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Peter Parycek, Noella Edelmann (Editors)

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and Open Government

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CeDEM13

Proceedings of the International
Conference for E-Democracy and Open Government
(2nd Edition)



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Editorial

CeDEM13 Editorial

Krems, May 2013

Noella Edelmann, Johann Höchtl, Peter Parycek,

*Danube University Krems, noella.edelmann@donau-uni.ac.at, johann.hoechtel@donau-uni.ac.at,
peter.parycek@donau-uni.ac.at*

Do you know what a „Grätzl“ is? Or „Grätzldenken“? Grätzl is an Austrian word. It means neighbourhood, or local community within a city, town or village. Each Grätzl has its own distinct characteristics that distinguishes it from other Grätzls – often due to historical developments. Grätzldenken means engaging in those issues that are relevant to or impact the neighbourhood or community you live in. So why is it important know what a “Grätzl” is if you attend the CeDEM or you submitted a paper that underwent the tough peer-review process? Because looking at the authors’ submissions this year, we realise that we are again witnessing profound changes in society, democracy, participation and government. And CeDEM once again offers the space for discussing the many different and sometimes opposing aims and perspectives.

Small is beautiful: the scale of the societal and political issues is moving from large to small, from international to national, regional, local and neighbourhood. Mobilisation and power relations in society are changing, and the Grätzl becomes more important than large-scale initiatives. This impacts the way electronic tools and social media are implemented and used by individuals (be they immigrants, citizens, politicians) or institutions (public administrations, governments, parliaments). But it also impacts the theory, research and perspectives taken on e-democracy (Mulder and Hartog; Freeman and Quirke; Grubmüller et al.). We see that the focus has moved onto individual tools, governments, cities and specific processes (Ferro et al.; Hansson et al). The people in the Grätzl are important, so the online users (Bershadskaya et al.) gain a more prominent position, and often specific user groups such as politicians and immigrants (Svensson and Larsson; Wetzstein and Leitner) are at the center of research. And it is necessary to consider whether the tools can be implemented so that government activities reach the local level (Hartmann and Mainka) and, whether the tools used can help achieve useful participation, collective action and results (Faraon et al.; Soon; Karna and Gupta; Skoric and Poor; Svensson; Vlachokyriakos et al.).

Everything has a flipside – in academia it is called the “adopting a critical approach”. And Grätzldenken does have a negative side to it. The phrase „Aus dem Grätzl nicht rauskommen“ (literally, “not coming out of your community”), often implies rejecting openness, new ideas and innovation, being homely and sedentary. And the CeDEM submissions show that we need to remember that the local, the regional, the national is embedded in a larger context such as the European Union (Götsch et al; Dalfert). The CeDEM provides the opportunity to see what is happening beyond the boundaries of the Grätzl, in other countries, with cases from Switzerland (Große), Scotland (Baxter and Marcella; Gregson), Italy (De Rosa), Sweden (Gustafsson and

Wihlborg), Botswana (Belkacem and Koulolias), Nigeria (Olujide), Russia (Chugonov and Bunkov) and Singapore (Soon). The authors of these cases provide opportunities for exchange, learning, refining and improving processes, applications and projects in one's own country or region, and to reach aims such as increasing user engagement (Cestnik and Kern; Williamson and Nielsen). The CeDEM clearly reveals the need for innovation in e-democracy and government– whether through new research (as seen with work by the PhD students who submitted to the CeDEM's PhD Colloquium), or by considering aspects, developments and issues such as transparency, open data, new technologies and new infrastructure (Peled; Zuiderwijk et al.; Papaloi and Gouscous; Mac Namara et al). The discussion about Open data has gained a lot of traction lately, and public administrations from every level have entered an informal competition to see who offers the most data or is able to attract the highest number of application developers. Open data is one of the means available to help public administrations become a truly open ecosystem - but in the near future will necessitate new internal processes that enable open data to be implemented rather than be a passing fashion.

These new processes have promising and powerful effects, and it is important to raise and resolve issues, such as privacy and social segregation aggravated by the digital divide (Eibl and Lutz; Molinari and March). The CeDEM provides both the formal and informal spaces for discussing the ethical and legal issues associated with e-democracy, e-society and open government (Grubmüller et al.) and further, how to evaluate research and the outcomes achieved (Sachs and Schossboeck).

We were overwhelmed by the number of submissions to the CeDEM13! We are particularly pleased and proud to present you this year's proceedings – the fattest proceedings since we started the conference series in 2008. We therefore thank the authors, the peer-reviewers, the programme committee, the track directors, the proof-readers, the sponsors and the Centre for E-Government team for all the efforts made that have gone into the CeDEM13 proceedings. And we can prove that your contribution is worth the effort: the CeDEM proceedings are also published online according to open access principles (for your information: Creative Commons Attribution 3.0 Austria (CC BY 3.0) License), and they have been accessed more than 20,000 times.

Welcome to the CeDEM Grätzl!

Noella Edelmann, Johann Höchtl, Peter Parycek

E-Democracy and E-Participation

(peer-reviewed)



Applied E-Democracy

The need for a information framework to support development

Bert Mulder*, Martijn Hartog**

* eSociety Institute of The Hague University of Applied Sciences, The Netherlands,
a.w.mulder@hhs.nl

** eSociety Institute of The Hague University of Applied Sciences, The Netherlands,
m.w.hartog@hhs.nl

Abstract: *This article identifies a growing urgency for the digital facilitation of existing democratic processes. In order to develop successful solutions it argues that designers, developers and policy-makers need a formal framework describing the requirements of democratic processes. It notes the disappointing results of current e-democracy projects and focuses on the digital support of existing democratic processes, instead of just looking at the new possibilities of social media and their contribution to a transformation of democracy. To distinguish this approach it uses the term “applied e-democracy”. Its research concluded that (for a city of 500.000 inhabitants in The Netherlands) the annual number of existing democratic processes is between 200-300. The article further describes that a framework connecting democracy to technology, needed to create effective solutions, is missing. It gives examples and a proposal of possible frameworks and argues that these need to be developed and researched.*

Keywords: e-government, e-democracy, strategy, practice, theory

The future of e-democracy research related to better systems design is a sensible and urgent subject for several reasons – in society the political, social and economical urgency for good e-democracy solutions is growing while the actual results of e-democracy projects lag behind some of the expectations. Following the general development of ICT we have to assume that in the coming decade digital support of democratic processes will become more widespread and will see more large scale and structural uptake of digital support into both existing democratic processes and procedures as well as the integration of new e-democratic processes into mainstream democratic practice (Mulder, 1999a; Mulder, 1999b; Scientific Council of Government Policy, 2011). Such a structural and strategic uptake needs much more than simple web information or e-petition solutions used today (Mulder, 2011). Some researchers indicate that better and more specific tools need to be developed that are better suited to the specific context of democratic processes (e.g. Finger, 2009; Shatin & Finger, 2008; Snellen, 2001), while others have noted the need for better theoretical and conceptual work is needed in the current research of e-democracy research (e.g. Mantilla, 2009; Nchise, 2012).

This article is more of an essay than a usual overview of research, partly because it looks to the future more than to the past. It is urging for a change in research to support the coming structural adoption of e-democratic practice. It describes the need for more cross-disciplinary research, refers to experiences from other domains (game-theory, corporate blogs, information architecture and value chain) to be able to realize practical solutions for e-democracy.

1. Introduction

The urgency to stimulate the uptake of e-democracy is growing for several reasons: the adoption of new technology by the government and the public, the need to engage in dialogue with citizens and the felt need for greater transparency from the public. For European countries there exists the less obvious but possibly more urgent demographic factor. A scenario study from the Dutch Ministry of the Interior and Kingdom Relations (2010) reports that due to demographic development (the number of older civil servants retiring and fewer young professionals becoming available) in 10 years time local and central government will have to do *with 30% of the workforce they have today*. The study estimates that 30% of that decline results from civil servants retiring and the other 40% from young professionals finding more interesting work outside the government sector, due to the structural shortage on the labour markets. If this scenario (in Dutch publications sometimes referred to as “empty government”) holds true it creates a new and urgent reason to deeply transform government. This makes the creation of working tools and applications to support existing democratic practices more urgent. But beyond the individual applications “empty government” should make us think about the large-scale and structural implementation of e-democratic tools, going beyond the current often small and incidental projects. We think that, to answer to this new urgency, create more successful new digital tools and speed up adoption a shared conceptual framework is essential. Looking at policymaking and e-democracy research, such a suitable framework connecting democracy to the possibilities of digital world seems to be missing.

Policy bodies aiming to stimulate the uptake of e-democracy express the sense of urgency. An interesting attempt to drive development is the 2009 recommendation on e-democracy by the Council of Europe (2009), the first legal document on e-democracy containing practices and methods for implementation of e-democracy. They indicate that e-democracy is one of several strategies to support democracy, complementary with the traditional democratic process, that it opens to the possibility of civic participation, reinvigorates representative democracy and reviews its traditional concepts. The extensive appendix the document provides 80 principles and more than 100 guidelines for civil servants and government organizations, focussing to embed e-democracy in the political and democratic processes. They note that current implementation focuses too much on technology, and state that now marketing and the integration with policymaking and impact will have to become more important.

But its recommendation will fail to be effective. The detailed advice is too complex and in the end leaves users empty handed, because it only slightly addresses technology. On the assumption that “technology is facilitative” it outlines extensively the defining of democratic requirements but then assumes that technology could fill that in. And that is not the case: there is little existing technology that is successful and there is little or no experience in creating new systems. In their urge for implementation they make the mistake many policymakers make: they assume that the field is professional and that good solutions exist. Taking up such a professional attitude at too

early a moment is what creates the relatively poor quality of the field: too little attention for the quality of digital solutions.

Such policy advice is an indication of the current status of the e-democracy field: the extensive research on democratic theory and recommendations from politicians provide little or nothing to advance the quality of digital solutions supporting democratic processes. They do not address the needs of designers and developers and fail to stimulate the creation of better e-democracy solutions. Grönlund observes that:

"...theory generation and theory testing are not frequent, while case stories (no theory, no structured data collection) and product descriptions (no analysis or test) are. Also, claims beyond what is reasonable, given the method used, are frequent" (Grönlund, 2005, p. 1).

Furthermore several authors note the disappointing results in the field (e.g. Baskoy, Behrouzi, Dai & Norton, Hercheui, Insua, Hirst, van Mill, Warren & Pearse in Sharma, 2011 or Dunne, 2008; Milner, 2002; Ostling, 2010; Peña-López, 2011). Dunne (2008) concludes the results mean that political online forums will not reverse political disengagement, they do not fail due to an inherent design fault but because political disengagement is tied to the dislikes of citizens if a liberally thin democracy. Peña-López (2011) points to possible adverse effects of digital support of democracy, sharpening the distinction between the active and the inactive, effectively leading to a new digital divide. Ostling (2010), focusing on e-participation, provides an overview of results and describes ICT as an amplifier of existing political trends, possibly converging *"active citizens in a detached and lonely room"*. She concludes that e-participation may follow Gartners' hype cycle, and currently be positioned between the *"peak of inflated expectations"* and the *"trough of disillusionment"*. It would indicate that in the following years the development would move through the *"slope of enlightenment"* to the *"plateau of productivity"*. This development is unnerving, because currently there is little knowledge on the required quality of practical solutions, and little work done to make the situation better.

This dilemma, between the perceived urgency for e-democracy and the disappointing practical results, will be sustained because individual e-democracy projects carry inherent political risks, the technological possibilities are complex and relatively new, tested solutions may be unavailable and politicians may prefer short-term projects. There is little thinking on the broad and structural adoption of e-democratic solutions. The digital solutions that more or less structurally support democracy may be governments informing citizens and e-petitions. Their success may be attributed to the fact that they form part of the general web activities of governance bodies (informing citizens on policy process) or are relatively simple to design, develop and implement as they consist of their own, clearly demarcated process in e-democracy (as for e-petitions).

2. Applied E-Democracy: Supporting Existing Democracy

Here we look at the requirements for the large-scale structural adoption of e-democracy. For larger cities that would mean providing thousands or millions of inhabitants with the possibilities to engage in the active democratic issues at any moment. Citizens would use a variety of tools to be able to inform themselves, deliberate, prioritize or vote in relation to the hundreds or thousands or issues annually. And in the course of using this variety of tools, in the different phases of e-democratic participation on many issues, the experienced sense of democracy should be maintained. In this article we address this development as *"applied e-democracy"* — it focuses on

supporting the existing democratic processes with digital tools (as opposed to new developments like social media) and on the challenges surrounding the actual development and implementation of tools.

Even if we would like to develop such broader and structural digital support for democratic processes, we lack the conceptual framework to develop it. That is why research into the practical requirements might contribute to the resolution of this impasse: it should identify challenges and opportunities for better solutions, identify design criteria and provide designers and developers with design requirements more suited to their needs (Mulder, 2011).

Our first research was aimed to determine “the size of the existing democracy”. To be able to establish the workload of supporting existing democratic processes we researched how many democratic dialogues the governance of a city actually takes. This was done by counting the number of democratic issues on the agendas of the different committees and the city council of one of the larger cities of The Netherlands. The result of our exploratory research (Mulder & Hartog, 2012) showed that for a city of 500.000 in The Netherlands there are roughly between 200 - 300 different democratic issues on its different agendas during a one-year period. Phrased differently, one might say that governance of a city of about 500.000 inhabitants requires about 200-300 issues annually to be decided upon. Many of these issues were small and inconsequential (important to an individual or small group of citizens or organizations) and only a few were large and of consequence to a sizable part of the population.

The underlying assumption is that the number and character of democratic issues is related to the size of the democratic challenge. Since a city would not increase in size unexpectedly, the number of democratic issues would not increase dramatically either, although our dialogue might; with the introduction of new digital means such as social media (Fischer et al, 2011). This estimate allows cities to create an estimate of required effort required for the broad adoption of e-democracy. Large democratic issues might require special web environments and special editorial staff, whereas small issues would use the standard available infrastructure and get their data from administrative systems. Follow-up research will determine “the size of democracy” for smaller and small cities, to create a model in which a constant ratio between the size of cities and their required democratic dialogues may be used to determine the workload for the broad implementation of e-democracy.

3. Current Research Disconnected from Application

The creation of successful e-democracy systems depends on clear requirements and specifications how democratic processes should be supported, but few exist. Chambers (2003) notes that the deliberative democratic theory has moved beyond the “*theoretical statement*” stage into the “*working theory*” stage. The extensive research on the different qualities of deliberation may be political (Chambers, 2003; Fearon, 1998, Kadlec & Friedman, 2007;), or practical (Dryzek, 2004; Price, 2009), or more structural (Grönlund, 2003; Landa & Meirowitz, 2006). But though each contains valid conclusions few of them would help designers to design better e-democracy solutions. In his research review Karlsson (2010) describes a few general notions on the design of systems, showing the importance of relating the amount and quality of deliberation to the design of online environments and instruments for deliberation. He also mentions that one specific design-related issue that has been depicted as a crucial feature for online deliberation is the level and style of moderation of online discussion forums. In line with Gutmann & Thompson (1997)

Chambers (2003) describes that scholars mention four possible goals in the design of deliberative forums:

"...augment legitimacy through accountability and participation; to encourage a public-spirited perspective on policy issues through cooperation; to promote mutual respect between parties through inclusion and civility; and to enhance the quality of decisions (and opinions) through informed and substantive debate" (Chambers, 2003, p. 316).

Such descriptions form the first step of a functional breakdown of the deliberation in deliberative democracy into required qualities such as accountability, participation, cooperation, inclusion, civility and informed and substantive debate. But for the design of real systems even these qualities are far too broad and general to be effective guidelines. To be useful in the creation of better e-democracy solutions notions like "accountability", "civility" and "cooperation" need to be further operationalized as to how they may be realized by web-based systems. This shows that the concept of deliberation is complex and current research does provide little to nothing to support a better design of systems. Research on e-democracy may develop our understanding but seems to be disconnected from the better realization of actual practical e-democracy systems.

This disconnect between e-democracy research and the practice of developing digital solutions is not the only one. Landa & Meirowitz (2009) analyse a similar disconnect between deliberative democracy theory and game theory. They note that there is an emerging body of game-theoretic literature that focuses on policymaking in deliberative institutions. But they conclude that the results are not connected with the extensive research on deliberative democratic theory or the research on deliberation from social psychology and experimental traditions. They offer three reasons: the analytical/structural relationship between game theory and deliberative democratic theory is unclear; the communication analysed by game-theorists is of a fundamentally different epistemic type; the game-theoretic approach omits key social and philosophical determinants of deliberation which makes its conclusions irrelevant to normative deliberative democratic theory.

They also describe the fundamental distinction between normative deliberative democratic theory and the game-theoretic approach. The latter treats deliberative democracy as an environment more than a process. The analysis of the properties of that environment, and how it contributes to the study of deliberation insofar as that environment captures the essential institutional features of deliberative democracy. The normative focus is on the behaviour without inducing it from the environment:

"Whereas the game-theoretic/deliberation-as-environment approach has an agreed upon 'machine' (or, more accurately, a small set of 'machines') for relating descriptions of the environment to descriptions of behaviour and so for generating comparisons about how different descriptions of the environment might influence the nature of discourse and policymaking, the deliberation-as-behaviour approach lacks such a device" (Landa & Meirowitz, 2009, p. 430).

This analysis may make the disconnect more understandable, but not easier to solve. In their treatment Landa & Meirowitz (2009) see the disconnect between the normative and game-theoretic approaches as inappropriate because democratic theory has practical aspirations. The inability of normative theory to include the environment as a determinant in deliberative democracy cannot be ignored. They propose a more balanced deliberative democratic theory by thinking in terms of three steps: formulating axioms about the political environment, ascertaining axiomatic consistency within a game-theoretic model, creating a conversation between research traditions.

According to Landa & Meirowitz (2009) this conversation creates a creative relationship, as game-theoretic analysis becomes an essential tool of institutionally prescriptive normative theory.

Step one would be the domain of normative theorists while the other two must involve other approaches. The deeper significance is that it outlines the essential functional relationship between theory and practice and between different disciplines. In line with the analysis of Landa & Meirowitz this article identifies the missing connection between e-democracy research and the design of practical digital solutions. Their proposal for the inevitable integration between normative theory and game-theoretic approaches may be extended to the integration between theory and the realization of practical democratic systems as figure 1 displays.

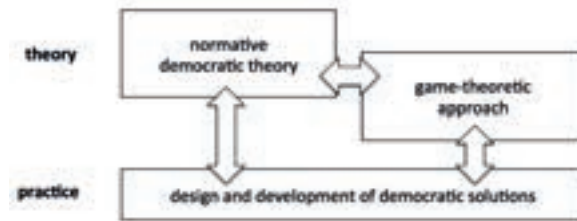


Figure 1: Integrating normative theory and game-theoretic approach

4. An integrative conceptual framework for e-democracy

To solve the disconnect between research and application we identify the need for a conceptual framework shared by all stakeholders, that allows for the meaningful translation of democratic qualities into design requirements for digital solutions. Creating successful digital solutions for democracy rests necessarily on a conceptual framework that integrates democracy and technology (figure 2) and meaningfully translates between the requirements of the stakeholders in the democratic process and the designers and developers of solutions.

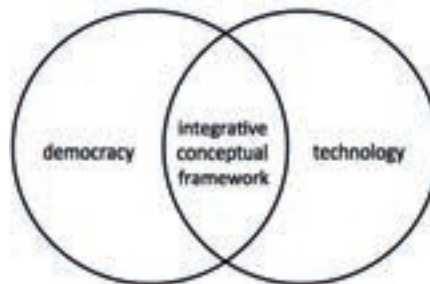


Figure 2: Conceptual framework

Such an integrated conceptual framework between democracy and information technology is lacking today. Current research on e-democracy uses a different epistemic and rhetoric than that of designers: both the questions asked and answers generated do not translate to better software solutions very well.

An example is the identified need to “inspire citizens to participate in the agenda setting phase of the policy development cycle”. To be useful in the creation of new system such statements have

to be more operational and specific. “Agenda setting” may mean different things. Long-term democratic issues may need building general awareness as opposed to immediate and pressing short-term issues that might need direct action. A deliberation that enlists a whole population is very different from one that supports a small well-organized group. To facilitate such goals each digital solution has a different quality, a different audience, a different level of information and a different style of communication. Although these may all take place in the agenda-setting phase they may require different tools and processes.

An integrative conceptual framework would be able to identify and describe such differences and create clarity empowering researchers, civil servants, citizens, designers and developers. It would allow stakeholders to specify democratic ambitions more precisely and in a way so that meaningful technical choices may be made. Its aim is not to understand democracy, but to allow the better design of systems. Developing such a framework is not trivial: it would contain a set of democratic processes described in terms of their informational functionality. It is too early to propose specific suggestions for a framework, but some examples from other fields give an idea of the challenges and possibilities. Here we mention two possible directions for such a conceptual framework and propose a first attempt at fulfilling that challenge.

A relatively easy example connecting digital tools to a domain is the classification of corporate blogs that Zerfass & Boelter (2005) developed in their research on business communication. It connects the different functionalities of corporate PR to meaningful functionalities of blogs, as shown in figure 3. This mapping is developed from the observed use of digital tools in communication.

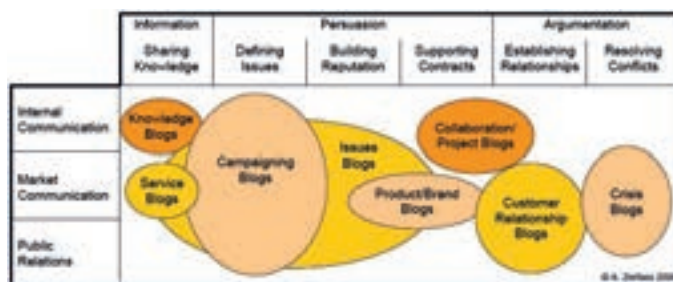


Figure 3: Classification of corporate blogs (Zerfass & Boelter, 2005:127)

Although there is research on the possible effect of blogs in democratic matters (Drezner, 2004; Coleman & Wright, 2008; Maria, 2009; Siapera, 2008; Touri, 2009) that doesn't mean in reverse that we might “just” use blogs to design better democratic systems. Blogs may be used in different ways for different purposes. Identifying these purposes and relating them to democratic processes in a framework means that citizens or civil servants may express their needs in a structured way, and that designers may infer sufficient information to create good applications. Without a framework successful e-democracy systems depend on the personal interest and quality of designers that personally to combine democratic quality and technology. But creating systems on the basis of the skills of individual people does not scale up easily.

Another example is the more formal frameworks that are extensively described in the world of information architecture. Muller (2011) describes “Architectural Thinking” which creates a connection between the customer and the proposed new system in a series of five different views:

customer objectives view, application view, functional view, conceptual view and realization view (figure 4).

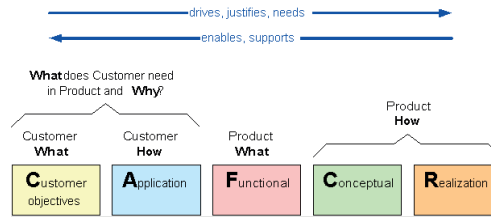


Figure 4: Different views of information architecture (Muller, 2011)

Muller (2011) describes it as an architecting method, supporting the architect in the process to go from a vague notion of the problem and potential solutions to a well articulated and well structured architecture description. This approach further developed into the framework of Shames & Skipper (2006) and forms part of the more generic IEEE 1471 and more recently ISO/IEC-42010 standards for architectural description. But such an approach can only be successful when both democratic stakeholders and designers and developers together have a shared understanding of the quality of the intended democratic processes so that they create systems that facilitate democratic processes without degrading them.

5. Proposed Formal Decomposition of E-Democracy as a Value Chain

Both examples above require a functional decomposition of democracy and its processes such that a meaningful translation into the digital domain becomes possible. To create such a functional decomposition for democracy we propose to use the concept of a “Value chain”. Introduced in general by Michael Porter (1985:36; 1996), a value chain describes a series of activities that together uphold the value of a service or product. Each phase may be realized by different systems of applications, but functionally each one is a necessary requirement. An e-commerce chain is upheld by functionality as different as identification of products or services, being able to compose an order, to place an order, to pay for the order, to be informed by it progress and, in the case of digital products, online delivery. Each of these steps is necessary and adds a specific value to the process but may be provided by completely different software solutions. The concept of a value chain is one of the ways to create a more abstract and functional description that may then be filled in by different forms of technology.

In that context a value chain for e-democracy would identify the necessary constituting information processes that together uphold the value of the “democratic process”, and might possibly (as a suggestion) contain five different information processes:

1. Being informed is an essential requirement that allows citizens to know what is going on and communicate their opinion
2. Deliberating provides the ability to engage in structured dialogue and reflection leading to insight and conclusions
3. Valuing the results of the dialogue would allow for identifying and prioritization the issues that need attention

4. Decision making is a distinct process allowing the development of structured argumentation and solution formulation
5. Voting allows participants to finally converge on a single political outcome



Figure 5: Value chain for e-democracy

Such a stepwise identification of functional steps rephrases democratic activity in underlying information processes that may then be realized by many different software solutions. Each of these has its own characteristics and will require extensive research and development. Looking at the seemingly simple first step “informing” it becomes clear that currently there is no simple and consistent way to inform citizens on any democratic subject. There is no “digital democratic dossier” on an issue. And, should it exist, it would show that we currently lack a uniform and consistent way to inform citizens of the financial consequences of democratic issues. This is assuming that with the large-scale and structural adoption of e-democracy a uniform and consistent approach would be a requirement.

Although very different in character, each of these three examples is a possible way to connect the process of democracy to the digital domain through an intermediate mapping onto functionalities. Such more structured mapping could greatly contribute to the development of e-democracy solutions.

6. Conclusion and Discussion

This article addresses the practical challenges of creating e-democracy solutions. We see the urgency of supporting democracy with digital solutions as (at least in Europe) the number of civil servants may seriously decline in the coming decade. We expect that digital support of democracy will become large-scale and structural supporting both existing democracy and new forms. To stimulate development and adoption of new solutions a clear and concise conceptual framework is needed to be able to successfully translate requirements of democratic processes into requirements for digital solutions. Today such a framework is missing. We propose a functional decomposition of democratic processes as a value chain but realize that research needs to be done to make that solution a practical reality. More interdisciplinary and integrated research is needed to assess the value of deliberation-, collaboration- and participation systems. We need quicker modelling and more practical translations for designers and developers in order to create the possibilities for governments and citizens to interact on a new level of intensity.

A more formal integrative framework for e-democracy would empower all stakeholders to create better systems and might speed up new developments. The consistent set of formal descriptors would also allow for new developments such as automatic processing of democratic systems in the semantic web. This requires the formal description of democratic functions and processes to be developed into an ontology and thesaurus. The current work on e-government ontology (Bettahar et al, 2009) creating semantic service descriptions and services registries mainly contains basic administrative processes and services and doesn't refer to democratic aspects. Extending the descriptive framework with appropriate design patterns that developers might use

it could not only allow better communication between democratic systems but might also support collaborative problem solving in new ways (Jermann, 2004). All these possible aspects of a framework will require thorough research to be able to cater to the diversity and complexity of democratic processes.

Since digital support of democratic processes is recent, there are no right solutions. But to create better quality solutions software development needs to be based on more formal models of democratic processes, so that they may be developed faster, better and be better integrated with each other.

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About the Authors

Bert Mulder

Bert Mulder is an associate professor of Information, Technology and Society at The Hague University of Applied Sciences and founder of the eSociety Institute. His main objective concerns strategy development for a broad and innovative appliance of ICT within the society. Prior to this he worked as an information advisor of the Dutch parliament and as Head of the IT department at Veronica Broadcasting Organization.

Martijn Hartog

Martijn Hartog is a project leader and researcher at the eSociety Institute of The Hague University of Applied Sciences. He is currently in charge of the research programme "government of the future" concerning an open and transparent government. He previously functioned as advisor within several Dutch governmental agencies, such as the Ministry of General Affairs / Ministry of Transport, Public Works and Water Management / Dutch Public Broadcast Agency and the Municipality of Rotterdam. The past 5 years his fields of research and interests concerns lifelong learning, e-government and e-democracy.

Is E-Democracy a Myth?

Civic Participation and Democratic Reform

Julie Freeman*, Sharna Quirke**

* University of Canberra, Julie.Freeman@canberra.edu.au

** Sage Data Limited, sharna.quirke@gmail.com

Abstract: Information and communication technologies (ICTs) offer opportunities for greater civic participation in democratic reform. Government ICT use has, however, predominantly been associated with e-government applications that focus on one-way information provision and service delivery. This paper distinguishes between e-government and processes of e-democracy, which facilitate active civic engagement through two-way, ongoing dialogue. It draws from participation initiatives undertaken in two case studies. The first highlights efforts to increase youth engagement in the local government area of Milton Keynes in the United Kingdom. The second is Iceland's constitutional crowdsourcing, an initiative intended to increase civic input into constitutional reform. These examples illustrate that, in order to maintain legitimacy in the networked environment, a change in the culture of governments to facilitate open and responsive e-democracy practices is required. Moreover, when coupled with traditional participation methods, processes of e-democracy enable wide civic involvement and emphasise that e-democracy should not be separated from the everyday operations of government. While online democratic engagement is a slowly evolving process, initial steps are being undertaken by governments that enable e-participation to shape democratic reform.

Keywords: E-democracy, e-participation, democratic reform, e-government

Prospects of e-government have been idealised as heralding in a new era of democratic involvement, with opportunities for unmediated discussions, direct participation and representation, and greater transparency and accountability through political openness (see, for example, Coleman & Blumler, 2009; Eggers, 2005; Wong & Welch, 2004). It is argued, however, that governments have placed little emphasis on the development of online practices that enable civic contributions to impact decision-making, instead prioritising information dissemination and service delivery features (see, for example, O'Toole 2009; Jimenez, Mossberger & Wu, 2012). Digital democracy, e-participation, and greater civic engagement have subsequently been labelled myths of e-government (Bekkers & Homburg, 2007); unlikely to occur without broader changes in the culture of government to be more open, receptive and responsive to civic views (Cullen, 2006; Jensen, 2009).

The rapid influx of digital technologies has created immense opportunities for new forms of government–citizen communication. However, it should not be assumed that online government applications will transform democratic structures and practices as rapidly. According to Keane (2009), the current form of post-representative democracy has been in development for over 60

years, with this gradual shift the result of increased public involvement in political processes. This paper highlights that while e-democracy is a slower process than first anticipated, this does not undermine its capacity to facilitate democratic reform. Governments that recognise the technological impact on the paradigm shift in democracy are able to use ICTs to address and adapt to increasing external pressures and broadening understandings of political representation and participation.

This paper explores e-participation efforts undertaken in the United Kingdom (UK) and Iceland to highlight how governments at varying levels are attempting to use ICTs to engage citizens in democratic practices. The UK case from the local government area of Milton Keynes is a targeted attempt to increase youth involvement in the democratic process. Iceland provides a nation-wide example of participatory democratic reform through its crowdsourced constitution initiative. These cases offer evidence of some of the ways that governments can combine ICT use with traditional political participation methods to actively facilitate increased civic engagement in democratic processes. Such developments are increasingly necessary for governments to maintain legitimacy in the networked environment. The success of e-participation initiatives depends, however, upon a change in governmental culture whereby representatives partially relinquish power and open themselves to further scrutiny through more transparent operations, and receptive and responsive communication with citizens. The following section outlines understandings of e-government, e-governance and e-democracy to highlight the role that ICTs play in broader democratic reform.

1. The Pace of Change in Democracy

Changes to democratic processes have never been swift, but nor are they ever stagnant. Keane (2009) suggests that democracy is transforming to incorporate additional deliberative and participatory features, and the current post-representative democratic form has been in development since 1945. Under this form of “monitory democracy”, citizens are enfranchised through advanced technologies and communicative abundance. Power monitoring and controlling bodies, such as citizen assemblies, public inquiries and human rights organisations, help to ensure the accountability of governmental power throughout the entire social and political landscape. The importance of traditional democratic structures does not decline, but their pivotal position in politics is changing due to scrutiny and contestation from external influences (Keane, 2009). E-government holds a vital position during these transformations. For governments, e-government applications offer mechanisms to address and adapt to broadening understandings of political representation, transparency, participation and accountability. In turn, participatory e-government practices offer citizens possibilities for additional involvement, understanding and engagement in the democratic system.

In his empirical evaluation of e-government in the United States, Norris (2010) highlights that idealistic claims of e-government fostering democratic deliberation and increased civic participation and engagement have not been achieved. He distinguishes between e-government, e-governance and e-democracy, and argues that while these three concepts are deeply intertwined, much academic literature contains the misconception that they are synonymous (Norris, 2010). E-government, according to Norris (2010), is understood as electronic delivery of information and services, whereas e-governance relates more to regulation and control both by governments and citizens. In terms of e-democracy (and its various counterpart names, such as digital democracy

and e-participation), Norris (2010) suggests that it involves providing citizens with access to government institutions and officials, and enabling civic participation in activities and decision-making through ICTs.

E-government enables improved efficiency of governmental services and increased civic access to information. These are important democratic developments as they facilitate civic equity towards public services and enable an informed citizenry. However, by themselves, these applications do not enable civic input into political agendas and policy processes, which would require greater two-way communication through e-participation. E-democracy practices can and do exist separately to government ICT use, which can be seen through, for example, citizen-led online political forums and the abundance of online news sources. But in order to maintain legitimacy and address the increasing external pressures, contestation and scrutiny identified by Keane (2009), government-led e-participation practices are increasingly important and, if implemented, will need to be run through e-government platforms.

ICT use has the greatest value for democratic reform when government provision of information, civic participation in policy-making processes, and regulatory transformations intersect. Here, technological advancements alter the functioning of power and authority through new citizenship practices (Smith, 2002). Effective governance subsequently involves dispersed power, with outcomes the result of a multiplicity of decisions from both vertical and horizontal relationships, rather than strategic decisions made by individual authorities (Ling, 2002). This is not to suggest an overhaul of current democratic structures to create direct forms of democracy, but that there is a need for additional deliberative opportunities for civic involvement and engagement in politics within the representative democratic model.

At present, information dissemination and service delivery often dominate government ICT use (see, for example, O'Toole, 2009; Jimenez et al., 2012). These types of mechanisms provide little capacity for citizen involvement in government decision-making, and civic participation undertaken offline remains more likely to impact the political system (Jensen, 2009). The prevalence of government centrality in e-government developments neglects online civic inclusion in political practices (Verdegem & Hautekeete, 2010), with interactivity restricted in order for governments to maintain control of information. Opportunities for online civic engagement in government decision-making have subsequently largely remained myths of e-government (Bekkers & Homburg, 2007). In part, this has been due to a government focus on improving efficiency through ICTs, rather than employing their use to aid the effectiveness of democratic processes (Verdegem & Hautekeete, 2010).

Despite these challenges, civic participation through ICTs has gained continuing and widespread attention, particularly due to its capacity to substantially contribute to democracy through greater engagement (see, for example, Hague & Loader, 1999; Chadwick & May, 2003; Macintosh, 2004; Coleman & Blumler, 2009). In *Promise and Problems of E-Democracy*, the Organisation for Economic Cooperation and Development (OECD, 2003) explores three joint perspectives on online engagement: information, consultation, and participation. "Information" is a one-way relationship where the government produces and distributes information to citizens. "Consultation" requires the provision of information and involves citizen feedback on issues predetermined by governments. "Participation" includes active involvement by citizens in the policy-making process, in which citizens can propose policy options and shape the direction of political dialogue. Governments, however, retain the final decision-making responsibility (OECD,

2003; see also Kingston, 2007). It is this final form of engagement that empowers citizens to shape political agendas and alter the focus of government initiatives, enabling citizens to raise their views and suggest alternatives rather than being restricted to topics pre-set by governments. It is also this type of government-led online civic participation that offers governments the opportunity to address emerging external pressures, demands for greater involvement, and changing understandings and expectations related to democratic representation.

Efforts towards more open government and enhanced civic engagement in political processes through ICTs are being undertaken throughout the world. The following section outlines developments in the UK and Iceland to highlight how e-democracy is evolving.

2. Government-Led E-Participation

This section details two case studies of government-led e-participation to highlight the broader impact on democratic governance. The first is a local government example from Milton Keynes in the UK, where the aim was to increase youth participation and engagement. The second is Iceland's crowdsourced constitution, a nation-wide project used to gather civic input to directly shape constitutional reform. Details of these cases were primarily obtained through analysis of government documents, websites, and surrounding political commentary. In the case of Milton Keynes, additional information relating to funding and the developmental approach undertaken by the council and its youth workers was provided directly by local government.

These case studies have been selected for examination as they highlight that governments at various levels are developing e-participation practices to facilitate democratic change. In both instances, e-participation is used to support broader, offline civic engagement in democratic reform. By taking this approach, these cases demonstrate the importance of integrating e-participation into governments' everyday practices, rather than viewing it as separate to the operations of government. Whether targeted e-participation initiatives aimed at a particular group of constituents or nation-wide mechanisms for engagement, these cases demonstrate that the success of e-democracy processes is inextricably linked to the ways that civic involvement is considered in broader political processes. That is, the way governments are open to empowering citizens by incorporating their views in decision-making.

2.1. Local E-Participation: Milton Keynes and Youth Engagement

Local initiatives offer useful contexts for e-participation. It is at this level where the bulk of civic involvement in government takes place (Shackleton, 2010), particularly due to increased interest in issues of direct relevance and familiarity to citizens (Margolis & Moreno-Riaño, 2009; Couldry & Langer, 2005). The UK local government of Milton Keynes offers an example of ICT use to facilitate increased local participation in democratic practices.

According to 2011 census data, Milton Keynes has a particularly young population, with 22.3 percent of its approximately 250,000 residents under 16 years of age. By way of comparison, this figure is 18.9 percent across England as a whole (Milton Keynes Council, 2012). With its young demographic, the object for the local government was to increase youth involvement in the democratic process. Until this time, it was common practice for outreach work in youth engagement to be primarily conducted through physical forums such as youth centres and schools. This social contact was built on the premise that positive engagement with a youth worker may lead to wider life aspirations. However, youth centre engagement was decreasing and, with fewer

young people at centres or out on the streets, the traditional practices of outreach work became increasingly challenging. In other words, Milton Keynes was faced with a withdrawal from public life and a potential increase in political apathy amongst its youth (see Sennett, 1977).

Milton Keynes received funding of £37,000 from the National Youth Agency to specifically address youth opportunities. The council teamed with a small business that specialises in using emerging technologies as tools to engage and inspire. While some within the council recognised that the online world may have influenced the reduced physical presence at traditional engagement forums, the initial reaction saw technology as a hindrance to, rather than facilitator of, engagement. There was a strong school of thought within the council that it was youth workers who were failing to connect with young people, with scarce physical attendance at centres being the result of poor outreach work. However, the youth workers identified the council's antiquated attitude to the relationship between engagement and technology. After receiving funding, the youth workers started to explore the use of technology to increase participation, including what this type of participation might look like. The end goal remained the same: to develop positive engagement and increase life aspirations; but the forums and how to achieve this were changing.

The first approach to increase engagement was to use *Facebook* and *Twitter* to share information, initially one-way, on behalf of the Milton Keynes Council. The aim was to connect with traditionally "hard to reach" groups such as disabled, lesbian, gay, bisexual, transgender and hidden communities. The approach created differing reactions across the council, as using social media in a purposeful and targeted way was perceived by some as predatory and inappropriate, rather than being seen as a new form of outreach. There was significant cultural resistance, which is a common trait amongst governments that are reluctant to utilise social media in their communicative practices (see, for example, Jensen, 2009; Chadwick, 2011).

The project made a shift towards more receptive and responsive e-participation by using the same social networking technologies to seek feedback from young people, using open questions and monitoring the responses. This move was a particularly important facet to enable increased engagement, as social media use that is restricted by only allowing youth to like, share or follow issues does little to encourage advanced forms of participation (Macnamara, 2012). Young people in Milton Keynes wanted more transparency and involvement in the decisions being made on youth related issues, particularly transport and employment opportunities in the local area. They identified that the best way to take their concerns forward was via a single point of common contact within the structure of the council, combined with ongoing social media dialogue.

In a rare move, the council partially relinquished control of its own website, allowing a page to be re-branded, "My Say MK" (see <http://www.milton-keynes.gov.uk/positiveactivities/>), and the content management to be controlled by youth volunteers. Young people were provided with the power to engage and collaborate with others on issues of common concern within the auspice of the council website. Within a few months, the webpage was enabling dialogue and discussion from young person to young person, supported by the council youth workers. Several engagement events were held (addressing the traditional youth work objectives) and a number of initiatives were taken forward to address the concerns raised around local transport.

Alongside the success of the My Say MK venture, an MK Youth Cabinet was established in 2009. Young people self nominated as candidates with a short two-paragraph manifesto and campaign on local priorities conducted both online and in person. Originally for ages 11-16, but later expanded to 11-19 years, over 2,500 youth e-voted via the My Say MK website in the first election.

This represented ten percent of Milton Keynes' youth population at the time (Milton Keynes Council, 2009). In the most recent election, more than 40 young people stood as candidates for the 25 cabinet positions, and 7,393 voted (Milton Keynes Council, 2011). These figures provide evidence of the initiative's success in facilitating both ongoing and increasing levels of youth engagement. The MK Youth Cabinet now meets monthly and is given a (small) budget to self-manage. Every three months, they meet with the adult cabinet and present their issues. The adult cabinet agrees upon actions to take and responds in the following quarter with updates.

This example offers evidence of the ways that ICT use facilitates increased levels of political engagement. Moreover, in its attempt to counteract declining public life and increasing political apathy amongst youth, these developments have both led to greater political participation in democratic processes and helped to educate youth on the operations of political systems, such as election campaigning and cabinet meetings. Such localised initiatives provide practical settings for democratic engagement, particularly as ICT use at higher levels of government creates problems associated with scale and manageability (Jimenez et al., 2012). Despite such challenges, ICTs can be useful to facilitate broader democratic transformations. The following section outlines ICT use in Iceland's constitutional reform process. Iceland is small country in terms of population (with approximately 320,000 residents), so it does not face the same scale and manageability issues as larger nations. However, it offers a useful example of the way that citizens can contribute to national policy discourse and offers a general framework that other countries may follow.

2.2. National E-Participation: Iceland's Constitutional Crowdsourcing

Founded in 930 AD, Iceland's Parliament, Althingi, is one of the oldest parliamentary institutions in the world. Iceland's existing constitution came into force when it gained independence from Denmark in 1944 and, at that time, Iceland used Denmark's constitution as a basis for its own. In 2009, in the midst of the global financial crisis, Iceland's banking sector collapsed, which led to extensive civil protests and political instability. The government was forced to resign over its handling of the economic challenges and a new government was formed, which led to calls for constitutional reform.

The government turned to the public and invited 1,000 randomly selected citizens from the national voting registry to attend a forum to brainstorm ideas for constitutional reform. In 2010, 25 of these citizens were elected by the public to form a Constitutional Council. They were tasked with drafting a new constitution for the country, which in turn was to be presented to the public through a referendum and then to Althingi for final approval. The council, consisting of independent delegates of diverse and varying backgrounds including, for example, university professors, farmers, lawyers, and media professionals, undertook a unique approach where end-to-end citizen participation was encouraged during the Bill's drafting. The main themes that the council observed during its work were distribution of power, transparency and responsibility (Stjórnlagaráð, 2011) and, in this vein, actively sought to increase public participation in the drafting process. Most notably, the council used social media and crowdsourcing techniques.

Through the use of ICTs, particularly social media, the council approached the general population to offer their ideas as to what the new constitution should contain. Signalling a change in the open nature of representative government, the consultation offered responsive and ongoing involvement and discussion between citizens and the council, and between citizens. Every week for approximately four months, the council posted a draft clause on its website (see

<http://stjornlagarad.is/starfid/>). Citizens could comment on the website, join discussions on the council's *Facebook* page, via *Twitter* or write their views via letter. Members of the Constitutional Council posted videos on *YouTube* and used *Flickr* to show photos of the council at work. Council meetings were open to the public and streamed live via the website and *Facebook* page.

Iceland is well positioned for such e-democracy practices as it has one of the highest household Internet penetration rates (at 95 percent in 2012) in the world (Statistics Iceland, 2012). Until recently, however, Iceland had received a relatively low ranking in relation to its participatory e-government development. In 2010, the United Nations' e-participation index ranked Iceland at 135. A rapid increase in online engagement initiatives saw this placing jump to number 26 in 2012 (see United Nations, 2010, 2012). It is likely that previously limited participatory online features contributed to, at least in part, the fact that the traditional letter method was the most commonly used form of public participation in the constitutional reform, totalling 3,600 responses in contrast to the 370 comments posted on the website (Stjórnlagaráð, 2011). This may also be because traditional letters allow a more comprehensive message to be developed compared to the nature of online communications, which is often restricted to shorter word limit contributions. This observation highlights the importance of combining traditional and online forms of participation to encourage active involvement in democratic reform, and to ensure equity of civic connection with government for those with limited ICT access and skills (see, for example, OECD, 2003; Beynon-Davies & Martin, 2004; Lowndes, Pratchett & Stoker, 2001).

Public involvement in Iceland's constitutional reform took place from beginning to end; from the initial ideas and discussion, to the development and drafting of the Bill, to voting in its referendum in 2012. Just under 50 percent of the voting population participated, with 64.2 percent voting in favour of a new constitution based on the crowdsourced version (Kosningavefur Innanríkisráðuneytisins, 2012). This result is not, however, binding as Althingi retains responsibility for the final decision to pass the new constitution. Althingi did not approve the new crowdsourced constitution. Instead, some political parties are proposing further amendments to the document and Althingi has raised the threshold of votes needed to approve constitutional changes, both in Althingi and amongst the public. Shortly after this, Althingi was dissolved in preparation for the general election in late April 2013, meaning constitutional changes become the responsibility of the next government in power.

While the actual impact that Iceland's citizens, including the Constitutional Council, had on democratic reform remains questionable, this example signals that governments are beginning to recognise the need to address external threats, perceived or otherwise, on parliamentary and elected representation through more open government, with greater emphasis placed on transparency and public involvement. Iceland therefore offers a useful example of the way that government-led online participation practices can be employed in order to address changing democratic understandings and expectations.

3. The Role of ICTs in Democratic Reform

In the past and still today, e-government techniques include limited consultation exercises seeking reactions and views from citizens to government controlled initiatives. These often occur in closed forums, such as emails to a generic inbox set up specifically for the consultation and seeking responses to pre-set questions. In contrast, government-led e-democracy is less controlled with free dialogue and greater transparency that opens political processes and discourse. The case studies

presented here illustrate that the scope of government Internet use has advanced from its original focus on one-way information dissemination and service delivery to incorporate e-participation by actively seeking civic views to inform broader democratic processes. E-democracy should not be considered as a list of discreet activities conducted online between an individual and the government, but as continuous engagement between multiple individuals and their government in an open and transparent platform. In this regard, these case studies support Norris' (2010) empirical survey-based evidence that e-government does not naturally lead to e-democracy; whilst they are interrelated, they are not synonymous (Norris, 2010).

One noticeable common characteristic in both of these cases is that of continuous, triangular engagement, using qualitative dialogue to achieve specific aims and objectives. Engagement was not based upon one-way, transactional activities such as a series of online surveys, petitions or voting, which are often ill-described as e-participation activities (Norris, 2010). Rather, engagement consisted of ongoing dialogue both bilaterally between citizens and governments, and more broadly amongst various citizens with integrated feedback offered to governments, moving towards a triangular engagement approach. In this way, citizens' awareness of other perspectives helps to foster debate and increase understanding, and also improves the transparency of political issues and processes throughout society.

Opening channels of communication online to aid transparency requires governments to partially relinquish control of communications, which empowers citizens to further scrutinise political processes. This may be a daunting thought for politicians who fear losing control of political messages. It is difficult to predict the possible outcomes and consequences arising from the increased visibility of previously hidden political practices, which may lead to volatile sites of resistance (see Thompson, 2005). Further challenges also arise from this situation in terms of who maintains accountability for the decisions that are made (see Wong & Welch, 2004). In the cases presented here, the governments ultimately retain decision-making power while drawing from civic input. Governments may be reluctant to incorporate civic views into decision-making if it is the governments that bear the burden of responsibility for decisions that may be unsuccessful.

Conversely, potential benefits from transparent e-participation practices include, for example, increasing government legitimacy and improving civic satisfaction with political processes. Such benefits cannot be achieved without governments being prepared to trial new forms of democratic involvement. In both of these case studies, the governments had previously acknowledged that their communications surrounding political issues were not resonating with citizens. The actions taken were therefore necessary to maintain governmental legitimacy by increasing the transparency of their operations and enabling continuous dialogue with citizens. The success of opening representation and enabling ongoing dialogue depends, however, upon a culture change within governments themselves to become more amenable to civic input, and being prepared to relinquish a degree of control.

Both Milton Keynes and Iceland highlight that a government culture change to facilitate e-democracy processes can take place (see Cullen, 2006). Such a change requires governments to become more responsive and receptive to civic views (see Jensen, 2009; Gauld, Gray & McComb, 2009). Milton Keynes has developed an ongoing process that reflects the growing need to gather civic input on issues that affect the community. The Iceland case provides evidence that external pressures are creating the need for change in the open nature of government. Iceland had just gone through a period of economic and political upheaval, with civil protests and claims made that the

government's lack of transparency contributed to the depth of the problem. This series of events meant the government needed to re-emphasise its legitimacy. To do so, the government accepted and engaged with a process of e-democracy to further empower citizens through greater transparency and involvement in political decision-making. This observation highlights a key point: If the economic and political upheaval had not taken place, then it is possible that engagement in, and acceptance of, the e-democracy process may not have been undertaken or as welcomed. This suggests that, to prevent similar predicaments, other governments may need to take a more proactive approach in culture change to open their representation to greater civic involvement.

These case studies also highlight the importance of combining both on and offline methods of political participation in order to encourage greater democratic engagement (see Beynon-Davies & Martin, 2004; Lowndes et al., 2001). The reasons for this are two-fold. On the one hand, using both traditional and online methods of participation enables wider engagement by ensuring equity of civic involvement with government. On the other hand, democratic reform is not something that can take place entirely through the online realm. The virtual is only used in support of the physical: to aid democratic reform and adapt the governance structures and processes that resonate through all aspects of everyday life. E-democracy practices therefore should not be thought of as separate to everyday processes of government but as mechanisms that can be used to achieve governmental aims. Use of ICTs for democratic reform does not require governments to completely diverge from traditional understandings of political processes, but to adapt the political mindset in order to recognise that new mechanisms can support traditional objectives.

This paper highlights that, whether targeted approaches like engaging local youth or wider initiatives such as seeking feedback from a nation's population to re-write the constitution (arguably the most valued and fundamental piece of legislation in a democracy), digital technologies are playing a key role in democratic reform. The impact of such ICT use is, however, ultimately reliant upon the willingness and capacity of governments to incorporate civic views in decision-making.

4. Conclusion

Democratic change is a gradual process and the adoption of ICTs by governments is no different. Use of ICTs to facilitate democratic practices does, however, offer opportunities to take the next step in broader democratic reform to shape the future of democracy. For this reason, e-democracy and the implications that stem from the observations presented in this paper are important for governments to understand in order to advance current practices. While this may come slowly, once the decision is made to implement participatory practices, e-democracy processes can be achieved reasonably quickly. The cases presented here highlight that, in order to address increasing scrutiny and external pressures to maintain legitimacy, governments are beginning to develop transparent e-participation practices that offer citizens a greater degree of power in decision-making processes. The success of current mechanisms is, however, limited through government retention of decision-making; the likely result of concerns surrounding accountability and the potential negative ramifications of poor decisions for government legitimacy. Despite these limitations, these case studies illustrate that governments are taking the initiative to enable citizen input to inform decision-making, an important step forward for democratic reform.

E-democracy is a means, not an end, to democratic reform. Evidence from Milton Keynes and Iceland demonstrates that it should be understood as a process of continuous dialogue, rather than a series of discreet or static activities facilitated by technology. Moreover, e-participation needs to be coupled with offline participation methods. This enables broad opportunities for civic engagement, and may help governments recognise that such practices are not separate to the everyday operations of government; they simply offer an additional means to support democratic processes. Achieving this may enable governments to maintain their legitimacy in the networked environment, but this will require a change in organisational culture to address increasing pressures, both external and internal, and to be more responsive and receptive to civic views. The outcome of culture change, combined with the transparent and interactive nature of many social media techniques, is likely to lead to a power shift between citizens and their elected decision-makers, which requires politicians and institutions relinquishing a degree of their own power. This is a likely cause of existing government reluctance to implement opportunities for e-participation, with the focus instead often remaining on e-government practices.

To date, the emphasis of government centrality in government ICT use remains pervasive. Greater focus needs to be given, by governments and researchers alike, on the potential for citizen-led practices to contribute to democratic reform. Chadwick and May (2003), for example, highlight that a participatory model of e-government recognises a more horizontal process where activities through non-government websites contribute to civil society. Further research into the types of civic pressures that create the need for e-democracy processes may help governments in planning for their future. At this time, it would be a substantial leap forward for governments to consider non-government communications in decision-making processes. But the examples of Iceland and Milton Keynes highlight that a change of culture is possible, with citizens and communities beginning to set political agendas within government-led initiatives. A gradual democratic shift through e-participation has begun.

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About the Authors

Julie Freeman

Julie Freeman is a Postdoctoral Research Fellow in the News & Media Research Centre at the University of Canberra, Australia. Julie received her PhD in Communications from Monash University in 2011. Her research interests include e-government, local government, ICT-enabled citizen participation and engagement, digital democracy, and the policy contexts of government 2.0.

Sharna Quirke MSc

Sharna Quirke is a consultant in public sector transformation and performance measurement. She has worked with governments worldwide on IT led transformation projects with a special focus on digital inclusion and the use of technology to deliver improved public services. She also advises public institutions

and charities on the benefits of open source data to help measure social outcomes and improve operational business efficiencies.

E-participation - the Swiss army knife of politics?

Katharina Große

Am Seemooser Horn 20, Zeppelin Universität, katharina.grosse@zu.de

Abstract: *This paper develops a starting-point for the strategic use of e-participation in Germany. Based on critical reflections about the expectations that are currently placed upon it, it is shown that e-participation is not the right tool to mobilise citizen engagement in politics. Further, grounded in an expert survey, it is discovered that in Germany, e-participation plays a role in forming the public opinion and improving political decision making. It cannot however, create higher acceptance for political decisions by providing throughput legitimacy. As a consequence, expectations towards e-participation should be re-considered. If the proposed strategic refinements are taken into consideration, the full potential of e-participation can be harnessed and the political process will be significantly enhanced.*

Keywords: e-participation, Germany, expectations, functions, features, communication, complex problems, acceptance, intelligence, mobilisation, citizen, digital democracy, open government

1. E-Participation: an Ubiquitous Tool Without Instruction Manual

We must acknowledge that great ideas come from everywhere”, is one of the key messages of the Open Government Partnership’s (OGP) launch video.¹ “Government should be participatory”, is the second commitment of Obama’s Memorandum *Transparency of Open Government* (Obama, 2009). Public participation in political decision-making has become a major goal in state modernisation. More often than not, it is conducted with the help of online platforms and web 2.0 technologies, which greatly facilitate participation: Citizens can now be involved independently of time and location. The discussion is supported by comment-structures and voting-buttons. The generated results can be easily visualised. In Germany, too, e-participation projects have come to be a common tool for parties, politicians and political institutions.² However, while the two quotations show that a major driver for public participations is the desire to profit from collective intelligence, many more expectations are connected with e-participation projects in Germany.

¹ http://www.youtube.com/watch?v=Bq_ZWl1ZXAO

² Some of the many examples are: <http://e-konsultation.de/opengov/>, <http://enquetebeteiligung.de>, <https://www.dialog-ueber-deutschland.de>, <http://bund.buergerforum2011.de/>, <http://www.punkteforum.de/main/home/>, <http://muenchen-mitdenken.de/>, <https://offenekommune.de>

To this day, the country has no comprehensive open government strategy that explicitly deals with e-participation.³ There are, however, two papers that mention it: The government programme for linked and transparent administration (*Regierungsprogramm Vernetzte und transparente Verwaltung*) and the national e-government strategy. In these, e-participation is proclaimed a major goal (Bundesministerium des Inneren (BMI), 2010: 17; IT-Planungsrat, 2010: 13). E-participation is meant to gather society's collective knowledge (IT-Planungsrat, 2010: 24f.). This goal matches the call for collective problem-solving.

Taking a second look however, it becomes obvious that politicians⁴ have additional hopes towards e-participation. They expect to achieve new means of communication with the citizens in order to better gauge public opinion (Enquete-Kommission Internet und digitale Gesellschaft, 2012). Also, they hope to mobilise more people to engage themselves in the political process (ibid.). Finally, politicians expect that by involving citizens they will create greater acceptance for the decisions they make.⁵ This is no surprise given that, recently Germany has seen large scale protest against political decisions. These are perceived as an increase in public dissatisfaction (Glodzinski, 2010a; Glodzinski, 2010b).⁶

To summarise, apart from the official goal of I) collecting the crowd's wisdom, politicians hope that e-participation will II) mobilise more citizens for politics, III) be a means of communication for citizens and politicians, and IV) increase the acceptance for political decisions.

It is thus no wonder that, when discussing e-participation, the conversation is perceived by many as too abstract, unfocused and full of misunderstandings (Kappes, 2012: 3). There is no joint concept for e-participation (Bohne, 2012). As a consequence, it remains unclear how to identify successful projects. Also, without a clear definition of the goals that are to be achieved, it seems very unlikely that the platforms will be designed effectively. It is essential to determine what e-can be expected of e-participation and what not. This is why this paper will **identify the role that e-participation can play in Germany's political process.**

In order to do so, this paper will critically reflect upon the different expectations towards e-participation: Is it the right tool to achieve the wanted improvements? If e-participation is a proverbial hammer, it would prove difficult to use it to drill holes and the expectation to do so would be utterly unrealistic. Secondly, the paper will examine how well the tool e-participation executes its possible functions in the given environment of the German political system. This last step is essential because it might very well be that e-participation is the perfect tool, say, a hammer to nail a picture to the wall. Its actual fit to the task however, also depends on characteristics such as the wall-material or specially designed frames. Finally, its role depends strongly on the handyman's skills or willingness to actually wield it. How often and under what terms is the tool

³ A strategy is planned to be issued in 2013 (BMI, 2010: 57).

⁴ Of course, there are politicians that do not see the need for e-participation at all and would not further any related projects. However, in the face of the cornucopia of e-participation projects, it seems highly unlikely that they can maintain this position in the long run.

⁵ This was well-illustrated, for example, by the participation project of Germany's Minister for Traffic: punktereform.de, where it was stated, that the project's aim was to develop solutions that are supported from all parties (Lösungen „die gemeinsam getragen werden“). Unfortunately, the project website has since been disabled.

⁶ Examples are the protests against Stuttgart 21 and the nuclear energy strategy of the German government.

used? Is it merely deployed on special occasion? Or is it the go-to tool in the kit? The role of e-participation is thus its executed function in combination with the degree of its institutionalisation in Germany.

This paper examines consultative e-participation projects that open up new possibilities for citizen participation and that are initiated by politicians or political institutions. This excludes other types of e-participation, like the technical enhancement of formally-required citizen participation in, for example, the German planning permission hearings.⁷ Also, not considered in this paper is the enhancement of internal communication, e.g. a party's communication with its stakeholders.⁸ Additionally, participation that is initiated bottom-up, like lobbying campaigns or citizen initiatives, are not regarded.⁹

2. Critical Reflection: Is E-Participation a Hammer or a Saw?

2.1. Expectation I: Collecting the crowd's wisdom

Why do politicians feel the need to consult their citizens? The expectation to collect the crowd's wisdom seems to stem from an underlying problem. It is not the first time that politicians call-in external support. In the 1960s politics had to realise that it faced many seemingly unsolvable problems, at least without help. As questions became more and more complex, specific in-depth knowledge was needed to solve them. Politics became dependent on scientific expertise (Narr, 1970: 218). "All power to the experts", Bucchi summarises (2009: 2; see also Nowotny, 2005: 40). Through the means of expert counsel, politics was able to solve the problem of not knowing.

Currently however, as we develop into a knowledge society (Willke, 1996: 266ff.) and the world continuously increases in complexity (Luhmann, 2000: 143), even experts find it difficult to provide right answers to policy problems, which have simply become too complex to grasp fully (Willke, 1996: 302). Consequently, the decisions based on expert opinions lose their legitimacy: "*Politics is no longer anchored to the solid rock of expertise*", (Bucchi, 2009). Citizens start to question the output of a system they do no longer accept (Luhmann, 2000: 267; see also Fischer, 2009: 75). The underlying goal that politicians need to achieve is therefore: **Improving the quality of decisions**, improving the output legitimacy.

Currently, the chosen path is to enter into dialogue with the citizens and profit from their knowledge. Indeed, this seems to be the right strategy. It is impossible for single actors to consider all aspects of a problem and all the possible consequences. If many actors enter into dialogue, they can all contribute different insights and thus create a better solution (Willke, 2006: 100ff.; Feindt, 2001: 404f.). It is important to note at this point that these insights may be information and knowledge, which only in combination lead to the competence to solve the problems at hand, because each of them adds another additional angel to the problem.¹⁰

⁷ For a description of these see Nesseldreher (2006).

⁸ The German SPD does so on <https://zukunftsdialog.spdfraktion.de/>

⁹ A comprehensive classification of the different types of e-participation can be found in Albrecht et al., 2008: 17.

¹⁰ Of course, it is impossible to find solutions that will satisfy everybody. Still, it is essential to be aware of the risks or dissatisfaction that might be caused in order to make informed decisions and manage the associated risks (Willke, 2000).

Organising this participation online should enable many different actors to contribute in the problem solution. Hence, e-participation seems to be the right tool to tackle the problem of low-quality decisions.

In order for e-participation to actually fulfil this *intelligence-function*, it must I) indeed generate new information or knowledge, and II) these must be incorporated by politicians. Otherwise, there would be no improvement in the decision-quality. Furthermore, it is relevant who participates. If e-participation is only used by a certain group of citizens, not all possibly relevant information or knowledge will be contributed. Additionally, it is important to determine the degree of institutionalisation of e-participation. If it is only applied in certain projects, it is only a marginal development of the traditional system. The change would be more significant if it were established as an on-going process in addition to traditional channels. Thereby, truly intelligent structures would be established (Feindt, 2001: 435; Willke, 2006: 234; Beck und Fisch, 2005: 87ff.)

2.2. Expectation II: Mobilising more citizens for politics

Again, one needs to ask why politicians want more citizens to take part in politics. There are several possible answers. One possibility is that they perceive broad participation as a pre-requisite for a legitimate democratic system. This aspect is already covered in section 0. Another motivation might be to broaden the base for input to reach better decisions. This aspect was already covered by the previous section. Further, politicians might want to gain better understanding of their citizens. This communication-orientation will be discussed in section 0. Still, there is one motivation to mobilise more citizens, which needs separate consideration: the desire to gain votes. Gaining votes lies at the core of the maintenance of political power in a democracy and is thus essential for every politician. In order for e-participation to be the right tool for this task, it has to solve the problem that led non-voters to not vote.

One might classify non-voters into three types: the dissatisfied, the interested, and the uninterested type (see **Figure 1**).

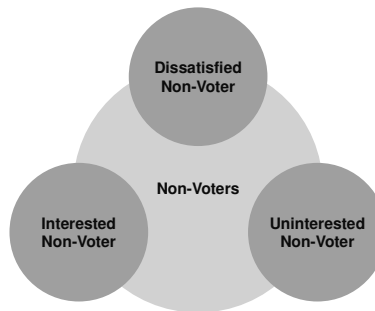


Figure 1: Types of Non-Voters

The dissatisfied non-voter (DNV) is dissatisfied either because of the quality or the legitimacy of decisions. If these factors are changed, the DNVs might decide to vote again. Hence, the change is a by-product of improved decision quality (section 0) or improved acceptance of decisions (section 0) and therefore does not need to be considered separately.

The uninterested non-voter (UNV) is the most common non-voter (Petersen, 2009). While he thus offers a great potential for the generation of new votes, his disinterest does not stem from dissatisfaction with the political processes or personnel (Petersen, 2009). He is simply not

interested in politics in general. As Vowe (2012: 2) has discovered in a long-term study, political interest depends on social factors, such as the level of education, on which e-participation has no influence. E-participation cannot create interest in politics (see also Märker in Helmich, 2011; Norris, 2006; Marr, 2005). E-participation is not the right tool to mobilise UNVs.

There is however, one group, which is interested in politics, but which has never taken part extensively in political life: the “bequeme Moderne” in the classification of Emmer, Vowe & Wolling (2011, p. 227), who make up 16% of the German population. Traditional means of participation do not appeal to them, going as far as refusing to vote – at least for parts of the group (ibid.). This sub-group could thus be called interested non-voters (INV). They are tech-affine and will hence be activated by e-participation. However, Vowe (2012) points out that “bequeme Moderne” will not change their offline behaviour. Thus, INVs would most likely not start voting. Politicians will need another tool to generate votes from this group. They might however, gather their ideas and opinions, which again, is the solution to another problem, namely the one of increasing decision-quality.

In summary, e-participation is no suitable tool to mobilise non-voters. E-Participation cannot fulfil a *mobilising-function*. All expectations to this effect will unavoidably fail and thus should be re-considered.

2.3. Expectation III: Communicating with citizens

Being elected, in order to keep or gain power, it is essential for politicians to gauge voters' reactions to their strategies (Luhmann, 2000: 281). Their indicator is the so-called public opinion (PO). PO however, is rather an artificial index created by the mass media than the accurate representation of people's opinion (Luhmann, 2005: 168ff.).¹¹ Also, it does not consist of opinions, but rather of topics. Mass media select what to cover and what not to, and how to classify the news. This influences both politicians and voters and creates the illusion that PO is a representation of reality (Luhmann, 2005: 171). However, new channels such as Twitter and YouTube change what people perceive as real. Citizens feel left out of the mass media's news process (Fuhse, 2003: 146), whereas news on social media are generated by their peers. Also, direct interaction with large groups is made much easier and economical (Vowe, 2012: 2) and thus, people find it increasingly awkward to be integrated in an artificial mass media index. They are dissatisfied if politicians do stick to traditional forms of (non-) interaction nonetheless. E-participation seems to be the right tool to apply here.

There could be two distinct manifestations of the new communication through e-participation: It might be that e-participation actually enables direct interaction between politicians and citizens. Or, it might be that it is rather another medium to form the PO, meaning that still no direct interaction is taking place and no actual opinions are aggregated in representative opinion polls. Rather, politicians would interpret the most prominent opinions or topics as indicating the PO, even though only a few users took part in the discussion.¹²

¹¹ Only representative studies actually relate to people's opinions.

¹² One indication for the latter manifestation is the discussion about the election of Christian Wulff as German President in 2010. His opponent, Joachim Gauck, was named President of the People, suggesting that he was the public's preferred choice (Schwarze, 2010). This PO however, was based mainly on one Facebook group, whose members cannot be considered representative for the German people (Reißmann, 2010).

In order to determine which manifestation of the *communication-function* applies, it is relevant to study politicians' behaviour. I) How do they interpret the discussions they observe on e-participation platforms? Do they deem them to represent the PO, or are they rather looking to them as direct interactions with citizens? If e-participation is indeed interpreted as representation of the PO, it might be that the concept is changed in that there develops a notion of a partial public. This means that IIa) politicians might be aware that only certain parts of the population are represented through e-participation, like .e.g. the net community.¹³ This *partial public opinion* (PPO) would then be characterized by the fact that the discussed topics and ideas are seen as representative for the entire net community, and not only for the few participants.¹⁴ If e-participation is seen as a form of direct interaction, it is relevant to analyse, if IIb) the user group is representative or not, in order to classify the interaction accordingly.

Again, the degree of institutionalisation influences the role that e-participation can play. If it is only offered for singular projects, no on-going communication can take place. Further, it would significantly hinder the public's ability to bring in topics of their own.

2.4. Expectation IV: Creating broader acceptance

80 million Germans will hardly reach consensus on anything. Democracy, therefore, is based on majorities and decisions are accepted nonetheless, if they are made by legally elected representatives. At least, this is how it used to be. Citizens now seem to have lost their trust in the rightfulness of this process (Luhmann, 2000: 234). According to Luhmann (2000: 258), every passing-on of power invokes a counter-cycle of informal power based on information. Representatives can hold back information or manipulate it and thus, the citizens' decision to keep a representative in office or not is not an informed decision – something more and more people become aware of. Still, they have no means to change this. Thus, the perceived legitimacy of the representatives' decisions decreases. As e-participation is not legally institutionalised and does not create binding decisions, it is no alternative means of input legitimacy.¹⁵ It could, however, improve acceptance for political decisions by increasing throughput legitimacy, legitimacy based on how decisions are made. Citizens might accept decisions if there were invited to participate in their preparation (Bucchi, 2009: 63; Joss, 2005: 26; Sutter, 2005: 222). E-participation could thus be a tool to create broader acceptance for political decisions.

A question to be answered for this function is if e-participation can generate a HALO effect. That means: If e-participation creates greater acceptance, does this influence the citizens' attitude towards all decisions, or just the ones that they were able to participate in?

¹³ The author is aware that the term "net community" is not undisputed. In this case, it is used because it is a common term to describe internet users.

¹⁴ Again, the discussion about presidential candidate Gauck serves as an indicator for this manifestation, as he was also titled: President of the Internet Community (Reißmann, 2010).

¹⁵ Increased transparency could of course be a solution to restore the trust in the representative system. While e-participation can hardly function without an increase in transparency, this analysis centres on the participative aspects.

The relevant criteria to determine if and which *acceptance-function* e-participation fulfils are thus I) if there is greater acceptance for decisions citizens do not agree to¹⁶ and II) if the greater acceptance influences the attitude towards political decisions in general.

Again, the degree of institutionalisation is an important determinant for the actual role of e-participation. If for example, there is no HALO effect to be observed, and e-participation is only used on a project basis, the effect on general acceptance will be minimal.

2.5. Synopsis

The analysis has shown that three of the four expectations that are placed upon e-participation are theoretically sustainable, namely the expectations centred on the *intelligence-*, *communication-*, and *acceptance-functions*. However, e-Participation cannot mobilise more people to become politically engaged. There is no possible *mobilisation-function* of e-participation.

Each possible function has possible sub-categories (see Figure 2). E-participation might fulfil several functions at once.

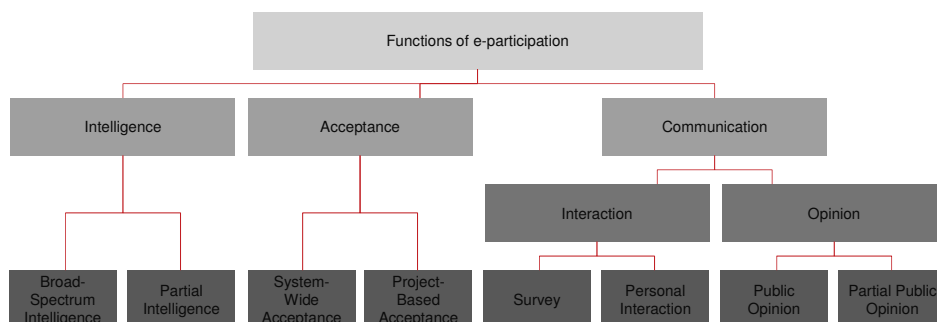


Figure 2: Possible Functions of E-Participation

For each possible function, the foregoing analysis has developed criteria to be tested and they, in combination with the degree of institutionalisation, lead to the role of e-participation in Germany. The result of the empirical test of these criteria and the degree of institutionalisation will be presented in the next sections.

3. Analysis: The Right Hammer for this Wall?

3.1 Method

The subsequent results are based on a standardised expert survey, which was conducted through an online questionnaire.¹⁷ While this method leaves less room for questions and comments, it was chosen for being less time consuming and individually accessible and thus enabling more relevant experts to participate.

¹⁶ E-participation can also create greater acceptance by improving the quality of decisions. This however, is a by-product of the intelligence-function and thus excluded from the acceptance-function.

¹⁷ The criterion representativity cannot be tested through the survey without significantly influencing the answers concerning the communication-function. Instead, it will be examined theoretically.

In order to achieve a balanced analysis, the survey includes experts from academia, administration, politics, and service providers, who were carefully selected according to their expertise of and experience with e-participation projects. All major German service providers are represented through their e-participation spokesperson or similar. In order to ensure that the participants from politics and administration are indeed the most knowledgeable about e-participation, members of the German Enquete-Commission on Internet and digital Society or, if substitution was necessary, the declared internet-politicians were selected.¹⁸ To represent academia, the experts were chosen among renowned scientists that analyse the different aspects of open government. This careful selection ensures that the sample of 15 experts¹⁹ provides a meaningful indicator for the characteristics and capabilities of e-participation in Germany.

The survey-questions have been designed alongside the established criteria (see section 0)²⁰ and the conducted analysis serves to assess their fulfilment. Mostly, the majority answer was decisive. However, as much room was given for comments, all statements were taken into consideration and serve to provide a more in-depth analysis that proves to be a valuable asset (see e.g. section 0).

3.2. Representative participation

As has already been discussed in section 0, a large share of the population is not and will not be interested in politics.²¹ They will not participate online. Furthermore, Emmer, Vowe & Wolling (2011) show in a longitudinal study that 47% of the population are only willing to participate on a minimal level and are not likely to invest more time if participation is moved to the online sphere. Thus, participation can never be representative. This is also expected throughout the literature (Norris, 2006; Leggewie, 2003) and confirmed by actual studies of the user group (Große et al., 2013).

This means, that only a small section of the population is participating online and thus the functions *broad-spectrum intelligence* and *survey* can be eliminated.

3.3. Degree of institutionalisation

Currently, e-participation is only used irregularly. However, the experts concur that in the foreseeable future, it will become more frequent. While some do indeed think that e-participation will become political standard, the majority of experts agree that it will routinely applied for certain projects only (see **Figure 3**). It can hence be concluded that e-participation will have a

¹⁸ Not all parties followed the invitation to participate in the survey. However, the opposition and government parties are represented, as are social, liberal and conservative perspectives.

¹⁹ A list and description of all experts unfortunately is beyond the scope of this paper but is, of course, available upon request.

²⁰ A detailed operationalisation and discussion of quality of analysis is unfortunately beyond the scope of this paper, but is available upon request, as is a full list of questions asked.

²¹ Of course, one might argue with an all-time voter turnout of 71% (Wissenschaftliche Dienste, 2009), the group of non-voters in Germany is comparatively small and consequently, so is the group of politically disinterested citizens. However, in terms of representativity this is a very significant share, especially because political interest is correlated with social factors and it is thus a very specific part of the population whose input misses in e-participation.

defined space in the political process but will not be a new standard of decision-preparation that might even replace representative democracy.

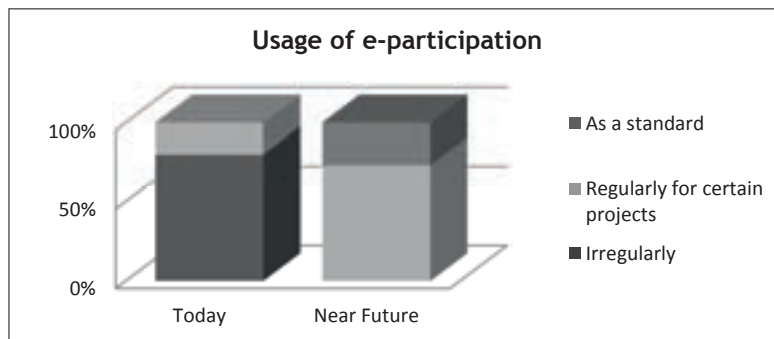


Figure 3: Institutionalisation of e-participation

3.4. Intelligence

Most experts agree that e-participation can generate new impulses for the political problem solution (see **Figure 4**). Nonetheless, an important insight can be gained from the diverging opinions. The experts from academia both negate the *intelligence-function* of e-participation. They argue that the information and knowledge already existed and that e-participation merely offers a new channel of transportation. On second glance, this is not a direct contradiction to the *intelligence-function*, but rather a reformulation. It rejects the notion of information and knowledge coming together on e-participation platforms, being discussed there and merged into a more comprehensive solution. It rather describes e-participation as a vessel meant to gather these impulses. Politicians can then exploit this source and create the needed solutions. Actually, this second description appears to be more realistic. Many platforms do not even offer the possibility to add to and edit suggestions. Even if they do, changes are minimal.²² It seems thus wise to change the connotation of the *intelligence-function* accordingly: E-participation allows the inflow of new information and knowledge into the decision-making-process.

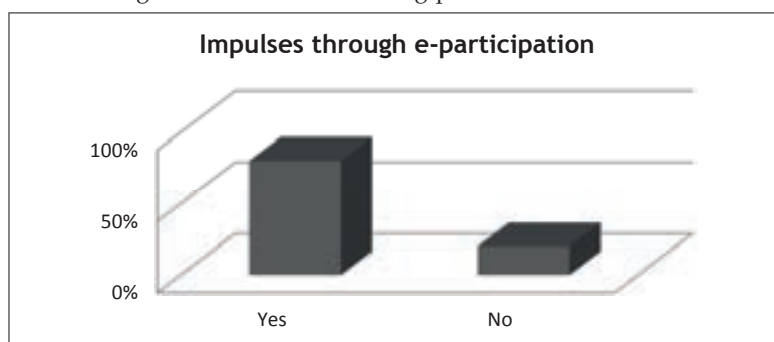


Figure 4: Impulse-generation through e-participation

²² Good examples are the suggestions made on enquetebeteiligung.de. Even though the adhocacy-platform offers the possibility of editing suggestions and working with different versions, even the suggestions that were directly passed on into the final report (Jarzombek, 2011) were discussed, but not edited.

Regarding the influence of the information and knowledge transported through e-participation, the experts are divided. While one half states that the political decision-making is influenced by these impulses, the other one does not think so. Interestingly, in this case, the separation runs alongside the distinction of government parties and administration on the one hand and opposition parties on the others. One might thus argue in favour of politically motivated answers. The non-political experts are of divided opinion. However, the majority of experts foresees a positive trend and expect the influence to grow in the future (see **Figure 5**).

It is, hence, justified to attest e-participation an *intelligence-function*. However, as there will always be disregarded information and knowledge due to the non-representative user group, there can only be *partial intelligence*. In accordance with the project-based degree of institutionalisation, e-participation has the role of *project-based elite consultation*. *Consultation* hints at the fact that because e-participation will only be used for some projects, citizens will not have the possibility to identify problems or set topics themselves. *Elite* refers to the fact that only a small part of engaged citizens will participate.

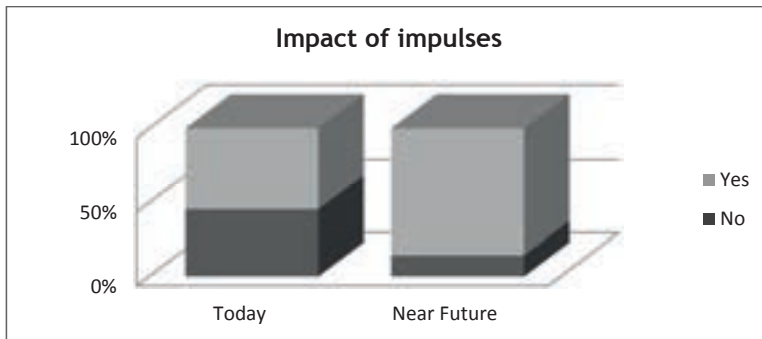


Figure 5: Impact of the impulses that were generated through e-participation

3.5. Communication

Despite the fact that e-participation cannot fulfil a *survey function*, a significant share of the experts accords it the capability to reflect the public opinion (see **Figure 6**). It is especially noteworthy that all politicians agree on this. This means that e-participation continues the illusion of a PO.

In combination with the degree of institutionalisation, e-participation is accorded the role of *observation hatchet*. *Hatchet* accentuates that politicians only choose to observe the public opinion through e-participation in selected decisions.

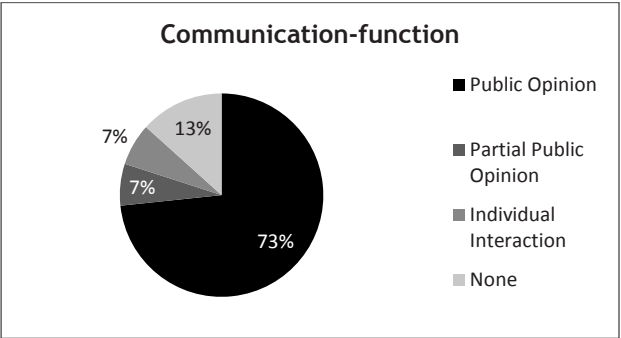


Figure 6: Perceived types of communication

3.6. Acceptance

At first glance, it seems that while e-participation is accorded no HALO effect by the majority of the experts, it at least is suited to increase the acceptance for political decisions by adding to the perceived throughput legitimacy (see **Figure 7**). However, this agreement about the *acceptance-function* must be limited. Most of the experts in favour of the *acceptance-function* only agree to it under the condition that it is closely linked to an *intelligence-function*. This implies that while citizens might not agree to the decision that was reached, they need to feel they had a fair chance to influence the outcome. At this point however, a very significant hindrance is encountered. In order to feel they had this fair chance to influence the outcome of the discussion, citizens must know about the possibility to participate. While this could be achieved by sufficient promotion, the actual problem lies with the awareness of the citizen, as is pointed out by one of the scientists. Especially with the long-term projects that encounter the most problems in terms of acceptance, many potentially afflicted citizens are not aware that the decision concerns them or will concern them in the future. Thus, they recognise no need to participate. When they become aware of the consequences the project may have for them, most decisions are already underway. Consequently, they do not perceive the fact that e-participation took place at some point in time as adding to the legitimacy of the decision. The use of e-participation does not on itself have an effect on the perceived rightfulness of decisions. An *acceptance-function* of e-participation has to be negated.

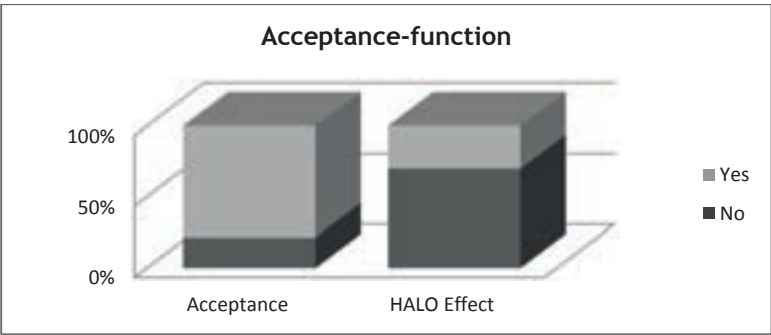


Figure 7: The effects of e-participation on the acceptance of decisions

3.7. Summary

The foregone analysis identified two functions of e-participation in Germany: *partial intelligence* and *public opinion* (see **Figure 8**). There is neither a *mobilisation-function*, nor an *acceptance-function*. In combination with the expected degree of institutionalisation of e-participation in Germany, this leads to the two roles of *project-based elite consultation* and *observation hatchet*.²³

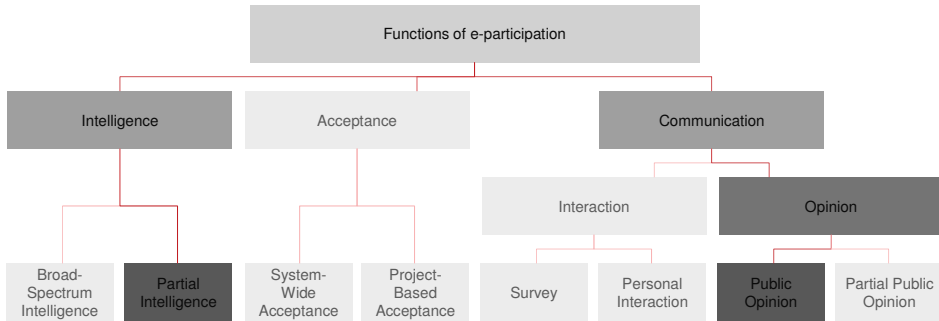


Figure 8: Actual functions of e-participation

4. Conclusions and Discussion: No Swiss Army Knife, but a Great Hammer

It has been shown that e-participation in Germany has to deal with many unrealistic expectations. It is no universal problem solver, no Swiss army knife, which can transform into whatever tool is required at the moment. It cannot provide greater acceptance for political decision by offering increased throughput legitimacy. It cannot mobilise uninterested people to engage themselves more in politics. This does not mean that e-participation is not a good tool. A hammer would not be downgraded for not being able to saw in half a log of wood. Neither should e-participation be measured by the overambitious expectations that were placed on it. Rather, the expectations towards e-participation should be reformulated and only encompass a *communication-* and an *intelligence-function*. E-participation takes the role of *observation hatchet* and *project-based elite consultation*.

When it comes to e-participation's *communication-function*, it has been shown that there is no direct interaction or representative opinion polling. Rather, e-participation is another player in addition to the mass media and influences public opinion. This diminishes the power of the mass media. Still, it holds the danger that the original frustration, the people's perception that mass media do not offer a valid reflection of world, will not be mitigated by e-participation. Thus, while e-participation fulfils a *communication-function* and certainly changes the public opinion, it is not guaranteed that this solves the perceived communicational nuisance in between politicians and citizens.

Regarding the *intelligence-function*, the analysis offered an interesting insight: Information and knowledge are transported through e-participation, but they are not combined to create comprehensive solutions. This task is left to the actual problem-solvers: the politicians. This offers a very strong argument in favour of representative democracy.

²³ There might be additional roles for e-participation that have not yet come to the awareness of Germany politicians, as there might be usages for a hammer that have not yet been discovered. These however, need to be discussed in another paper.

These discoveries also hold significant implications for the design of e-participation. Firstly, many citizens contribute formulated ideas and proposals. It thus needs to be possible to group or merge similar suggestions. This can happen by tags, special topic-threads or it can be managed by moderators. Only by clustering ideas, important meta-topics can be identified or trends recognised. Secondly, it is advisable to include a voting-function in order to enable participants to support suggestions that are similar to what they had in mind. Also, such a minimal-effort feature would also allow the participation of the more passive 47% of the population.²⁴

Finally, the results of this study have implications for non-e-policies. It is important that politicians reconsider their strategy to generate political participation. The tool that they placed their hopes on is not suitable. There is a need for strategies that foster participation regardless of social status. This needs to be done in educational and academic institutions. Further, in order to create higher acceptance of political decisions, the trust in traditional cycles of representation must be re-established. This can only be done by transparent and honest communication and knowledge-sharing.

All in all, if the strategy for e-participation in Germany is refined and focused, it offers a great potential to become better-connected to the citizens and to generate high-quality solutions to complex problems. E-participation cannot replace a representative government, but it can enhance it significantly.

These reflections, while being crafted for Germany, offer a valuable starting point for similar analyses in other countries.

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²⁴ See section 0.

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About the Author

Katharina Große

Katharina Große works at the institute for public sector and business informatics at Zeppelin University (ZU) in Friedrichshafen, Germany. After her Bachelor's degree in Marketing Management from the International Business School in Groningen, Netherlands, she completed a Master's degree in Public Management and Governance at ZU. Her current research focuses on the citizen's role in a digital democracy. Recent publications include a study of the success of the e-participation portal of the German Enquete-Commission on Internet and digital Society (available in German at <https://fold.liqd.net/files/2011/10/Der-Erfolg-von-enquetebeteiligung-V1.pdf>). Outside Germany, Katharina has lived and worked in France, the Netherlands, Canada, and Spain. She speaks all the respective languages and strives to achieve the same in Arabic.

Organizing safe on-line interaction and trust in governmental services.

A case study of identification channels for public e-services in schools.

Mariana S. Gustafsson*, Elin Wihlborg**

* PhD-candidate, Department of Management and Engineering, Linköping University, Sweden.
mariana.s.gustafsson@liu.se

** Professor, Department of Management and Engineering, Linköping University, Sweden.
elin.wihlborg@liu.se

Abstract: *There is an increased use of public e-services integrating citizens into public administration through electronic interfaces. The relation among parents and public schools is a daily and important relation that has to be trustworthy. On-line interaction among public organizations and citizens can be seen as e-government, indeed embedded into daily practices. A safe entry into such systems is essential for security and trust in the e-governmental systems and schools as well as public services in general. This paper addresses how electronic identification has been used for access to public e-services in schools in a Swedish municipality. The aim of the paper is to present a case study on how electronic identification is used and implemented in ICT platforms in schools. The analysis focuses on information security, organization and potential development of the platforms. The main finding in the case study is that there was an un-organized presentation of information in the system; both general and personal information had to be accessed with the same level of security (identification systems). The organization of identification and access to public e-services seemed highly dependent of the organizational structure of the public schools. The more general implication is that safe and well organized identification systems that are considered as trustworthy and useful among citizens are essential for increased use of the services and legitimate public e-services in general.*

Keywords: electronic identification, e-government in public schools, case-study, eID

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1. Introduction

Identification is a crucial part in all relations and it becomes even more important as societies develop into more complex, integrated and globalized networked relations (Giddens, 1990). This also relates to the risks in the settings of the digitalized society (Castells, 1996 and 2011 Beck, 1992). In citizen-government relations the identification confirms citizenship and thereby it

gives access to welfare and social services. This is at the core of e-government (Heeks & Bailur, 2007). In an increasingly digital society where e-government develops and becomes more integrated into citizens' daily practices and activity patterns, needs arise for safe and trustworthy arrangements of identification. Electronic identification (eID) confirms and verifies the identity of a person and is related to the citizenship. The electronic identification thus plays a fundamental role when relations among citizens and the government are transferred into e-governmental relations (SOU 2009:86 and SOU 2010:62). Electronic identification is essential for providing public e-services that are individual and related to the individuals' personal information (Taylor & Lips, 2010, Söderström, 2011, Axelsson & Melin, 2012,).

Identification systems are designed and managed by each state and its government. The Swedish system of electronic identification was initiated in the early the 1990s by the *Swedish Tax Agency* (STA). They saw a potential for improved efficiency in creating links between systems containing tax information and civil registration data (Soderstrom & Melin, 2012). A common practice is that eID is downloaded as a security-software on the user's computer and/or available on-line. Identification devices are used to confirm the identification by a unique signature when accessing the e-service (Grönlund, 2010).

In mature welfare states, as Sweden, where citizens express high trust towards the state (Rothstein, 2009) there is also a high level of interaction among the state and its citizens. There is also a high and clear policy ambition to reach an almost complete coverage for public e-services (Grönlund, 2010). The government aims to develop a modern and efficient public administration at all levels. Improved e-government is highlighted in several policy documents, among other in the National Digital Agenda and the issue is made explicit in the state budget. Sweden also stands out for its high access to computers and internet access; about 97% of the households have access to Internet (Eurostat 2011).

Education is compulsory and free in Sweden. The Government regulates and funds all education and schools are managed by the municipalities. In line with new public management models, private companies and foundations can also run schools. These schools are called "free schools" and provide education at all levels and follow the same laws and regulations as the public schools. The municipality has the main responsibility to also allocate pupils and resources to the free schools. Hereby, the schools make up an essential part of the local government service to citizens. There is a long history of use of ICT in education in Sweden and with the new Education Act (2011) that demands increased and systematic reporting of the pupil's school progression, use of ICT in education administration will probably increase. In this context systems for safe log-in and identification become essential and have developed as a commonly used local citizen - public authorities' interaction. Here essential information, including sensitive information is transferred among several actor groups. The pupil's integrity is at the core of this. Teachers and parents have to communicate both about the progress of the pupils and the general schedules in the school. Teachers also have to report to head teachers and other administrative authorities. There is a general high demand on teacher's professionalism, quality of education, pupils learning target achievement and their eligibility for further education. Use of ICT-systems for teaching and administration of education has therefore developed rapidly. We have here chosen to focus on two ICT platforms used mostly in all schools (to different degrees) in one Swedish medium sized municipality.

1.1. Aim of the Paper

The aim of this paper is to present a case study of use of electronic identification to access ICT platforms in schools in order to analyze security aspects, organization and potential development of the platforms.

1.2. Case Study Methods

The general processes of policy development and design of eID highlight the importance of trust and safety (Soderstrom & Melin 2012; Melin, Axelsson & Soderstrom 2013), but there is also a need to analyze its practical outcomes and how it is embedded into organizational practices.

This case study focuses on use and implementation of secure login to ICT platforms in five schools in a Swedish municipality — Linköping — focusing both on the central administration and schools' practice. As an example of e-government this analysis applies a public administrative focus. All five schools are at primary and secondary level, one of the schools is a "free school" publicly funded but run by a private organization. The case study material consists of nine in-depth interviews and eight focus groups, involving in total forty-one informants (school principals, teachers, pupils and municipality officials). Semi-structured interviews were made with school principals and the schools' IT- or Fronter-administrators. The school principal was a key person with an overview of the school organization and the strategy and priorities for school development. Beside his/her leadership function, the principal held administrative responsibility at the school and was key decision-maker with regards to allocation of resources inside the school.

The research design strived to reach key informants who could inform us about the school organization and their experience with using the platforms Fronter, Dexter and other ICT-systems in their work. In addition local policy documents have been analyzed, to get a background of the processes and policy statements made both regarding these specific systems and municipal e-government in general. A limitation of the study is that we have not at this stage made any formalized interviews with parents. The schools are not willing to provide contacts with parents. However, in some of the interviews and focus groups the informants provided information in their role as parents, although tangentially.

2. Identification in On-line Relations and Local Organization of e-ID

Identification can confirm citizenship and as such it is related to a complex web of relations. Identities are transformed and given other meanings in a globalized information society (Castells, 1997/2010). The development of electronic identification refers both to a technical solution and social and organizational arrangements (Axelsson & Melin, 2012). It is a socio-technical system, but as such it is limping. There is a mismatch of social and technical innovations that can challenge legitimacy of e-government (Wihlborg, 2012, Söderström, 2011) and electronic identification in particular and e-government in general (Axelsson & Melin, 2012).

In order to form legitimate e-governmental systems there has to be a balanced and high level of actual and perceived security. Actual information security is a factual, objective state of the information security in a system and it includes all aspects of security arrangements. Perceived information security is a subjective interpretation made by a single individual in his/her context and is based on personal knowledge and experience. There is always a difference between actual and perceived information security, since people never can reach a complete knowledge about the degree of actual information security at a specific point in time. The perceptions of information security can differ among different subjects who act in the same organization, as these are influenced by the nature of their work, the knowledge they possess, experience, own analysis and judgment (Oscarson, 2007).

The perceived security is highly related to the organizational setting that the ICT-system is contextualized into. E-government is based on political institutions and thus legislation and policy decisions are framing the IS-system (Hardy & Williams, 2011). In this case the national legislation clearly defines the role of the schools in the municipality and their local action spaces. There is a strict legislation on communication and transparency on pupils and their results.

3. e-ID as the Way into E-Services - The Case Study

This case study is based in Linköping, a Swedish municipality with 145 000 inhabitants. The municipality has been a forerunner in applying a functional organization, with internal procurement also in the educational sector. There are today a total of 84 schools, whereof 66 are primary schools (55 public and 11 free-schools) and 18 are secondary schools (5 public and 13 free-schools). In this section we present the two ICT platforms — Dexter and Fronter — used in schools and demanding eID.

3.1. Municipal Policies on eID and Education

The municipality has, in line with national and European policies, a local policy —“eVision”, with the aim that *“e-Service shall make it easier to live and work in the community”* (eVision and eProgram for the Municipality 2006, p. 4). This policy, implemented during 2007-2010, focused on the three key areas: e-democracy, e-service and e-administration. The Digital Agenda adopted in 2012 made trust and safety of digital systems more explicit.

The ICT platforms in schools are a key area of implementation, where the pupils’ “individual development plans” (IUP, legally demanded documentation) will be managed digitally and allow the parents to get access to the IUP (Municipal Digital Agenda 2012, p. 3). Information security was a fundamental precondition for this implementation and was given specific focus in the Digital Agenda. A joint login function for easier access in the education area was to be developed, with a pilot on eID being conducted in spring 2012. The piloted systems included: Skola 24 (access to records on pupils attendance), Fronter (access to digital IUP) and Dexter (registration of supervision hours within childcare) (Municipal Digital Agenda 2012, p. 8). Fronter and Dexter are the most used systems and will be the focus here.

3.1.1. Dexter

Dexter is widely used in the municipality’s e-services towards citizens. Primary schools are using the attendance function and the grading function offered by *Dexter*. Through *Dexter* pupils and their parents can choose and apply for childcare, where the parents can follow up their place in queue and report their income (to calculate fees). There are several alternative ways to log in to *Dexter*. Teachers are using their intranet password while parents can log in by a personal ID and password or their eID provided by banks (See Figure 1, where the blue boxes are translation of Swedish text). The former alternative is encouraged, but a pilot is running currently to investigate solutions for a wider use of the latter alternative.

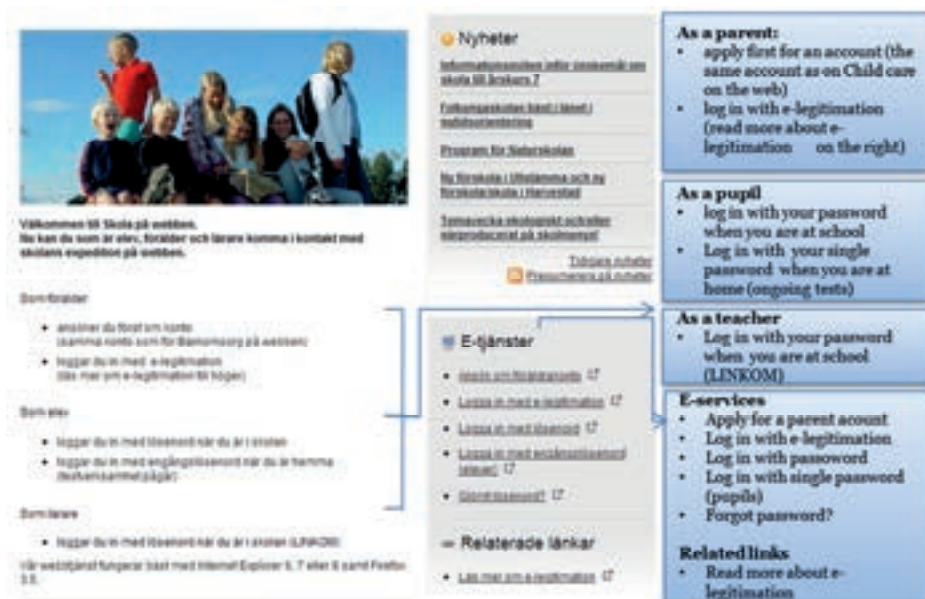


Figure 1: . Dexter snapshot, log in view at Linköping municipality webpage

Figure 1. shows different types of log-in opportunities for different user-groups. The main impression of the first page into the system is the focus on the three core actor-groups: parents, pupils and teachers. The parent-school relation is encouraged already here and the potential of the e-service is clearly pointed out.

3.1.2. Fronter

The program *Fronter* is both a learning/teaching platform and an administrative tool for managing work-tasks like pupil documentation (IUP, goals, portfolio and attendance records), teaching administration and planning. Linköping municipality started to implement it in 2007, and today most schools are included, but some still lag behind of local organizational reasons. The teaching functions are the mostly used and the communication between parents and schools is not yet fully implemented. Teachers and pupils are seen as internal users and they log in to the platform using a personal password. Teachers are using their intranet password and the pupils are using intranet password or a single-use password (See Picture 2). Parents are logging in by the external electronic identification system. Parents can- and have logged in by using the pupils log-in. But they are supposed to use a personal eID to reach a higher level of security.

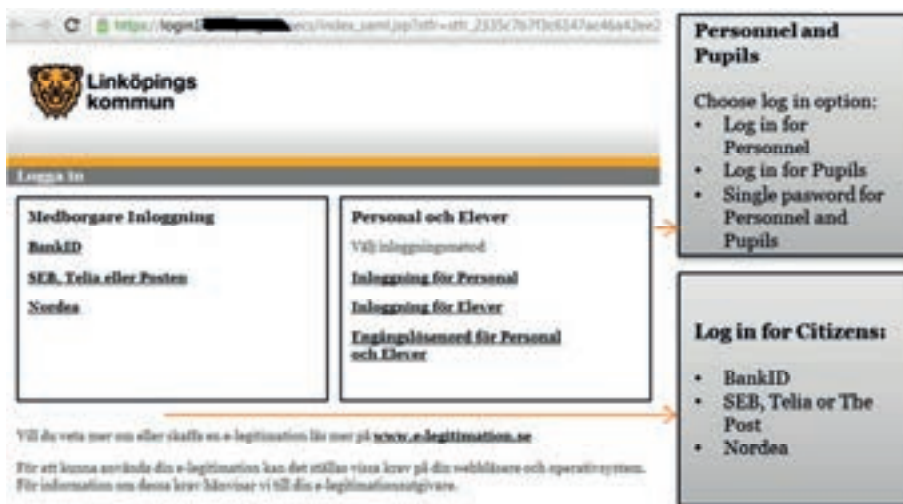


Figure 2:. Fronter log in snapshot at the webpage at Linköping municipality

In contrast to the Dexter login-page the eID has a much more apparent role on this first page of the Fronter system. Login for parents are described as “For citizens” and requires an eID, provided by the private banks or national post.

The Figures 3 and 4 illustrate the increasing activity in Fronter, showing the amount of active users and total log-ins to Fronter per month. The dips in both pictures are illustrating the use during summer vacations. This development is grounding for our analysis focusing on security, organization and potential developments.

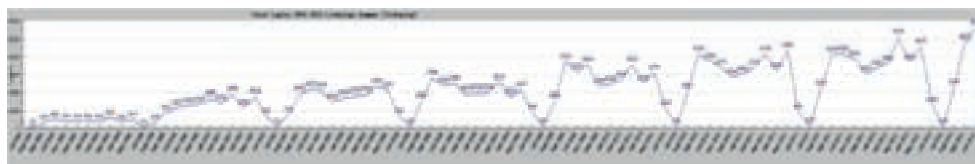


Figure 3: Total logins Fronter 2001-2012 (Linköping Municipality)

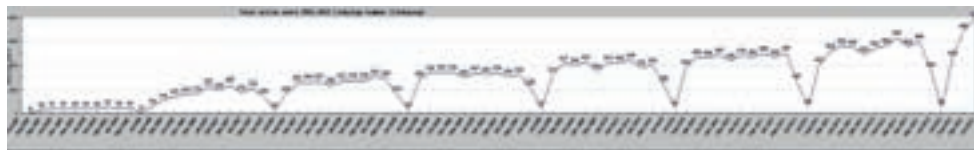


Figure 4: Total active users Fronter 2001-2012 (Linköping Municipality)

4. e-ID in Practice - Results and Analysis

This paper is based on an in-depth single case study. The analysis of the use of eID and different platforms for interaction between parents and schools can be taken even further. Here we focus on information security, organization and potential developments of the systems with the certain eye for safe electronic identification.

4.1. Reach of information - security in focus

Our case study indicates a diverse range of thoughts and experiences of security aspects connected to secure log-in among the key actors. The informants highlight issues regarding both actual and perceived security of the system and the organization of work methods. The most common discussion is the management of personal and sensitive information.

Two important security aspects connected to the system's factual security are *operational reliability* and *data security*. Fronter is considered as a stable platform, fulfilling these technical dimensions, according to the IT-coordinators (interview 12-10-22). Secure log in for legal guardians, on the other hand, is an actual and complex issue since these are unique users who have to manage several related issues of identification and rights. External electronic identification, eID, is a solution that the municipality plans to use so as to allow legal guardians' access to the platform. However, the primary problem is connected to client support in diverse problems connected to the e-services. Since eID is administered by several agents (BankID, Telia, SEB, Posten, Nordea etc.) the municipal administrative officials can only help partially if at all (interviews 12-10-23, and 12-10-22).

The municipality deals with large sets of sometimes personal and sensitive information regarding citizens, raising the demand for secure channels of handling this information. The demands for secure management of information are increasing in on-line systems, even if the security level was lower before these systems were put into use, as one of the administrative officials admitted:

"You can never be sure that the person calling is indeed the personal who he says he is" (interview 12-10-23).

There is a much lower actual security when calling, but it appears to be paradoxically interpreted as more secure among at least some end-users.

The system administrators also emphasized that it was still indefinite how different types of personal information would be managed and exposed to the users. One of the principals (School 1) also questioned what type of information was stored and securely managed in Fronter. His school was running a project that was investigating the issue of digitalization of all registered files and was going develop security requirements on the system (interview 12-10-30).

Another finding concerns the different value of the information stored in Fronter for the different users. Information, for ex. logbooks written by the pupils, can be sensitive for the specific pupil or teacher who have logged a conflict during a project, while be totally non-sensitive for the rest:

"... if somebody logged in and read my logbooks, I would be hated in my class"
(Focus group 12-12-04).

The different value of information for the users has important implication for factual and perceived security relation, meaning that the sensitivity of data and the security needs can be relative and relational.

Perceived security builds importantly on trust. The key actors seem to be the teachers who do or do not trust in their own IT-skills, the IT-systems themselves and the organization support. This system strives to include everyone and the differences regarding competences and experiences of competence was highlighted in the focus groups as the main constraint for common trust and organization.

4.2. Schools On-line a New setting - New Organizational Forms are Emerging

Fronter and Dexter are implemented to improve organizational efficiency and quality both regarding pedagogics and administration. The schools are autonomous organizations, where the school principals have a large degree of independence. Based on their professional competences the teachers are entrusted to manage their daily work independently. In this context Fronter and Dexter are supposed to be implemented and used in flexible ways and the identification systems have to support this. The municipality cannot force the teachers to actually use the systems

"... they (ed. school principals) decide in the school, but it is the teachers who have the final responsibility (ed. to actually use the system)" (interview 12-10-22),

The municipal IT-coordinators have noticed the importance of the school principals' personal engagement and interest in the systems for successful implementation and high interest in login to and using of the systems. The principals have to prioritize the implementation and allocate time and money in the budget. But it is also about Fronter-administrator and skilled IT-teachers who understand its potential and who can show and inspire their colleagues', as was explained by the IT-coordinators (interview 12-10-22).

A teacher (in focus group 12-11-05) described the organizational set up around Fronter as: "quite loose". The users in some schools perceived no directives concerning how to use Fronter while in others it occurred naturally. The teachers who had used Sharepoint (a similar platform) a lot changed to Fronter much easier than other teachers, for example. It wasn't organized specifically, but it happened naturally due to skilled IT-interested teachers, as one of the principals described:

"there was a teacher in each work group who had the competence and the will to test Fronter"
(interview 12-11-06).

Almost all informants pointed out that this relation was unclear and loose today. If a user (teacher, pupil or parent) encountered problems with Fronter or Dexter, the organization and support of the login possibilities was unclear.

Consequently, the organizational setting is important for the implementation of secure login and identification. Since the organizational setting in general was decentralized it was difficult to reach coordinated and standardized use of the information platforms and identification to it.

4.3. It is good, but can be better

Ideas of potential development of secure login to the platforms abounded in the interviews. These differed among the informant groups and related clearly to their focus and interests. The administrative officials had more of a system focus and parents and teachers had more ideas

relating to their own use of the system. In spite of this the ideas on potential development can be categorized in two types, regarding organisation and regarding trust.

A combination of a shortage of IT-competence and infrequent use had a negative influence for the implementation and use of eID for ensuring secure IT-systems and e-services, which also implied less usability and weaker impact on target achievement. One of the teachers considered that

“There should be a critical mass, that a majority of the teachers are using it. Maybe it should be 85% of the teachers who are using it, in order for it to be meaningful” (interview 12-11-06),

There is a long way to go in development and organisation of public e-services and electronic identification arrangements connected to them. Most of the ideas focused on the relationship and coordination among the schools, the municipality and the technical developers. As shown by the interviews, reliance and trust in the e-services depend on a range of factors and conditions, such as development of support structures with clearly defined roles of the agency, users' skills and attitudes towards use of IT-systems in schools and competence development measures targeting the different groups of users in and outside the schools.

In the context of transition from a verbal tradition to a written and digital documentation on schoolwork and pupils performance, a considerable amount of sensitive data needs to be handled. This urges for development of secure, flexible and at the same time simple and accessible IT-solutions, a point that is raised by teachers, school principals and municipality officials. IT-coordinators foresee that more specialised systems are under development for deeper information to be shared on different levels by different actors, which raises the demand on security (interview 12-10-22).

Trust in the IT-systems used by the municipality (and other authorities) seemed to be a core element for acceptance and use of the different IT-solutions, according to our interview data. More specifically, we can identify two dimensions of trust - trust in the security of the system itself and trust in the subject's own capacity to deal with the system. In both these respects there are potentials for development.

5. Concluding Remarks

From this single-case study we can draw some conclusions regarding development and use of secure login solutions in education. Firstly, we will point out the need for improved work on secure systems and use of eID embedded into the practical policy areas. Electronic identification has to be suitably included as an essential part of all public administrative situations where identification is needed. New forms of trust and legitimate governance have to be promoted when public administration less and less takes place in face-to-face situations. This case study highlights two such basic aspects: the disparity of actual and perceived security and the organisational arrangements.

The main findings show that use of secure log in or eID is at its incipient stage in the education area in the municipality of Linköping. This is explained by the difference in factual and perceived security among the different user groups. Low frequency of use, technical problems of the systems, lack of IT-competence and lack of trust in IT are several aspects that seem to influence the perceived security of the system among the users. Identification is not the primary focus of public e-services from a user perspective. However, when highlighted no respondent hesitated to its importance.

The general organizational arrangements and the decentralized management of schools muddle the trust in eID and the specific platforms with the trust in the educational system in general. These platforms had a standardized and coordinative function that did not fit into to the

decentralized and flexible organization of the schools and their work methods. Private software companies have designed and provided all-inclusive platform solutions, especially in the case of Fronter, but the local implementation in schools was to different extent limited and opened for frustration. In addition the Swedish national eID connection to these systems presents a challenge. Thus there are laggards among potential users who might have problems accessing the external identification rather than the platforms themselves. Perceptions of security of the systems take place in the complex interplay of the providers of electronic identification and the services within the platforms.

There are several challenges of making these types of systems more secure and still keep them simple for the user and flexible for management. There are obvious needs for further technical development, improved competence and trust among users, and improved organizational set ups for implementation of these systems. This work is essential for security and trust in public e-services and e-government in general.

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Interviews

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- 2012.10.23 Group interview with Administrative officials (5 participants), Municipality
- 2012.10.30 Group interview with System administrators (2 participants), Municipality
- 2012.10.30 Interview School Principal 1
- 2012.11.06 Interview Secondary School Teacher 2

Focus groups

- 2012.11.05 Focus group Primary School Teachers (5 Participants).
- 2012.12.04 Focus group Secondary School Pupils (4 participants)

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About the Authors

Elin Wihlborg

Elin Wihlborg is a professor in Political Science at the Department of Management and Engineering, (IEI) Linköping University, Sweden. Her research focuses on public administration, in particular regarding regional development, urban planning and e-government and implementation issues in general. Her research has been published internationally and in handbooks for policy makers in municipalities and regions in Sweden. She is a member of the faculty board and supervises a number of PhD-students in different areas.

Mariana S. Gustafsson

Mrs. Gustafsson is currently a PhD student at the Department of Management and Engineering, (IEI) Linköping University. She has worked in a number of FP5 and FP6 research projects in the area of innovation, labor market *research* and information society, based at Lund University. Subsequently she has joined Oxford Research to work with evaluations and consultancy in the areas of innovation and organization development. Her research interest is currently focused on politics and economy of high technology and consequences of these upon society

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Bravehearts or tim'rous beasties?

A decade of research into online election campaigns in Scotland

Graeme Baxter*, Rita Marcella**

* Research Assistant, Department of Information Management, Aberdeen Business School, Robert Gordon University, Aberdeen, UK, g.baxter@rgu.ac.uk

** Dean of Faculty, Aberdeen Business School, Robert Gordon University, Aberdeen, UK, r.c.marcella@rgu.ac.uk

Abstract: *Over the last ten years, the authors have conducted a series of investigations into the use of the Internet by political parties and individual candidates during parliamentary election campaigns in Scotland. These are the only such studies which have looked specifically at the Scottish political arena. This paper provides an overview of the results of these studies, and reflects on how new technologies have been adopted by political actors in Scotland in an effort to disseminate information to, and engage with, potential voters.*

Keywords: Internet, elections, political parties, candidates, Scotland

The formation of the new Scottish Parliament in 1999²⁵ was widely regarded as an ideal opportunity to introduce a new, more transparent style of democracy, and one that would make extensive use of developing information and communication technologies (ICTs) (Consultative Steering Group on the Scottish Parliament, 1998). Indeed, subsequent studies (e.g. Smith & Webster, 2008) have indicated that, in Scotland, “new ICTs have become a cultural norm of contemporary parliamentary life”. In the earliest years of the Parliament’s existence, the current authors hypothesised that those seeking to gain election to this new legislature would seek to take advantage of the opportunities offered by ICTs and, in 2003, conducted the first in an ongoing series of investigations examining the ways in which political parties and individual candidates in Scotland use the Internet during parliamentary election campaigns. To date, studies have been conducted during the 2003 (Marcella, Baxter & Smith, 2004), 2007 (Marcella, Baxter & Cheah, 2008) and 2011 (Baxter *et al.*, 2012) Scottish Parliament elections, as well as during the 2010 UK

²⁵ For those readers unfamiliar with the legislative situation in the United Kingdom, dramatic constitutional changes in the late 1990s saw the devolution of some legislative powers from central government in London to three new devolved bodies, the Scottish Parliament, the National Assembly for Wales and the Northern Ireland Assembly. The devolved matters on which the Scottish Parliament can pass laws include: agriculture, forestry and fishing; education and training; environment; health; housing; law and home affairs; local government; police and fire services; some aspects of transport; sport and the arts; and tourism and economic development.

Parliament campaign (Baxter, Marcella & Varfis, 2011; Baxter & Marcella, 2012), which was predicted by several observers (e.g. Helm, 2010) to be one on which ICTs, particularly new social media tools, would have a significant impact. These studies have coincided with the emergence of a significant body of literature that has discussed the use of the Internet as an electoral tool by political actors worldwide. As Ward and Vedel (2006) observe, the early literature, from the mid-to late-1990s, heralded a general wave of enthusiasm about the potential impact of the Internet, where “mobilisation” or “equalisation” theorists predicted that it would facilitate a more participatory style of politics, drawing more people into the democratic process, and bringing politicians and voters closer together. Shortly afterwards, however, a second wave of more sceptical voices appeared: “reinforcement” or “normalisation” theorists who argued that the Internet simply reflected and reinforced existing patterns of ‘offline’ political behaviour. More recently, renewed optimism has emerged, due largely to developments in the United States, where, for example, Barack Obama’s 2008 presidential campaign successfully used new Web 2.0 technologies to raise campaign funds and create networks of supporters and volunteers (Cogburn & Espinoza-Vasquez, 2011).

This paper will outline the methodologies used during the authors’ four campaign studies, and will provide an overview of the results of these investigations. It will discuss how Scottish political actors’ online efforts have evolved over the last ten years, in terms of the ways in which they have provided campaign information to the electorate, as well as any opportunities for interaction, debate and feedback. It will consider whether these results support the mobilisation theorists’ revolutionary claims; or whether Scottish politics online remains, as the normalisation proponents suggest, “politics as usual” (Margolis & Resnick, 2000, p. vii).

1. Methodologies

A number of different methodologies have been used by the authors over the ten-year period. However, one consistent element throughout all four studies has been the content analysis of party and candidate²⁶ websites. In terms of the political parties, the content of the websites of all parties fielding candidates has been examined and analysed, where such websites have existed. These parties have ranged from the four major ones that have traditionally dominated the Scottish political arena (i.e. the Scottish National Party (SNP), the Labour Party, the Liberal Democrats and the Conservatives), to the minority/fringe parties, some of which have stood during one election only and have campaigned on very specific issues (e.g. the Equal Parenting Alliance and the Save Our NHS Group, both in 2007). Back in 2003, less than 40% of the competing parties had a website. More recently, however, the vast majority of parties have maintained a campaign site of some kind, with just one of the 23 parties in the 2011 election failing to have a web presence. In terms of the individual candidates, during each of the four studies a sample of 11-12 candidate websites has been drawn for analysis, representing a range of parties, as well as a mixture of existing members of parliament seeking re-election and of new candidates. It should be noted here that, throughout the ten years, the parties’ websites have been less than helpful in directing users to their candidates’ personal websites, and that the researchers have had to rely largely on Google searches

²⁶ The two most recent campaigns studied saw 347 candidates competing for the 59 first-past-the-post Scottish constituency seats in the 2010 UK Parliament election; and 756 candidates contesting the 73 first-past-the-post constituency seats and the 56 proportional representation regional seats in the 2011 Scottish Parliament campaign.

to identify a suitable sample of candidate sites. In all four studies, during the four-week period immediately preceding the respective polling days, the party and candidate websites have been analysed in terms of the ways in which they have: provided campaign, policy and candidate information; attempted to generate interest in the election campaign; kept the electorate up to date with the latest campaign news and developments; tried to engage the support of website users; and provided opportunities for interaction and debate.

Another core element of all four studies has been an enquiry responsiveness test, where a series of email enquiries based around topical campaign and policy issues has been directed at parties and candidates, in order to measure the speed and extent of their response, as well as any efforts they have made to create an ongoing relationship with potential voters. The questions asked have been on topics ranging from street crime to parliamentary expenses and, at times, have been designed to almost provoke a response from the politicians. Here, an element of covert research has been used, where the researchers, although using their real names, have created special email accounts to disguise the fact that they are academics, and have given no indication of their geographic location, to conceal the fact that they may not have been based in the individual candidates' potential parliamentary constituencies. Such an approach was felt essential in order to ensure that the parties' and candidates' behaviour, in terms of responding to enquiries from the electorate, remained normal and consistent. In the 2010 and 2011 studies, the enquiry responsiveness test was expanded, to include the now popular social media applications, Facebook and Twitter. Again, a covert approach was used: new Twitter accounts were created, and existing personal Facebook pages were modified, to conceal the researchers' geographic and professional backgrounds. It should be noted, however, that opportunities to question candidates on Facebook have been limited, as only a minority have allowed direct messaging without first showing allegiance to the candidate and their party by becoming a 'friend' or by 'liking' their site.

Given the increased use of new social media in political campaigning internationally (see, for example, Williamson, Miller & Fallon, 2010), the 2010 and 2011 studies also included an analysis of the content of those Twitter accounts, Facebook pages and blogs belonging to competing parties and candidates in Scotland. Here, all posts made during the respective four-week campaign periods, by the political actors and by members of the public, were captured electronically and subsequently analysed, both in terms of the broad topics being discussed on these sites, and in terms of the nature of the communication taking place (i.e., one-way 'broadcast' by politicians to voters, or two-way interaction with and/or between the electorate). Again, direct links to candidates' social media sites from party sites have been rare. In order to identify such sites, the researchers have had to rely on Google searches, on using the Facebook and Twitter search engines, and on systematically examining the lists of members or followers of party social media sites.

As Gibson and Ward (2009) point out, the literature on online campaigning has been dominated by "supply side" questions, where researchers have quantified the extent of the adoption of online campaign tools by political actors, or where they have conducted content analyses of campaign sites. Meanwhile, Gibson and Römmele (2005) have bemoaned the lack of qualitative user studies and have argued that we need "a better in-depth understanding of individuals' online election experiences". With these points in mind, and to complement their other work, the current authors conducted a study of voters' online information behaviour during the 2011 Scottish Parliamentary election campaign. This study used the researchers' interactive, electronically-assisted interview method, where 64 citizens of Aberdeen, in North-east Scotland, were observed and questioned as

they searched for, browsed and used information on the websites and social media sites of parties and candidates.

2. Results

2.1. Information Provision on Campaign Websites

2.1.1. Manifestos and Other Policy Information

Traditionally, the primary source of policy information during UK election campaigns is the party manifesto, and throughout all four studies the manifesto has been prominent on the majority of the parties' websites. Unsurprisingly, given the diversity of the competing parties, these documents have varied greatly in length: the manifestos of some of the smallest fringe parties have consisted of just 200-300 words, while those of the major parties have occasionally been between 100-120 pages long. More recently, some of the larger parties have begun to recognise that lengthy manifestos do not always "connect with the public" (Wade, 2011), and have produced more concise policy documents. For example, during the 2011 campaign, the SNP launched a series of additional two-page 'mini-manifestos' online, each one aimed at a specific sector of the electorate (e.g. carers, small businesses) or dealing with a particular policy area (e.g. the environment, justice and peace). On the individual candidates' websites, meanwhile, policy information has, surprisingly, been less common. Throughout all four studies, only around half of the sample candidate websites have contained copies of, or links to, their party's manifesto, or have contained any personal policy statements or commentary.

2.1.2. Candidate Information

It might be anticipated that a crucial role for parties' websites during election campaigns would be to provide information about their prospective parliamentary candidates. Throughout the four studies, however, the provision of candidate information by the Scottish parties has been erratic and, at times, illogical. For example, in the 2003 campaign, all of the major parties provided biographies of the vast majority of their constituency candidates. In 2007, though, only the Liberal Democrats provided any biographical information, and only for around half of their candidates; the other major parties simply provided a list of their candidates' names. In terms of providing candidates' contact details online (i.e. postal address, telephone number and/or email address), the SNP provided none at all in either the 2007 and 2010 campaigns (arguing, in 2007, that their candidates would receive too much spam²⁷); the Labour Party failed to give any email addresses in 2003; while the Conservatives were the only major party to provide email addresses in 2007. Throughout all four campaigns the provision of links to candidates' personal websites and social media sites has also been negligible. At times, then, it has appeared that the Scottish political parties have consciously discouraged voters from making personal contact with their prospective representatives, and have expected the online electorate to make their democratic choice based on minimal personal information.

²⁷ Personal communication with the SNP campaign team, in May 2007.

2.1.3. Campaign News

During all four studies, the majority of party websites have contained sections labelled 'campaign news', or similar, where they have attempted to keep visitors up to date with the latest events on the campaign trail, from manifesto launches to media appearances, and from key speeches to hustings events. However, it has generally only been the largest parties, with the greater resources, who have updated these sections regularly: the smaller parties have performed less well in this respect. Similarly, only around one-third to one-half of the sample candidate websites have contained regularly updated campaign news items. Throughout all four campaigns, between one-fifth and one-quarter of the parties have indicated that they provide free e-newsletters, and the researchers have attempted to subscribe to all of these in order to explore their regularity and content. The results of these efforts have been mixed: some parties have failed to send any newsletters during the campaign period, while a very small number (most notably the Scottish Green Party) have consistently sent weekly, or sometimes more regular, news bulletins. Overall, though, Scottish parties have paid relatively little attention to the e-newsletter as a dissemination tool during busy campaign periods. During the two most recent studies, the websites of a small number of parties (four in 2010, five in 2011) have incorporated real-time feeds from their UK, Scottish, or local branch party social media sites, thereby providing up-to-date information on campaign events. Similarly, a small number of the sample candidate websites (two in 2010, one in 2011) have provided feeds from their personal social media accounts.

2.1.4. Opportunities for Communication and Engagement

In all four campaigns, the vast majority of the party and candidate websites have provided some method of online contact, in the shape of either a general enquiries email address or a web-based enquiry form. However, based on the results of the researchers' enquiry responsiveness tests (of which more is discussed later), the extent to which the political actors have responded to any contact made by the electorate has to be open to question. The provision of other opportunities for online engagement with the electorate has been limited, though. During each of the four studies, just two or three of the smaller parties have provided discussion boards and other online fora; although in some cases (e.g. with the British National Party (BNP) and the Pirate Party) these have been hosted by national, UK-wide party sites and have not focused specifically on Scottish campaign issues.

2.1.5. Audiovisual Features

During the researchers' first study, in 2003, just two parties were found to include video clips on their campaign websites. Since then, video clips of election broadcasts and speeches have become standard fare on the websites of the larger parties, either embedded in the website content, or in the form of links to the parties' YouTube channels. The websites of the smallest parties, however, remain largely devoid of any audiovisual features. With regard to the candidate websites, the 2003 study saw just one candidate provide video clips; but by 2010, seven of the 12 sample candidate sites contained videos, of their parliamentary appearances or personal election addresses. Twelve months later, however, just two of 12 candidate sites now contained video clips, perhaps reflecting a new preference for the use of social media as campaign tools. The 2007 campaign saw the emergence of the online TV station, when both the SNP and the BNP broadcast live TV over the Internet each evening. The success of these stations, in terms of viewing figures, is unclear.

However, neither party has repeated the experiment in subsequent campaigns, nor have any other parties followed suit. This perhaps suggests a lack of sufficient content to make nightly broadcasts viable; or perhaps that voters prefer to watch election broadcasts at their own convenience, rather than at times predetermined by the parties.

2.1.6. Information in Alternative Languages and Formats

During the most recent campaigns, the research team has observed a disappointing decline in the provision of campaign information in alternative formats or languages, aimed at website users with a disability or whose first language is not English. The 2007 campaign, for example, had seen a Scottish Gaelic version of an entire party website, minority language versions of manifestos, and a video clip of an election address complete with subtitles and British Sign Language interpreting. By 2011, however, none of the candidate websites and only five of the 22 party websites made any reference to information in alternative forms. The Conservative and Green Parties provided audio versions of their election manifestos; the Scottish Socialist Party provided a one-page anti-cuts leaflet (from 2010) in Polish; and two of the other minority parties provided a Google Translate widget, which theoretically allowed the translation of their website content into around 60 languages. Indeed, during the 2011 campaign, Scotland's political parties were criticised by disability charities for a lack of large print and Braille manifestos, and for the accessibility of their websites (Anon, 2011). The SNP came in for particular criticism, and the party did eventually provide an audio version of their manifesto, which appeared on YouTube just two days before polling day.

2.1.7. Membership and Donations

Following an emerging trend, identified during the 2005 general election (see, for example, Jackson, 2007), of UK political actors using the Internet as a resource generation tool, the current authors have mapped a growth in Scottish parties providing opportunities for members of the public to actively become part of the campaign in some way. By 2011, the majority of party websites (i.e. 16 of 22) now provided an online party membership form, and also allowed users to make online donations to the party. Smaller numbers of parties also provided online volunteering or "pledge of support" forms, or online shops where supporters could purchase party t-shirts, mugs, etc. The same period, however, has seen a noticeable decrease (four parties in 2011, compared with ten parties in 2007) in the number of party sites providing free, downloadable, more traditional campaign materials, such as leaflets and window posters. This suggests a move away from the mutual exchange of support between political actors and supporters, where the parties, although anxious to obtain financial and manual support via their websites, appear less willing to provide anything in return.

2.1.8. Other Interactive Features

The provision of other interactive features has remained relatively rare throughout the ten-year period. In each of the four studies, only a small proportion of party and candidate websites have included such features. These have tended to consist of three types: postcode-based search facilities, to identify the user's parliamentary constituency and/or their prospective candidates; online surveys and polls on, for example, voting intentions; and online petitions on a range of topics, from hospital parking charges to the part-privatisation of the Post Office.

2.2. Enquiry responsiveness tests

Figure 1 provides an overview of the response rates to the researchers' email enquiries during the four studies. In terms of the parties' responses, the first study in 2003 saw a particularly good response rate of 84%, which subsequently declined dramatically during the following two election campaigns. The most recent study in 2011 saw an improved response rate from the parties, but still almost half (47%) of the enquiries remained unanswered. This lack of response to email enquiries on campaign and policy issues is similar to that identified by Vaccari (2012) in a cross-country longitudinal study conducted between 2007 and 2010.

Throughout all four studies, no clear patterns have emerged in terms of the most or least responsive parties. For example, in 2010, the Conservative Party failed to answer any of the questions sent by the researchers, but in 2011 responded to all enquiries received. In contrast, the Labour Party had a 100% response rate in 2010, but failed to reply to any queries in 2011. With regard to the nature of the party responses, the major parties have, generally speaking, adopted a 'copy and paste' approach, where they have simply copied paragraphs from party manifestos or other policy literature and pasted these into the body of the email response. Indeed, during the first two studies, the parties sometimes made little or no effort to disguise this fact, providing replies containing a variety of font sizes and styles, reflecting the different sources from which the text had been copied.

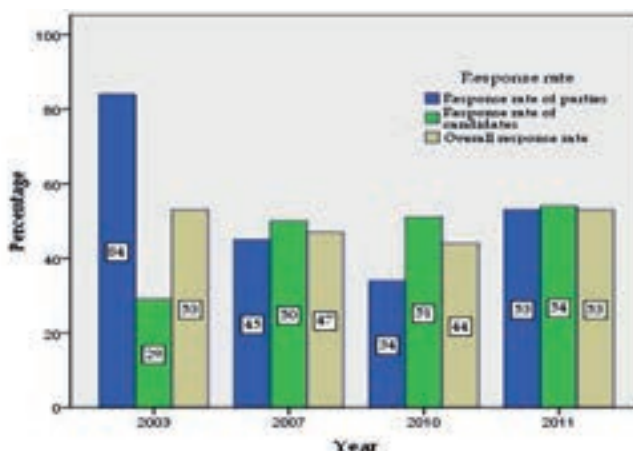


Figure 1: Email Enquiry Response Rates, 2003-2011

In terms of the individual candidates' responses, the 2003 study saw a very disappointing response rate of just 29%, which has increased incrementally during subsequent campaigns. Again, though, the most recent campaign saw almost half (46%) of the researchers' questions being ignored completely. Over the ten-year period, it is perhaps fair to say that the candidates from the Scottish Green Party have consistently been the most likely to respond. The extent and nature of the replies received from candidates have varied widely, from the curt and not particularly informative, to those that have been constructive, responsive and relatively detailed. Indeed, it has frequently

been the candidates from the fringe parties, with little chance of electoral success, who have appeared the most willing to initiate further discussion and debate with the enquirer. One interesting phenomenon, first encountered during the 2007 study, has been that a small but significant number of candidates (generally existing elected members seeking re-election) have requested details of the enquirer's postal address, to establish if they lived in their prospective parliamentary constituency, and have implied that a fuller response would only be provided on confirmation of that address. As Norton (2007) notes, this practice is far from unusual, and presumably relates to Jackson's (2004) finding that over half of elected members' email correspondence comes from non-constituents.

Table 1: Facebook and Twitter Enquiry Response Rates by Candidates, 2010-2011

Year	Facebook	Twitter
2010	50%	0%
2011	35%	30%

Table 1 illustrates the response rates to the researchers' questions sent to candidates by Facebook and Twitter during the 2010 and 2011 studies. With regard to Facebook, the 50% response rate achieved in 2010 was encouraging, being on a par with that of the email enquiries sent to candidates; however, 12 months later the response rate dropped markedly to 35%. In both years the Facebook responses tended to be very brief and offered little evidence of any desire to engage further with the enquirer. With Twitter, meanwhile, whilst acknowledging the difficulties candidates face in providing a meaningful reply within the application's 140-character limit, the current authors were dismayed by the failure to obtain a single response (from 30 enquiries) during the 2010 study. While the Twitter enquiry response rate in 2011 did rise to 30%, these findings suggest that, in general, Scottish political actors are reluctant to use social media as a vehicle for answering policy questions, or at least from those enquirers with whom they are personally unacquainted.

2.3. Content analysis of party and candidate social media sites

In 2010, during the UK Parliamentary election, seven of the 20 competing parties in Scotland used Facebook and/or Twitter as campaign tools. One year later, just over half (12 of 23) of the parties in the Scottish Parliamentary contest had adopted one or both of these social media. Whilst the Labour Party had the most Twitter followers (1,224) in 2010, by the 2011 polling day the SNP's Twitter site had the largest following, of 3,833. During both studies, the SNP also had the largest number of Facebook 'friends', which rose dramatically from 3,305 in 2010 to 10,433 in 2011. Table 2, meanwhile, indicates the adoption rate of social media (more specifically, Facebook, Twitter and blogs) by individual candidates during the 2010 and 2011 campaigns. As can be seen, in each campaign, just over one-third of the individual candidates were using either Facebook, Twitter or a personal blog at least partly for electioneering purposes. In 2010 the proportions using Facebook and Twitter were almost identical, but by 2011 Facebook had become a slightly more popular campaign medium. The number of Facebook 'friends' each candidate has had has varied widely: in 2010, one Conservative hopeful only had two 'friends' by polling day; while, in 2011, the prominent UK Independence Party candidate, Christopher Monckton, had almost 6,300. Similarly,

the number of Twitter followers has ranged from the two people who followed one Scottish Green Party candidate in 2011, to the near 27,000 following the controversial Respect Party politician, George Galloway, during the same campaign.

Table 2: Adoption of Social Media by Candidates, 2010-2011

Year	Facebook	Twitter	Blog	One or more types of social media
2010 (<i>n</i> = 347 candidates)	21.0%	21.9%	12.6%	36.9%
2011 (<i>n</i> = 756 candidates)	25.8%	18.8%	8.7%	34.3%

Following the 2010 campaign, the researchers analysed almost 1,600 blog posts, over 3,000 tweets, and over 7,000 Facebook wall posts made during the four-week campaign period. This analysis established that social media were primarily being used for the one-way flow of information from the parties and candidates to the electorate. There was little direct, two-way engagement with potential voters and, as with the email communication discussed above, a general reluctance to respond to 'difficult' policy questions or critical comments posted by the electorate. The information provided tended to be rather bland and lacking in any meaningful policy comment. Indeed, many of the 2010 candidates appeared more interested in discussing the climatic conditions when out on the campaign trail, rather than any important national or local issues being raised by their potential constituents. The 2010 candidates' posts were also almost universally (and unrealistically) positive and optimistic: even those candidates who were resoundingly defeated on polling day had claimed throughout the campaign that the electorate was warmly responsive to their political message. With the exception of the more prominent individuals (largely existing parliamentarians seeking re-election), the candidates' Facebook 'friends' and followers tended to be relatively modest in number, and appeared to be largely family, friends and associates of the contestants, or party supporters, members and activists. This gave something of an exclusive feel to many of the sites, where 'outsiders' with opposing political views were unwelcome and where opportunities for objective debate with the wider electorate were limited.

Analysis of the parties' and candidates' social media activity during the 2011 Scottish Parliamentary campaign is still ongoing. However, the researchers' initial impressions are that little had changed in the intervening 12 months. The political actors were still largely in one-way, broadcast mode, and two-way interaction with the general public was relatively rare. Despite the victorious SNP's suggestion that their candidates, including their existing Scottish Government Cabinet Secretaries, had been actively encouraged to converse with potential voters via social media (Macdonell, 2011), there is little evidence to suggest that the SNP candidates were any more interactive and engaging online than their opponents. And while the SNP have also highlighted the positivity of their digital campaign (Wade, 2011), there is little evidence to indicate that their candidates and activists were any less likely than those of other parties to attack their political opponents online. Indeed, the most vitriolic exchanges identified by the current authors were amongst those to be found on the SNP's Facebook site.

2.4. User information behaviour study

In the 2011 user study, the most dominant theme to emerge was that of a need for brevity and clarity in the presentation of policy information by political actors. As indicated above, a mainstay of the party campaign website has been the election manifesto, which is frequently a lengthy and verbose document. Very few of the participants were prepared to spend time perusing these, and instead expressed a need for short, sharp, “bite-size” policy statements that might be easily read and digested. As noted earlier, some of the parties have recognised this preference, and where more concise policy statements were provided these appeared to resonate strongly with the study participants. A clear need was also demonstrated by participants for policy statements and commentary relating specifically to local constituency issues. However, these were perceived as lacking, or becoming ‘lost’ amongst the other content on party websites. Interviewees were also surprised and disappointed by the lack of local policy commentary on their local candidates’ sites. The participants were also far from impressed with the political actors’ use of social media, citing the preponderance of “boring” campaign photographs, but also a lack of meaningful policy comment, and a reluctance to engage in dialogue with potential voters. Indeed, “trivial”, “puerile” and “shallow” were among the terms used to describe the politicians’ efforts. Overall, while the interviewees regarded online campaign sites as serving a useful purpose, being easy to use and understand, relatively interesting, and likely to be visited again, there was very little evidence to indicate that they had any significant impact on voting behaviour. For the vast majority (60 of the 64 participants), the online, interactive sessions had had no influence on their democratic choice. Rather, the interviewees’ responses suggested that more traditional information sources, particularly broadcast and print media, together with long-established campaign techniques, such as leaflet deliveries and door-to-door canvassing, remain more influential in determining voters’ choices.

3. Conclusions

This overview of research into online election campaigning in Scotland has demonstrated that political actors have appeared relatively keen to be seen embracing new and emerging technologies for electioneering purposes. The vast majority of political parties, and a significant proportion of individual candidates, now maintain an online presence during campaigns, be it a ‘traditional’ website, or newer social media applications such as a Facebook page or a Twitter account.

It might be argued that, in certain respects, some progress has been made by Scottish political actors over the last ten years. Certainly, online sources are being used more extensively for the generation of campaign funds and for the recruitment of members and volunteers; and the inclusion of audiovisual features has become more prevalent, particularly on party sites. Equally, however, the provision of information in alternative languages and formats has regressed. And, despite the incorporation of real-time social media feeds on some sites, many parties and candidates fail to regularly update their online content during the busy campaign period, resulting in rather stagnant sites unlikely to attract repeat visits from voters. While the technologies adopted by political actors may have changed over the last decade, the nature of their use has remained relatively constant. Parties and candidates still use the Internet primarily for the one-way broadcast of information to the electorate, and they remain reluctant to encourage online contact or to enter into any kind of visible online debate. They also remain unwilling to respond

fully to any critical comments or questions on contentious policy questions. The current authors would argue that these patterns of information exchange are unlikely to have encouraged an already apathetic and cynical electorate to participate more fully in the democratic process.

Indeed the research, particularly the 2011 user study, has revealed the dichotomy that appears to exist between the views of the parties and candidates and those of the voters. While the public wishes to see concise and easily-read policy statements, the majority of parties continue to produce lengthy, wordy manifestos. And while the electorate desires more information relating to local constituency issues, local policy comment is lacking, or difficult to find, on campaign sites. Voters also desire more online engagement with their prospective representatives, yet most Scottish political actors continue to avoid such interaction. With this apparent dichotomy in mind, the assertion of the SNP that the 2011 election was the “first European election where online has swayed the vote” (Gordon, 2011) might be questioned. It is acknowledged that certain elements of the SNP’s digital strategy, such as its bespoke, internal, voter database, Activate (Gordon, 2011), will have played a crucial role in informing and organising the party’s activists during what was an unprecedented election victory. However, in terms of publicly accessible campaign information, given the generally modest followings of most of the political actors, from across all parties, and the bland and superficial ways in which they used the Internet during the 2011 campaign, the current authors would hesitate to make any direct associations between these politicians’ online efforts and their electoral success or failure.

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About the Author/s

Graeme Baxter

Graeme Baxter is a Research Assistant and part-time Lecturer in the Department of Information Management at Aberdeen Business School, Robert Gordon University. His research interests include: the provision of, need for, and use of government, parliamentary and citizenship information; the provision and exchange of information during public consultations; freedom of information legislation; and the use of the Internet by political parties and candidates during parliamentary election campaigns.

Rita Marcella

Rita Marcella is Dean of Faculty at Aberdeen Business School, Robert Gordon University. Her research interests include: the provision of, need for, and use of government, parliamentary and citizenship

information; the use of the Internet by political parties and electoral candidates; freedom of information; business information provision; and information systems in health and safety management.

Voice of the People or Cybercratic Centralism?

The Italian case of Beppe Grillo and Movimento Cinque Stelle (Five Star Movement)

Rosanna De Rosa

Dpt. of Social Sciences, University of Naples Federico II (rderosa@unina.it)

Abstract: With the rapid diffusion of Social media, grassroots political organizations are starting to use supportive technologies to avoid party representation. The Pirate Party in Germany and the Five Star Movement (5SM) in Italy are trying to use the interactive democracy paradigm to renew the institutional framework of political representation from bottom up. This paper aims to analyse the case of Beppe Grillo and 5SM that – after a successful showing in administrative elections – is now involved for the first time in a national election. How the 5SM, as a virtual party without a structured organization, will solve the problems related to its institutionalization and how the “proxy vote” will be used in parliament are the main questions which scholars are debating. It is a unique occasion to see if this emerging model of party will evolve into a democratic rather than a cybercratic organization.

Keywords: Five Stars Movement), Liquid Democracy, Direct democracy, e-participation

In the United States we had to wait until 2008 to see the power of the web being used to link party fund-raising to political involvement and thereby contribute to Obama’s unprecedented electoral victory. In Italy it wasn’t until Grillo that any significant progress in terms of online politics was made. After social media had begun to compete with television for people’s time and attention, it was then that the Grillo phenomenon really took off. And with Grillo, online politics moved out of the Geek domain to enter into the world of ordinary people. In 2005 Time Magazine considered Beppe Grillo as the European hero of the year. Three years later, The Guardian put Grillo’s Blog at number 9 on its list of the world’s top fifty most powerful blogs. The Italian political classes are both scared and fascinated by Grillo’s rise to success. The Right admires his style and the Left his method. To try and define the Grillo phenomenon people have often used political terminology like antipolitical or populist, etc. But all attempts to fit Grillo into ready-made interpretative frameworks look set to fail.

1. The Beppe Grillo Story

Grillo was a TV comedian until 1978, when he became a persona non grata on State TV after drawing people’s attention to the corruption in Bettino Craxi, the then Prime Minister’s Socialist Party. Since then he has made a living from performing in theatres, from the sale of his books and from his blog. It is through this blog, Beppegrillo.it, that Grillo expresses his vis polemica, a form of direct communication with the thousands of fans who are attracted by his comic verve. When Grillo organised the Vaffa-day in Bologna in September 2007 to rally support for a grass-roots

change to legislation consisting of three points (no to anyone involved in criminal lawsuits standing for parliament, no to re-election after two mandates and yes to direct election of candidates) the response from politicians was strangely supercilious; viewing him as some kind of “court jester” trying to perform on the serious stage of politics. The press gave much more space to Grillo’s proposal. Michele Serra wrote that

“It’s as if the hypothetical numbers involved suddenly materialised, as if the nebulous, virtual assembly suddenly became clear and real. (...), an important if not decisive indication of the increasingly important role played by the Web in influencing people’s orientation and choices” (Serra, La Repubblica, 9.9.2007).

Grillo is thus able to take another step forward into the democratic agora, where protest is transformed into commitment and political alliance into recognition of leadership. Beppe Grillo’s friends now find themselves members of the 5SM which was formally founded on 5 October 2009. One star for each of the cardinal points the Movement upholds: environment, water, development, connectivity and transport. We witness the transformation of a generic Internet public into a fandom and then into a structured group of activists working on behalf of a political project. These people are mainly young, male, well-educated, with high levels of digital literacy and easy access to information and many of them with no previous political experience. Most of them were born in the South of Italy but live in the North-East. In fact, the vast majority of them are white-collar workers or self-employed professionals (in private firms or commerce) with a smaller group of university students. There are no unemployed members or people working on short-term contracts. 5SM activists would like to help Italy move forward but are blocked by a political class who are incapable of modernising themselves or the country, preferring to insist with conservative strategies. When questioned, the 5SM activists appear very radical as regards public administration, the media, the jobs market but much less so when it comes to support for a women’s quota in parliament or the abolition of the legal value of a university degree. They refute the idea of leaderism and anti-politics as media simplification and prefer to think of themselves as anti-bad politics (Orazi and Socci, 2008).

During the local elections of June 2009, the 5SM stood for election in 64 local administrations (town council) through the work of their local MeetUp groups. 23 of their candidates were elected as borough officials and 6 as district representatives. In Bologna the 5SM activists represented 10% of the elected leadership. During the local elections of 2012, the Movement stood for election in 101 local administrations and were successful almost everywhere: in Genova (over 15%), Verona (9.5%) La Spezia and Alessandria (11.7%). In the Regional elections in Sicily the same year, they were the first party with the most votes, gaining 18.20% of the votes and with 15 elected Regional Representatives. As far as the General elections in 2013 are concerned, the SWG polls put them in third place. Much of this success is attributed to Gianroberto Casaleggio, an expert in social network marketing, whose staff organises the MeetUp networks, defines the rules, evaluates candidates and handles local crises.

2. Cybercratic Centralism

By the time Grillo became a politician, the political scene had never looked so wobbly since Tangentopoli: the Popolo della Libertà (Pdl) and the Lega Nord were at loggerheads, Berlusconi’s leadership was no longer unquestioningly accepted, Gianfranco Fini (the center-right wing President of the Deputy’s Chamber) had become an unwilling partner in a forced marriage and the

Democratic Party (Pd) was being torn apart by internal conflict. Even institutional equilibriums seemed to be wavering. In Europe, the country's political and economic credibility have reached an all-time low, Italy is deep in crisis and its people exasperated. A World Values Survey of 2005 had already noted the downward trend of trust in parties with less than 1% (0.9%) of the citizens claiming to have a lot of trust in his own party against 15.2% who claimed to have enough confidence. Italy this time is not the exception but the rule: throughout Europe there is, in fact, the same trend with a range that varies between 70% in Spain and 84% in Germany of citizens who have no more trust in political parties. There is an empty space that a new form of representation could fill.

Initially the Beppegrillo.it blog provided the only forum for supporters to meet: in 2010 there were about 200,000 visitors every day and several thousand comments for each post (Lanfrey 2010). Then came the decision to use the platform that Howard Dean used for organising events and funds raising. It was the group of Beppe Grillo's friends who requested that civic candidates should stand in the local elections which led to the delicate issue of actually formalising the movement's rules, institutionalising it without associations or links to political parties and without the mediation of management or representative bodies.

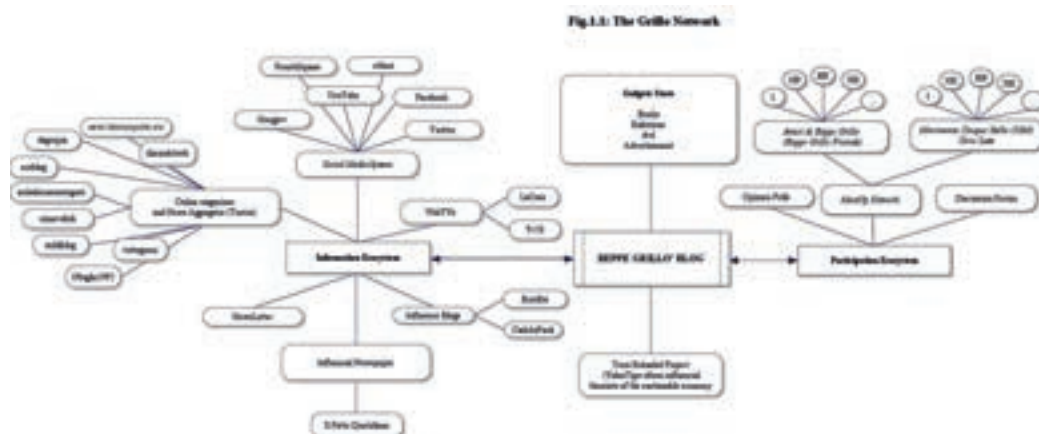


Figure 1: The Grillo's 5SM System

The movement's organisational model could be described — using a computer metaphor — as a star bus topology with Beppe Grillo's blog as the central hub and the MeetUps the network devices. The blog plays a central role in information, communication and regulation of the group, employing broadcasting logic, although the structure often appears to have problems managing local activities. The local networks seem quite fluid and deal with issues such as the control of information, the No TAV protest (the high-speed trains new line), the public water defense. They vary, in fact, depending on the territory that they represent. The MeetUp groups are strictly local organisations making for the kind of in-depth knowledge of local issues that characterises 5SM candidates. Activists who decide to stand for election accept to campaign always and only on behalf of local issues. Candidates are not allowed to stand for other elections while they are in office. The ban on taking part in national talk-shows could also be read in the same vein. The cult of the persona and careerist ambition are discouraged, because they want to keep the movement firmly focused on its principle of direct representation. The mandate stipulates that elected candidates need to account for their work every so often. Many observers see this as a kind of

slipping down towards direct democracy. For the moment, objectively speaking, it would appear to be a hybrid form, a kind of representative-participative system (Slaton 1992), as a true platform for a direct participation is still missing and the imperative mandate is not allowed by the Italian constitution. The problem of political leadership at local level has been solved by making it answerable to, and mutually dependent on, the constituency it represents. Representatives are spokespeople from the movement who cannot take personal credit for their work. In computer terminology, these representatives are *“both a terminal and an executor of the electoral body”*, as explained by Casaleggio and Grillo (2011, p.154). Decision-making therefore works on a proxy-voting system, facilitated by appropriate technological support. The software incorporates a way of quantifying feedback combined with a transitive delegate voting system where users can indicate their preferences in an error-proof system.

3. Counter-democracy in Movement

The primaries that Grillo organised to select his candidates for parliament looked like a complete flop. The strict rules which were implemented to ensure that no “unsuitable” candidates were chosen had a significant effect on the results, downsizing the whole operation. The experiment in deliberative democracy involving the mobilisation of large amounts of people started to look more like a condo meeting to vote their administrator, with only 1,486 candidates to choose from for both houses, and an electorate with voting rights of only 31,61228. The decision to state up to three preferences acted as a way of multiplying votes, guaranteeing the selection of as many candidates as possible, and, at the same time, giving the most popular candidates within the movement, and women — who had always been in prime position — a better chance of being elected. Apart from the data itself, the primaries were an opportunity for testing a totally online way of selecting political personnel: no polling stations, no queues and no vote-counting. As far as academics were concerned, these elections presented an opportunity for profiling the demographics of a typical 5SM activists: average age 42 (only 8.5% are under 29, while 70% fall into the 30 - 49 age range) and 87.2 per cent of them are male. In terms of profession, 67% of them fall into only six categories, and 25.99% of these are white-collar workers in the private or advanced tertiary sector and 16.7% are self-employed professionals. There is a small segment of entrepreneurs (6.87), blue collar workers (5.72), public sector employees (5.72) and teachers (5.32). There are the same proportion of pensioners and students (3.7 and 3.6% respectively) though mainly in Southern areas. This mini sample shows that the unemployed, short-term/temporary contract workers, pensioners and students are very much minority categories, whereas the vast majority of 5SM activists are, as we have seen, employed in companies or in the advanced tertiary sector or are self-employed professionals.

Although there were complaints about the lack of transparency in the way the lists were put together and the primary elections run, it seems clear that the rationale was based on a combination of mathematical rules and principles of representativeness: a multiplier factor to maximise the choice expressed, a gender factor to maximise the representation of women, which is

28 Out of a total of 95,000 possible votes, 57,272 were actually cast, according to data published by the organisers.

generally very poor²⁹, an age-group factor to give young people, who are also generally under-represented, a better chance, and a merit factor to reward those people who had worked hard within the Movement, holding positions of responsibility or demonstrating professional skills and competence. Since these parliamentary elections were perceived as essentially internal to the Movement, they were not marked by any real campaigning, nor indeed any particular media coverage. The candidates were given a space on the Movement's website to present their curriculum, introduce themselves via video or link to their own social network profiles. Only 40% of the candidates took up the opportunity to introduce themselves through video, while the same percentage had no particular following on any social network nor any particular interest in generating one (Cattaneo Institute 2013). Apart from being overshadowed by the Pd primaries and by Monti's unexpected appearance on the battleground, the 5SM primaries were also conditioned by a desire to keep some kind of "reserve" on the candidates, only allowing people who had been members since 30th September 2012 (at least two months before the primaries) and who satisfied a series of other requirements, to stand. Given the results, many people thought the 5SM was the kind of Movement that would fall at the first hurdle. As we will see things took a very different turn.

A month before the elections, the number of MeetUps started to increase, going from just over 500 in November to over 708 in early January and soaring to 1,102 groups in March 2013 (an increase of over 32 groups per week). Apart from the MeetUps, many of which constituted 4 thousand members, there were also smaller groups with a few dozen members. If we look at the MeetUp list (<http://beppegrillo.meetup.com>), we can see that the Movement is actually very far-reaching, with a network that branches out over large areas yet concentrated in local points too. This enables it to keep track of the country and to mobilise people when necessary, and it doesn't matter how small the hubs are. A constellation of groups that use different technological devices depending on need, function and availability: websites, Facebook groups, Google groups, Twitter, Tumblr, webTv, youtube channels, Ustream channels etc. Each of these is used by the activists to organize events, communicate with sympathisers or recruit amongst interested visitors. If, then, real members of the MeetUp groups number about 120 thousand people and there are another 50 thousand people in the small interest groups, that means the total number of registered members of the Movement is about 300 thousand. However, the network structure of the Movement obviously means that there is the potential for reaching out to many more people, maybe even millions³⁰.

It was not until 18 December 2012 that the Movement drafted a proper statute to define its electoral status, recognising the constitutional right of citizens belonging to the 5SM to steer the course of National Politics by presenting for election candidates and lists of candidates who would

²⁹ The data was very clear: only 12.85% of the candidates standing for the parliamentary elections were women (191 out of 1486), but almost three times as many were actually elected to the Upper House by the Movement, with a total of 38.27 % (62 out of 162).

³⁰ Data from November 2012. After the political elections, the number of registered members of the MeetUp groups rose to 139 thousand while the figure referring to interest groups stayed the same (4 April 2013). Data is always relative, however, because evolution of an online movement tends to be organic, and in some ways, messy; MeetUps, Civic Lists, Friends of Beppe Grillo and other profiles produce a certain amount of overlap. The figure of 300 thousand members — the hard core of the Movement — comes from interviews we held with 5SM activists.

be selected using direct participation procedures set up on the Internet. The biggest opinion poll agencies started talking about the Movement as the third biggest party in Italy, with support ranging from 16% to 20% (Bordignon and Ceccarini 2013). This was enough to make other parties in the field sit up and take the Movement seriously, though not enough to make them consider Grillo a threat. Things started to take a different turn when the tsunami tour started in January³¹; an old-style electoral campaign, played out in the piazzas, making the most of Grillo's theatrical rhetoric to draw the crowds. This tour provided the opportunity for setting the Movement's first exclusively electoral objective: broaden its base, embrace other causes, extend the manifesto and build a bridge between the online community and the political community at large. The lesson learned by Howard Dean is that one should never confuse online popularity with the electoral consensus. The Movement needed to reach out to those people who choose not to vote, who do not participate, who do not go online to find out what they need to know, the kind of person who has lost political faith. The Movement also needed to be able to communicate with that part of the vast group of workers, unemployed people and students. In particular, the idea of the generation gap became central to Grillo's discourse, whereby the young stood in opposition to everything old and stale, from party organisations to government institutions and the forms of democracy they uphold. Moreover, young people and students are an extremely volatile, post-political electorate, and one that was prepared to change cassock or to agree to wear one. The time had come for Grillo's movement to channel this disillusionment through the Movement, using his anti-language and the media system as a powerful amplifier of its message and a way of mobilising the electorate (Corbetta and Gualmini 2013).

The campaign approach reveals an integrated strategy: the network created by the MeetUp groups, the Civic List groups and the Grillo blog members constitutes a community that covers a wide geographical area, shares the goals of the movement and is armed with the technological wherewithal to amplify Grillo's political message, mobilise citizens and organise ad hoc campaigns and events. There is no contradiction between piazzas and the web, in fact both of them offer a similar kind of forum for the exchange of public opinion. The ubiquitous nature of the web is provided by the rising numbers of mobile devices and wi-fi connections in Italy, and the piazza, in many ways, reflects the broadcasting model Grillo uses in his shows and in his blog. Thus social-empowering, micro-mobilisation and organised communities are the main ingredients in Grillo's electoral campaign as well.

4. An Electoral Tsunami

Interestingly, the year 2013 has been declared the European year of the Citizen. In Italy, the election results delivered a clamorous victory to 5SM citizens: the most surprising electoral victory since 1993. An electoral tsunami which swept part of the old political classes away and marked the start of a new, if difficult, legislature. As far as the media was concerned, the only news of any real interest was the arrival in parliament of a Movement of citizens with no background in politics, no specific professional competencies and, seemingly at least, no personal ambition. A somewhat paradoxical response to Monti's technical government, which was based on professional competencies yet deemed inadequate to provide the country with a political solution.

³¹ "Tsunami" was the term used by the political scientist Giovanni Sartori in his well-known article for *La Stampa*, *Cast causes Quake* (*La -trema sotto la casta*) (19 September 2007).

The 2013 general elections, therefore, bear all the hallmarks of insurgent politics with the 5SM doing better than even the most optimistic forecasts³², Monti being confined to a very modest result and the expected success of the Pd party very significantly downsized. The Pdl, expected to perform spectacularly badly, lost far fewer votes than anticipated thanks to Berlusconi's occupation of the media, whereas the Lega Nord lost many votes to the 5SM (Cattaneo Institute 2013). As far as the Upper House was concerned, the Region-based, proportional system of allotting seats meant that it was extremely difficult to form a majority, and that the role of the 5SM with its eight and a half million votes was a decisive one. The various inter-party incompatibilities, combined with the fast-approaching end of term of office for the President of the Republic, soon made for an explosive situation. Grillo and his Movement call themselves out, refusing to give a vote of confidence to a Pd-led government and proposing instead a minority, single government headed by the 5SM³³. The result is chaos. It signals the defeat of politics as a land of compromise, the end of political parties as a way of mediating diverse interests and of the institutions as safeguarders of the rules of democracy. Moreover it represents the end of the bi-polarism into the Italian political system, applied since 1993.

It was only Christmas when Grillo's Movement seemed headed for disaster, beset by internal strife. Then, in mid-January the tsunami tour started. Travelling in a camper van, Grillo toured 70 piazzas and drew large crowds wherever he went, from the provincial cities to the political and industrial heartlands: Turin, Milan, Naples, and Rome. While Grillo talked, the webTV set up for the electoral campaign broadcast his rallies in streaming media. The staff, militants and sympathisers covered the events with a constant stream of photos and videos on the different social media. Activists from home commented and launched new discussion threads, thus contributing to the creation of a comprehensive and enthusiastic narrative of events. The web stormed into the piazzas and the piazzas stormed onto the web with images showing the crowds of attentive citizens (Schudson 1999). And while the Italian press was kept firmly away, the International press were treated to an exclusive story almost without precedent, with the exception of Coluche, a French clown who stood against Giscard d'Estaing and François Mitterrand in the presidential elections 1981 (Biorcio and Natale, 2013). A month in which virtual and real piazzas moved in tandem and acted in unison, amplifying Grillo's speeches and magnifying the effects of an electoral campaign which had epic traits. A non-silent revolution bent on winning parliament, sending the incumbents packing and restoring sovereignty to the people. The cause they were fighting for took on a force all of its own, drawing in supporters from the right and left, especially the Northern League who responded well to the anti-establishment principle (Pedrazzani and Pinto 2013). The web became the connective tissue, the megaphone and the organising principle behind a campaign that offers seamless movement between different reality spaces (online/offline). It worked as an integrated whole with citizen-voters at its heart, hubs in a power network who themselves took on the job of stripping old politicians of their role and restructuring democratic processes, with parliament in central position.

³² The Movement got 8.69 million votes in total, 2.4 million in the South, 2.1 in the North-East, and 1.6 in the so-called "red regions" with Lombardia, Lazio and Sicilia heading the score (Data Cattaneo Institute). In the Lower House, the 5SM comes second to the Pd, with 25.55% of the votes. In the Senate it gets 23.79% of the votes.

³³ According to a LaPolis survey, even before the elections: «the majority (relative: 37%) of people who voted 5SM expected the party to do well and hoped to form a Five Star executive. Another similarly large group (34%) supported the idea of a government coalition. While barely 19% preferred their Movement's MPs to sit on the opposition benches» (Bordignon and Ceccarini, Voting estimates 4-6 February 2013: <http://www.demos.it>).

5. A Five Star Electronic Parliament

The days immediately following the elections were dramatic. The whole country seemed startled and divided over what was happening. People demanded greater transparency, participation and democracy but also effective and immediate decisions to be taken, guaranteeing a stable government and drastic cuts in the cost of politics. The newly-elected candidates seem initially unsure, and their words often belie their actions. They start to ask for an advanced platform to facilitate the decision-making process. A couple of projects take shape outside official confines.

The 5SM Online Electronic Parliament Project is headed by a few members of the Rome chapter³⁴ This highlights the problems inherent in managing democracy when it involves real procedures and decisions which require deliberative organs in order to work. In the absence of this type of democratic organ, the only solution is to use the algorithms offered by a technological platform. It has to be *open source*, to enable citizens to check the code correctness and to avoid fraudulent use, to enable *non-secret* ballots, to ensure full control and absolute security where the voting procedure is concerned and *transparent*, to permit data mirroring and external monitoring. These features clearly reveal a deep-seated fear that the voting process could be undermined by lobbies or professional hackers. Other features of the platform are harder to understand, however. One example is the decision to eliminate moderation of the discussion (too expensive to manage) leaving the web to organise itself as it sees fit to debate single issues and only posting a link to the specific discussion on the platform. *"In this way the web itself becomes the parliament, guaranteeing all its users maximum transparency and freedom of expression"* (p.2). Or the need to use a physical device (token) to check the identity of online users, making the platform more complicated and expensive to run.

The project developers obviously opt for "Liquid Feedback" partly because it has been used successfully in various parts of the world by the Pirate Party and also because it is considered reliable. However, they are dubious about adopting reputational ranking systems because of the 5SM fundamental rule that "one is as good as another". They do, however, accept that an independent opinion from technical committees might be useful, identifying proposals where there is a potential conflict of interest. They then focus on the decision-making process, looking at whether the legislation drafting process could be made simpler and the effect this would have on public spending, and whether the *Schulze method* should be adopted for voting on draft laws which are pretty similar and whether they should make proxy voting more difficult and offset the effect of extremely active members (the jargon term is *activerts*) and how they could construct a precise yardstick based on reliability indicators for deciding when a proposal could be presented in parliament and voted according to the imperative mandate. Where more complex issues are concerned, they proposed setting up technical committees and members would be the elected candidates' staff, the only salaried workers who could work full time on the decision-making process. Their trickiest jobs would be to oversee the budget, make sure that all proposals are constitution compliant and carry out specific research in conjunction with selected and unpaid University experts. None of these features is already present on Liquid Feedback, and some of them are of difficult implementation.

³⁴ The document can be read at: <https://pdfzen.com/35fe5f>

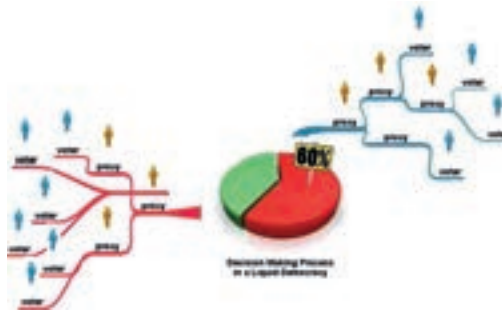


Figure 2: The Interactive Democracy Model

A second project is “Airesis”, an Italian discussion and decision-making platform which is already available and with which many groups of 5SM activists are already experimenting. Airesis is a more intuitive kind of platform which allows for the management of functions which have not yet been incorporated into LiquidFeedback. Examples include events management, organising tasks and passes for participants, organising transversal spaces, managing collaborative wikis, integrating personal blogs and, more importantly, enabling people’s votes to be either secret or open and their discussions of proposals to be anonymous. When the percentage of proposal evaluations rises to 60% of the total, the proposal would have to go to the vote.

The choice or development of a platform involves more than wanting to play a more effective role in the democratic process and support 5SM parliamentary members. It also symbolises the desire to free the Movement’s activists from Grillo and Casaleggio, and get rid of the sensation that the Movement is remote-controlled by the two men. In any case, whenever collective deliberation methods have been tested, liquid democracy has so far failed to provide a solution to one of the classic dilemmas of traditional theory (Sartori 1993): ensuring that minority groups are respected and represented. There is also the risk that in these minority communities there is a lot of pressure on people to go for cohesion and the majority vote. The result is the very real risk of a perverse, downward “spiral of silence” (Neumann 2002). The “wisdom of the crowds” (Surowiecki 2004) tends to annihilate differences and minority opinion, leading to a substantial reduction in the democratic quality of the decision-making process. This warped effect can already be observed in some of the decision-making procedures on Airesis or LiquidFeedback.

In the meantime, parliament itself is a new institution in many ways. The politicians making up the XVII legislature have not looked so young, so female or so different since the 1994 and 1972 elections when the PCI seemed about to overtake the DC. The most striking aspect of this new parliament is its willingness to introduce new procedures. The presence of 5SM activists is enough to encourage the established parties, especially the Democratic Party — to which the Head of State has given a pre-assignment for government formation — to change. Thus, for the first time in the history of the Republic, consultations with political leaders and social parties are broadcast in web streaming. This practice quite clearly follows on from what was established by the 5SM, who always broadcast their press conferences and debates in the Upper and Lower House in streaming, and summarised the day in parliament with video-accounts on their own WebTv. Fervent sharing amongst all the 5SM groups on the social media guarantees that the videos quickly go viral.

Intra-elite discussion, especially political consultations, have always been described as “bargaining over the price of a sofa”. Video streaming offers a new format which has serious implications for the question of transparency, but can also be used with more sinister intent, however. Many people already see a kind of electronic Panopticon on the horizon. On the other side of the video screen we have an electorate that entrusted the Five Star activists with the difficult task of breaking with the political past. We also have the Movement itself, which controls their every breath. “Terminals” is how Grillo describes them. The control chain and the no-confidence stance are very closely-linked. The 5SM activists control the political classes and have seats within the institutions but the activists are controlled by the Movement. In a context where no trust if possible, democracy seems to become a monolithic and obscure, rather than liquid, process.

6. Grillo: The Parties’ Guilty Conscience

During his career as a comedian, Grillo always played the role of the “Talking Cricket” in Collodi’s *Pinocchio*, reprimanding the political classes for corruption, the economic establishment for financial scandals and denouncing information sources for collaborating with existing power structures. If we search the pages of history we can see that Grillo’s movement bears uncanny resemblance to an American movement founded in 1992 which was similarly criticised by the media and by academics. The movement was founded by Ross Perot and was called *United, We Stand America*, which later became the Reform Party which continued until the early 2000 (Kirp, 1992; De Rosa, 2000). Although the Web at that time was not so well-developed, Perot (a rich computer tycoon) managed to establish a network of groups in every State which were all linked by computer to the central organisation. And he stood in the 1992 Presidential elections and performed reasonably well. His model was extremely innovative and ambitious for its time. A series of Electronic Town meetings (ETM) meant that people and groups could coordinate (Barber 1984; Matthew 1994; Clift 1997; Malbin 1989). The decision-making process focused on local issues and was supported by an online petition platform (uVote). The voting system, based on consensus focusing and termed *National Group Technique*, also included videoconferencing technology which gave the group immediate feedback. The movement paved the way for the formation of a permanent non-party organisation in readiness for the 1996 elections. They were the first *non-party party*. Perot was also a hardliner, coming down heavily on any members who strayed from the party line or formed splinter groups. In terms of his ideological approach, Perot also had much in common with Grillo, especially his scorn for the political establishment and its ineptitude, and his criticism of the media (Perot, 1992). The political context in which his movement developed was also one marked by tension. People were fed up of politicians being selfish and refused to accept that they kept increasing their own salaries. Citizens exerted their rights and set up a movement called “Term Limit”, getting people to sign a petition to limit the term of office of those politicians then in power (Black and Black, 1993). So both Perot and Grillo found fertile terrain, with people very much on their side, which enabled them to transform popular discontent into an organised structure. How did they do it? How did so many people think their ideas were feasible?

According to Rosanvallon (2008), there are many reasons why our society is one of mistrust. First of all, the optimism we associated with technology has gone. Industrial development is now more synonymous with risk than with progress (we only need to think of the reaction the idea of nuclear power provokes). Secondly, the agencies responsible for economic forecasts have

contributed to a growing idea of the impotence of politicians (the idea of politics being measured in terms of spread has been widely criticised). And finally there has been a structural decline in trust on a social level where ties are getting progressively weaker. Beppe Grillo is a man whose campaign is based on respectful environmental progress, questioning the power of banks and their control over the economy, and interpersonal trust³⁵. So control over political action has been personified in the 5SM with people working as a surveillance-team that monitors and comments on political performance; as a contrast team that works to veto any measures they feel are unjust and as a judgement-team (or people's tribunal) that investigates and makes formal accusations against politicians or institutions. This explains the repeated requests for transparency in politics, the appeals to rid parliament of any members involved in criminal lawsuits and their attacks on President Napolitano and journalists. Rosanvallon describes this approach as the organisation of mistrust (2008) informal social counter-powers and even institutions all intent on trying to compensate for the erosion of trust. The Rosanvallon "counter democracy"

"does not work separately from the legal, democratic institutions but aims to become an extension of them and to widen their powers. It is one of the pillars of institutional democracy. It needs to be seen as a proper political form" (Rosanvallon 2008, p. 292).

In other words, it is a form of politics that sees society itself holding the reins of power, and exercising that power in new and different ways. However, it is destined to remain largely misunderstood because it does give more power to the people and it does open the doors to populist-demagogue tendencies. Seen in this light, Grillo is the embodiment of the kind of leader who wants to bypass traditional party mechanisms, to overcome the "democracy without people" as in Duverger (1968), or the "democracy counter-people" as in Mastropaolo (2005) which stresses the growing divide between the procedural and real democracy. For the first time in Italy, the Web has shown its muscle and proven itself capable of producing politically-aware collective subjects. As Grillo himself said:

"In Italy the Five Star Movement was born to the Web, with not a cent of public funding to its name, and with media opposition from all sides, yet it is forecast to be the third major party in the forthcoming general election." (Casaleggio and Grillo, 2011).

7. Final Remarks

In theoretical terms, Grillo's 5SM is the tip of the iceberg of a complex phenomenon that emerges from the separation between legitimacy and trust, two principles which theories of democracy and representation had merged together in the form of electoral processes (Rosanvallon, 2008). Once they are separated, the electoral process can no longer be seen as sufficient reason for keeping afloat a political class that fails to respond to citizens' needs and, more importantly, fails to deserve their trust. Grillo's criticism is one that aims at the heart of the way power is perpetuated through representation, and through its representation in the media. In Grillo's view, both the political-representative system (circuit) and the political-mediated system (circuit), form part of the same (terrible) agenda that was responsible for ruining the economy, destroying the environment and

³⁵ The 5SM takes ideological inspiration from Lester Brown, environmentalist and economist, described by the Washington Post as one of the most influential opinion makers in the world; Joseph Stiglitz, Nobel prizewinner for the economy, Jeremy Rifkin expert in International Affairs; Wolfgang Sachs, sociologist; Serge Latouche, theorist on economic degrowth.

contaminating the information. Interactive democracy is the way to move Italian politics forward. However, the model is not perfect, and 5SM is not willing to really challenge the old politics. The result is a defense reaction that closes the movement to dialogue with other parties.

Whether the movement will evolve democratically along Pirate Party lines or whether it will be realigned as a personal party, with Grillo holding exclusive rights to the brand name seems to be the crucial challenge. For the moment, the movement looks intent on facing up to the organisational as well as the electoral challenge, having already managed to emerge from the realm of sub-politics where most movements seem happy to stay (Beck 1997). It is during this transition phase that the organisational dynamic is so important. Because trying to organise people without a clear system of incentives or using negative ideological incentives (like Beppe Grillo's bans) can create internal conflict and discontent, giving the impression that the movement is more like a Leninist-inspired party (Panebianco 1982). The most complicated issue facing the 5SM at this stage is finding the right balance between Grillo's (personal) freedom of action and the organisational restrictions placed on the membership, as the early events seem to demonstrate. It looks unlikely in the end that Grillo's movement, at least for the moment, will be able to avoid those iron rules of organisation spelled out in the political science literature. Signs of difficulty are already beginning to show as it changes from movement operating in a social context to movement in an institutional context. Panebianco (1982) set out a list of the major factors that organisation revolves around and two would seem particularly important: recruitment and laying down the rules. The attempt to move from a local level of participation to a national one poses a tough challenge for Grillo and the whole MeetUp network, from finding the right technological platform for handling a people's vote, to deciding on terms and conditions for potential candidates.

Organizational constraints and dilemmas apart, Grillo and 5SM are having success where many others have failed. He is the product of a set of a unique circumstances: the political and economic situation, the party system crisis, but also the transformative power of new media, which now are enabling a critical mass of citizens to claim their rights, to demand more transparency and to take part in political processes.

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About the Author

Rosanna De Rosa

She is assistant professor at the University of Naples Federico II where she teaches Political Communication. Her publications are mainly aimed at analyzing the impact of new technologies on politics, with a focus on e-government, e-democracy and the emerging of a public sphere in Internet. She has been a Research Associate in a joint international project on political concepts and theory, directed by Mauro Calise and Theodore J. Lowi.

Botswana Speaks Parliamentary Initiative

A Socio-Political Approach to eDemocracy Initiatives in Developing Countries

Kheira Belkacem*, Vasilis Koulolias**

*eGovlab, Computer Science Department (DSV), Stockholm University, Sweden, kheira@egovlab.eu

** eGovlab, Computer Science Department (DSV), Stockholm University, Sweden, vasilis@egovlab.eu

Abstract: *This paper introduces the Botswana Speaks Parliamentary Initiative, an eDemocracy project launched in partnership with the Parliament of Botswana, eGovlab at the University of Stockholm and Government to You, a non-profit organisation. The initiative aims to enhance transparency of political and institutional processes in Botswana by fostering communication between Members of Parliament and citizens in four pilot constituencies. The approach taken to implement this initiative takes into consideration lessons learnt from ICT for Development (ICT4D) initiatives launched in the past decades and establishes itself in a new, innovative and adjusted framework that strongly relies upon the socio-political dimensions of the country. The Botswana Speaks Parliamentary Initiative should be seen as an eDemocracy initiative that builds on three crucial pillars for success: adaptation to socio-political realities, consideration of established IT infrastructures and finally, sustainable partnership with local partners with a sustained emphasis on capacity building.*

Keywords: eParticipation, ICT4D, online consultation, constituency services.

This paper presents a project that was launched in September 2012 in partnership with the Parliament of Botswana, eGovlab and Government to You and that aims at developing a Parliamentary Communication System (the Botswana Speaks platform) that enhances transparency and fosters communication between Members of the Parliament and citizens during the legislative process in Botswana. The conceptual framework of the Botswana Speaks Parliamentary Initiative adopts a socio-political approach. This project emphasises the role of offline and online participation by adapting to the socio-political traditions of the country as well as adapting to the IT infrastructures of the country. Moreover, this project emphasises the importance of capacity building through the implementation of eDemocracy initiatives in developing countries by first, rejecting the donor-recipient relation, thus by encouraging partnership and second, by putting a strong emphasis on training users and participants throughout the project period.

Thus, this paper introduces the socio-political context of Botswana, its political and democratic traditions as well as the IT infrastructure of the country that have strongly framed the technical decisions on the development of the Botswana Speaks platform. The second part of this paper describes the origins and the implementation of the Botswana Speaks Parliamentary Initiative in

the country for enhanced communication between Members of Parliament and constituents for better constituency services. It also presents the Botswana Speaks platform with its user-friendly mobile version and SMS integration, as well as the implementation of offline constituency meetings in the context of the project. The importance given to capacity building throughout the project period is also discussed in the second part of this paper. Thirdly, the objectives of the initiative are discussed and are put in perspective with past projects on ICT for Development. Finally, this paper concludes on the political, social and infrastructural expected outcomes of the project. The socio-political approach taken here to ensure the successful implementation of an eDemocracy initiative in a developing country is discussed in light of the specific political and democratic context of Botswana as well as the necessity to think eDemocracy projects beyond the simple paradigm of ICT implementation to enhance democratic processes.

1. Project Background: A Socio-political Analysis of Botswana

Since it gained independence in 1966, Botswana has experienced remarkable levels of political stability and economic development, in a region affected by unstable political systems and lack of growth and good governance (Plane & Vencatachellum, 2009). Botswana's long established practice of popular consultation and its level of social cohesion constitute a unique context where traditional structures are taken into account and integrated within contemporary administrative structures (Sharma, 2005).

After independence, the chieftainship system was maintained in Botswana, giving therefore a significant position to local representatives (chiefs). The functions of a chief are "to promote the welfare of the members of his tribe; to carry out any instructions given to him by the minister; to ensure that the tribe is informed of development projects in the area; to convene Kgotla meetings to obtain advice as to the exercise of his functions; to determine questions of tribal membership; to arrange tribal ceremonies; and to prevent commission of any offense within his tribal territory." (Sharma, 2005, p.5) The role that chiefs play in the democratic system of Botswana has been reiterated in the Botswana Vision 2016 Declaration written in 1996: "Traditional leaders will be an important part of the democratic process through which the long lasting "kgotla" system will pass from generation to generation. They will play a significant role as custodians of our culture and tradition, which will be dynamic in response to changing conditions." (Vision 2016 Booklet, p. 11)

Although often overlooked by international organizations, traditional chiefs and tribal administrations still wield considerable power in many African countries and participate in every aspect of local government, despite the rise of contemporary elected governments and bureaucracies. However, Melber (2007) explains that the levels of rural marginalization point at an erosion of the country's tradition of popular consultation, and points out that consulting the traditional chiefs is now used as a mere window dressing by government in major decision-making processes." Such finding goes in line with the Speaker of the Botswana National Assembly's speech given in October 2012 when she emphasised young people's decreasing interest in kgotla meetings: "Young people do not attend kgotlas. They are hardly ever there [...] they feel out of place."³⁶

³⁶ Speech given by the Speaker of the National Assembly, Dr. Margaret Nasha, during the official kick-off meeting of the Botswana Speaks Parliamentary Initiative, 8 October 2012, Gaborone, Botswana.

Botswana has a long-standing tradition of democratic consultation at the local level, a consultation dynamic that is well perceived and worth looking into when considering the implementation of an eDemocracy initiative in the country.

The second pillar of this initiative, which goes together with the country's socio-political context, is current policies on new ICTs and public services and the IT infrastructure of the country. Indeed, the Botswana Speaks Parliamentary Initiative falls within the National e-Government Strategy 2011-2016. With the aim to improve public services in Botswana, the National e-Government Strategy "outlines five major programmes and approximately twenty five interrelated projects that will, collectively, move all appropriate government services online, significantly improve public sector services delivery, and accelerate the uptake and usage of Information and Communications Technology (ICT) across all segments of our society." (Government of Botswana, 2011, p. 2). Besides, the Botswana Speaks Parliamentary Initiative falls within the broader Government's Vision 2016 Declaration that envisages "all citizens of Botswana fully embracing and actively managing the process of change. This cannot be change for its own sake, but rather a fundamental transformation across the broad spectrum of the social, economic, entrepreneurial, political, spiritual and cultural lives of Botswana." (Vision 2016 Booklet, p.4) It is within this policy framework that the Botswana Speaks Parliamentary Initiative has been conceptualised.

The second dimension that has influenced the conceptualisation of the initiative is the IT infrastructure of the country and its e-readiness. Botswana ranks second for e-government development in Southern Africa just after South Africa (0.3637 e-Gov Development Index in 2010 to 0.4186 in 2012 with a sub-regional average of 0.3934) (United Nations, 2012, p. 18). Besides, mobile penetration in the country reaches 118% in 2011 and the most interesting uptakes relates to mobile broadband. Indeed, whereas internet subscriptions have little increased (from 203,885 subscribers in March 2011 to 279,429 in March 2012), mobile internet subscriptions have increased from 185,971 in March 2011 to 259,486 in March 2012 (Botswana Telecommunications Authority, 2012, p. 5). The limited penetration of the Internet in the country is a reality that needs great consideration when conceptualising an eDemocracy initiative in Botswana. Besides, the significant use of mobile phones and nowadays the growing use of mobile broadband call for adaptation in terms of ICT tool development.

2. Botswana Speaks Parliamentary Initiative: Enhancing Transparency and Establishing Stronger Constituency Services

2.1. Origins of the Project and Description

The Botswana Speaks Parliamentary Initiative aims to build, evaluate and standardize an innovative Parliamentary Communication System (Botswana Speaks platform) that supports Members of the Parliament and citizens at the local level in their effort to execute their social contract. The project runs for a period of 18 months with four MPs involved in four constituencies: Nata/Gweta, Boteti North, South East South and Maun West. The origin of the Botswana Speaks Parliamentary Initiative goes back to February 2012 (Phase 0) when the Programme Director of the Botswana Speaks Parliamentary Initiative (eGovlab) visited several constituencies in Botswana together with one Member of Parliament and met with local authorities. The fieldwork then conducted showed a strong interest from local authorities and youngsters into the implementation of an eDemocracy initiative in remote areas of the country. During this same phase, a survey was

conducted with 33 Members of Parliament (out of 61) and 620 citizens in several constituencies. The interest in such initiative combined with the needs reflected in the survey results have led to the conceptualisation of the initiative together with the Parliament of Botswana. The initiative officially started in September 2012 with a first phase (Phase 1) of 6 months that has focused on the platform development and training for MPs, staff members involved in the project and constituency officers. Information dissemination, training, feedback, evaluation and testing of the online platform have constituted the main aspects of the first phase of the project. During the same phase, collaboration with partners in the Parliament of Botswana have enabled the design of the pilot phase (Phase 2) that has started in April 2013 with the essential definition of constituency meetings (design and purposes) and planning of those same constituency meetings in a timeline of 9 months in relation with parliamentary business in the Parliament. Thus, Phase 2 runs from April 2013 to December 2013 (9 months) and maintains training throughout the phase, including training for citizens in the four constituencies involved in the project. The online platform is then made available and used for both deliberation and enhanced constituency services (Speak4Yourself and U-Speak applications). The final phase of the initiative (Phase 4), which will run for 3 months – January to March 2014 –, is dedicated to feedback, evaluation and exploitation of the initiative as a whole. The Botswana Speaks Parliamentary Initiative is co-funded by the Parliament of Botswana, eGovlab at Stockholm University and Government to You in addition to the funding provided by the Swedish International Development Cooperation Agency (SIDA).

2.2. A Growing Demand for Interaction: Fostering Constituency Services

The survey mentioned in the previous section was conducted during Phase 0 of this initiative with 620 citizens of Botswana prior to the launch of the Botswana Speaks Parliamentary Initiative and 33 MPs. Survey questions focused on citizens' use of technology (i.e. mobile phones and the Internet) and on their perceptions of online and offline public consultations for the purpose of legislative decisions. The data gathered gives an overview of citizens' use of mobile phones in Botswana that reflects the figures mentioned in section 1 of this paper; their familiarity with the Internet and their perceptions on the potential of introducing a new consultation scheme to share their opinions with their elected representatives. Citizens from several constituencies (Serowe North, Nata/Gweta, Boteti South, Ngwaketse South, Gaborone Central, Gaborone South, etc.) were interviewed for the purpose of this study and general findings show that there is a strong commitment to and welcoming of an initiative that would gather citizens' opinions offline and online to then be made public or shared privately with elected representatives in the Parliament of Botswana. Those findings should be seen in light of the survey conducted with almost 60% of Members of the Parliament of Botswana (33 MPs) who declared that they would positively welcome input from their constituents in the context of their legislative work.

Thus, the following figures are indicators of the relevance and need of the Botswana Speaks project in the current political and consultative system in Botswana. Indeed, survey shows that 76.1% of interviewed citizens have never consulted their elected representative in the Parliament to share their concerns or give their opinion (see Table 1). At the same time, 94.2% of those same interviewed citizens declare that they would communicate with their elected representatives if a dedicated free line were made available to them.

Those findings need to be put in perspective with the Members of Parliament's willingness to hear their constituents out (see Table 2). Indeed, 91% of interviewed MPs declared that they would

accept direct messages from their constituents and all of them maintained that they would be interested in getting citizens' opinions, preferences or suggestions in the context of their legislative work.

Table 1: Communication between citizens and MPs, survey conducted with 620 citizens, 2012.

Have you ever communicated your concerns with your representative in Parliament?	Total (N)	Total (%)
N/A	5	0.8%
No	472	76.1%
Yes	143	23.1%
Grand Total	620	100%
If there would be a dedicated free line (either by mobile or fixed landline) for you to communicate your concerns about you constituency with your representative in parliament, would you use it?		
N/A	3	0.5%
No	33	5.3%
Yes	584	94.2%
Grand Total	620	100%
If an independent member of staff would be tasked to come to your district on a frequent basis to gather your views and communicate them to your elected representative, would you share your views?		
N/A	6	1%
No	29	4.7%
Yes	585	94.3%
Grand Total	620	100%

Table 2: Communication between MPs and citizens, Survey conducted with 33 MPs, 2012.

Would you be willing to accept direct messages from your constituents?	Total (N)	Total (%)
No	3	9%
Yes	30	91%
Grand Total	33	100%
Would you be interested in directly informing your citizens about your opinions/ views and latest efforts for the constituency?		
No	1	3%
Yes	32	97%
Grand Total	33	100%
Would you be interested in seeking citizen inputs (their preferences/ opinions/ suggestions) for your work on policy/legislation?		
Yes	33	100%
No	0	
Grand Total	33	100%

The Botswana Speaks Parliamentary Initiative was conceptualised from its early days for its socio-political dimension. An evaluation of the needs from both Members of Parliament and citizens (as mentioned with the survey findings) has helped conceptualize the proceedings of the initiative and set up the core elements (offline and online) of the Parliamentary Communication System (Botswana Speaks platform). Two elements have guided the conceptualization. First, the significant role local consultations play in Botswana through its chieftainship system. Putting aside such component of the political and cultural life of the country would be a risk to ensuring the success of the initiative given the establishment in traditions and culture in constituencies. Second, the survey findings have given an overview of the lack of communication between MPs and constituents. Constituency services, where MPs represent their constituents' interests in the National Assembly, remain underdeveloped in the country. Financial allowances for consultation missions have put a strain on the interaction between Members of Parliaments and their constituents. One way of addressing this is by fostering communication between MPs and constituents and providing citizens with a tool to express policy preferences and provide feedback to policy implementation instantly and at minimal costs.

2.3. Embracing Local IT Infrastructure: Mobile Version and SMS Component.

The Botswana Speaks platform (See Figure 1) is built on Joomla!®, an open source content management system, which is currently used in more than 200 countries (47 in Africa) to build and

maintain over 3,211 government websites³⁷. From the citizens' end, the platform enables users to submit messages via two different applications. First, the platform includes the U-Speak application, a constituency case tracking system that enables citizens from four constituencies (South East South, Nata/Gweta, Boteti North and Maun West) to send messages via the online platform or via SMS directly to their MP. Second, Speak4Yourself is an opinion poll application that enables any citizen in the country to enter opinions into on-going polls on specific issues that are of concern to them. From the Members of Parliament's end, the platform (both applications) offers a decision support system that gathers data on constituents' concerns and requests. The platform enables MPs and parliamentary staff to instantly generate statistics and export tables and graphs in order to analyse and visualize citizens' input and preferences by policy areas and by constituency, over any given period of time.

The IT infrastructure of the country has been a core element that has been taken into account when conceptualising the initiative. As discussed earlier, Internet penetration in the country is very low whereas mobile penetration is very high. Botswana is part of the African countries that have skipped the stage of broadband Internet as we know it in developed countries and have directly embraced mobile broadband with an increasing number of mobile Internet users in the country as discussed earlier. Therefore, given the high level of mobile penetration and the growing mobile broadband in the country, a mobile-friendly version of the platform has been developed during Phase 1 of the initiative and implemented for the pilot phase (Phase 2). The mobile version enables all users (citizens, MPs, parliamentary staff) to access the platform on any mobile device with the same functionalities than the desktop platform (See Figure 2). Besides, an SMS component to the communication platform has been integrated to the platform. Citizens from the four constituencies involved in the pilot phase of the initiative can send SMS to share their issues with their MP in order to improve constituency services.

³⁷ www.joomlagov.info, retrieved 24 December 2012



Figure 1: Botswana Speaks Dashboard (Desktop Site)



Figure 2: Mobile version of Botswana Speaks Platform (From left to right: U-Speak and speak4yourself dashboard, U-Speak issue form, speak4yourself home page)

2.4. Embracing consultative traditions: offline constituency meetings

The uniqueness of the Botswana Parliamentary Initiative as an ICT4D initiative lies in the offline dimension of the project as briefly discussed earlier. As part of any project in eDemocracy or eParticipation in developing countries, it is essential to favour field promotion by establishing a strong communication strategy to enable the highest number of citizens to get involved. As much as constant promotion in local areas in the country are an essential part of the offline dimension of the project, the novelty with the Botswana Speaks Parliamentary Initiative lies in the socio-political context discussed earlier (importance of local consultations) and its implications in implementing an eDemocracy initiative that would prove successful. Thus, the conceptualisation of *constituency meetings* has been favoured. Constituency meetings draw upon local meetings (kgotlas) and favour consultation on legislative matters. As for today, there is no mechanism that allows a wide transparency on parliamentary business in the country and as mentioned in the previous section, constituency services remain poor. As an answer to those lacks, the Botswana Speaks Parliamentary Initiative offers an offline component that completes the online platform developed for this purpose. Constituency meetings are designed as open discussions (based on the same design than kgotla meetings) on specific issues that are to be discussed in session in the Parliament. Thus, during the pilot phase of the project, a piece of legislation on a specific theme (i.e. Health, Education, Water supplies, etc.) will be selected by the Parliamentary Services and will be discussed in several villages in the four constituencies that participate in the initiative. The establishment of such offline meetings requires the creation of a mediator/officer role in the project. Indeed, constituency meetings have been designed on the basis of existing kgotla meetings but involving traditional chiefs in constituency meetings (as mediator and chairs of the meetings) is not possible as they depend on the Ministry of Local Government and not on the Parliament. Therefore, administrators of MPs' local offices will become *constituency officers* for the pilot phase of the initiative. As part of the crucial necessity to foster capacity building throughout the project, training 'constituency officers' who will chair and monitor public discussions on legislation, is an essential part of the project's conceptualisation. During those meetings, local authorities and citizens are invited to discuss a specific topic related to on-going parliamentary business. The constituency officer chairs the meeting and collects citizens' input and requests to make them then available on the Botswana Speaks platform (U-Speak). The use of an offline tool enables constituency officers to gather citizens' input in a similar way than on U-Speak. Once internet connectivity is available, the constituency officer can sync the offline tool with the platform to gather all data on one single platform.

2.5. Sustained capacity building as a key factor

One of the reasons why eDemocracy and eParticipation projects in developing countries tend to fail is for their lack of capacity building throughout projects. Several variables lead to failing ICT4D projects (i.e. design, capacity building, etc.) (Heeks, 2010; Dada, 2006). And we would like to focus here on one variable that proves essential in the case of the Botswana Speaks Parliamentary Initiative: capacity building. We have so far shown the different aspects of the initiative: online/offline, online platform/SMS functionalities, fostering deliberation/improving constituency services. In order to ensure the success of each one of these aspects, sustained training of Parliament staff, Members of Parliament and constituency officers is indispensable. Training for

citizens in the four constituencies involved in the project is also foreseen, in order to enhance chances of participation and ensure sustained use of the platform.

Training is designed in two-fold: first, a conceptual training that allows participants to be fully aware of the implications of the projects and its expected outcomes. Such training is less about training participants than making MPs, members of staff involved in the project as well as constituency officers full partners in the project. We believe that by rejecting the donor-recipient dynamic and encouraging partnership, the initiative is more likely to lead to successful results and sustainability in the long run. Second, technical training is also provided to ensure sustainability of the initiative from an ICT perspective. The low penetration of the Internet as well as the considerable low level of IT skills in the country needs to be addressed for the sustainability of the project. Thus, the Parliament of Botswana has put into place an IT training scheme for MPs, members of staff and local administrators in order to sustain IT skills in the long run. At the same time, as mentioned earlier, partners in the projects (Government to You and eGovlab) offer technical support but also training sessions throughout the period of the initiative (orientation seminars, workshops, team meetings, etc.).

Thus, as part of the first phase of the training, MPs and partners in the Parliament have been made full partners in the initiative. By designing together the pilot phase of the project (i.e. discussing jointly implications of constituency services at the local level, limits and expected outcomes of the online platform, design of the online platform, etc.) partners are trained to grasp the outcomes of the initiative and the implications in their day-to-day work as elected representatives and civil servants in the Parliament of Botswana. Second, technical training is provided as an essential element of capacity building. The lack of IT skills is seen as a serious brake to the successful completion of the initiative and therefore technical training is seen here as an integral part of the project, as much as the development of the online platform. Moreover, regular trips to the constituencies taken by the staff of the Parliament involved in the initiative will ensure that citizens in remote areas will also be trained to use the online platform (mainly via the mobile friendly platform).

3. Discussion

The case of an eDemocracy initiative implementation in Botswana comes in a different theoretical context of discussion when one talks about ICT and democratisation in developing countries. Indeed, the case of Botswana does not relate to ICT for political development (i.e. implementing ICT tools to introduce democratic processes in oppressed countries). Rather, Botswana has the distinctive feature to be a strongly established democratic system in a region of the world where political stability is not systematically ensured. In this context, the initiative seeks enhanced transparency and stronger participation in an already established democracy. Traditional consultations at the local level – kgotla meetings – are a good example of the establishment of traditional democratic processes. This is why they have strongly inspired the conceptual framework of the Botswana Speaks Parliamentary Initiative by considering an offline dimension to the project with the setting up of constituency meetings that are held offline and based on the kgotla model of consultation. Such offline meetings should be seen in light of the lessons learnt from ICT4D projects conducted in developing countries. As much as the case of Botswana does not reflect in typical ICT for democratisation initiatives, we cannot compare such eDemocracy initiative to projects conducted in developed countries. Some structural, technical and

organizational differences do not allow us to make direct comparisons. Therefore, the case of an eDemocracy initiative such as Botswana Speaks in an established democratic system in Africa calls for a reconsideration of ICT4D parameters to evaluate such project.

The points discussed in the previous section (conceptualisation of the representative/represented relationship in the context of the initiative, online and offline components of the Parliamentary Communication System, sustainability and capacity building) are elements that Heeks and Molla (2009) have characterised in their model of good practice for ICT4D project implementation. The three main issues suggested by the authors – design, governance and sustainability – have been addressed during the conceptualisation of the Botswana Speaks Parliamentary initiative. The importance of local socio-political realities is an addition to this model and would reflect more accurately parameters of evaluation for projects such as Botswana Speaks. The following diagram, inspired in part by Heeks and Molla's (2009) good practice model, summarises elements of good practice that will lead the Botswana Speaks Parliamentary Initiative to a successful one:



Figure 3: Good Practice for ICT4D initiatives in Botswana (adapted from Heeks and Molla's model (2009))

There are several expected outcomes to this initiative. First, the aim is to offer a two-way communication system for MPs and citizens, a system that will allow MPs to receive their constituents' input during the legislative process. Complementarily, the initiative gets citizens involved in the decision-making process and enhances their awareness of the ongoing parliamentary business on the one hand and increases their participation in this process on the other hand. The innovative approach taken for this initiative considers both new technologies and

the political traditions of the country as a way to embrace the national socio-political context to implement a sustainable communication system. By conceptualizing the offline dimension of the initiative, the project has the objective to be inclusive and sustainable. Therefore, through offline constituency meetings and online participation, the Botswana Speaks Parliamentary Initiative aims to improve constituency services. Where constituency services have been poor or non-existent, Botswana Speaks offers a sustainable solution to addressing the issue. As a result, the relationship between elected representatives and constituents is reinforced and decisions made in the Parliament of Botswana are further democratically and representatively informed.

4. Conclusion

The specific objectives of the project in operational terms is to develop and customize the Parliamentary Communication System; establish constituency meetings and implement the platform in four constituencies for improving constituency services; pilot, evaluate and standardize the application by deploying the two-fold platform in the whole country, and finally to promote, and replicate the Botswana Speaks platform by analysing the results of the pilot phase and lessons learnt throughout the project in order to expand the Parliamentary Communication System to a larger population of users in the country but also in the Sub-Saharan region.

The Botswana Speaks Parliamentary Initiative offers sustainable benefits for citizens through their awareness of parliamentary business on issues that concern them on a daily basis and through their participation in the decision-making process. Training in local areas for citizens (i.e. how to use the online platform and the mobile version of the platform) is also contributing to the sustainable benefits of the initiative. Moreover, the initiative offers sustainable benefits for the Members of Parliament and the staff of the Parliament. MPs, staff members and the MPs' local administration develop, throughout the initiative, capabilities in leveraging technology to support collaborative and active engagement in the decision-making process. Thus, four MPs and the Parliament staff are being trained on good governance using ICTs and open infrastructure. Finally, the initiative contributes to achieving the Botswana Vision 2016 objectives and remains in line with the goals of the Botswana National e-Government Strategy 2011-2016.

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About the Authors

Kheira Belkacem

Kheira Belkacem is Assistant Programme Director at eGovlab. Her experience in the European Parliament, when working closely with the Director General of the Directorate-General for Innovation and Technological Support in 2008-2009, left her with a strong expertise of parliamentary systems and adoption of new technologies in democratic institutions. She also spent a summer internship at the United Nations Institute for Training and Research (UNITAR) on the e-Governance Programme in 2008. In 2010, she worked as a research assistant for the Reuters Institute for the Study of Journalism at the University of Oxford where she contributed to two research reports in 2011. In 2010-2012, she taught modules on communication theories and new media as a teaching assistant at the Institute of Communications Studies, University of Leeds, UK. She is currently the Assistant Programme Director of the Botswana Speaks Parliamentary Initiative and is involved in academic course development at the eGovlab, Computer Science Department, University of Stockholm, Sweden.

Vasilis Koulolias

Vasilis Koulolias has been working at the interface of technology and parliamentary two decades. In 1987, he set up Pythia Corp - developer of legislative information as Chairman and CEO until the company was sold in 1998.

In 2005, Vasilis founded Gov2u, a non-profit organization dedicated to bringing the Internet to promoting popular democratic processes and giving a voice to citizens to be involved in making processes of their governments. In less than three years of its founding, Gov2u PoliticsOnline amongst the Top 10 most influential players in the field of Politics and the Internet. Gov2u now operates around the globe advising and assisting governments to modernize their legislative processes and enabling citizens to exercise their rights to democratic participation.

Open Collaborative Government

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An E-Participatory Map over Process Methods in Urban Planning

Karin Hansson*, Love Ekenberg**, Göran Cars and Mats Danielson

* Department of Computer and Systems Sciences, DSV, Stockholm University, khansson@dsv.su.se

** Department of Computer and Systems Sciences, DSV, Stockholm University, lovek@dsv.su.se

Abstract: *In this paper, we put the concept of e-participation in a wider perspective. Based on experiences of using participatory process methods in urban planning, we address the importance of communicating underlying epistemological beliefs in various participatory methods. Using eight cases of urban planning, we show how an analysis of the interplay of the concept of agenda, participant, and method can be used when developing strategies for e-participation. The investigation reveals a lack of procedures and methods for actively visualizing the unequal influence of different groups and individuals on the participatory processes and decisions. In contrast to the usual governmentally-controlled participation models, we propose a map clarifying the epistemological and ontological positions of different participatory methods, bridging various research paradigms and methods while identifying project teams' expectations and common concepts.*

Keywords: Participatory decision making, Societal planning, Regional development, eDemocracy

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In the Swedish Planning and Building Act public participation in the planning process is emphasized as being vitally important. The purpose is, according to the current legislation, to improve the information upon which the decisions are made and to enable insight and influence. However, in contexts where participatory methods are used to gather information and develop the agenda along with citizens, confusion often arises because participants have contradictory or exaggerated expectations of what the process entails. A striking example is the concept of "dialogue process". This is frequently used in the context of citizen participation when it actually, at best, is about a consultation regarding an already developed proposal that the citizens are asked to comment on. Needless to say, in these cases the potential to influence is rather limited. To reduce confusion and conflict in a dialogue process, it is fundamental to have a common understanding of who should participate, what is on the agenda and what is the scope for action; in other words, the ontological and epistemological foundations of these methods, during the entire process in the process from agenda setting to discussion and decision-making.

These challenges are not relevant merely to practitioners but also to academia. Especially in research projects that involve different research perspectives and practices, a clarifying of the democratic discourses is needed. The more academic area tends, however, to be a bit discouraging in this respect with quite limited theoretical developments. In their review of e-participation research in six European countries, Freschi et al. (2004) are critical to the lack of real interdisciplinary research in the field of e-participation, where many disciplines are gathered but seldom mixed. In a recent review of EU funded e-participation projects, de Marcos, Martínez, and Prieto-Martín (2012) point out the importance of looking at a wider participatory situation and to put the concept of e-participation in context of the field of participation. This has also been recognised by several researchers in the fields of e-democracy and collaborative government. For instance, in overviews of the field of e-participation by Macintosh et al. (2009) and Sæbø et al. (2008), in Dahlberg's (2011) overview of discourses on e-democracy, and in reviews of the field of e-government by Heeks and Bailur (2007), the authors point to a lack of nuanced discussion of the underlying concepts of democracy, and to the fact that it is usually an unarticulated liberal or deliberative conception of democracy which forms the basis for technology development. In the more broad field of collaborative government, (Ansell & Gash, 2007; Emerson, Nabatchi, & Balogh, 2011) complain about the lack of common language to describe underlying strategies.

The area of e-participation is also characterized by technical determinism. For instance, Helbig, Gil-Garcia, & Ferro (2005) point out that there is too much confidence in the technologies' capacities of solving complex democratic problems. This despite the fact that most research on the digital divide and marginalisation indicates that technology often increases socio-economic inequalities rather than reduces them, and, as (Norris, 2001; Schradie, 2011) note, it seems that these differences are not primarily about access to technology but rather about how to use technology to reach out to influential groups. Not surprisingly, authors such as Macintosh et al. (2009) emphasize that the unequal distribution of access to the Internet may cause severe problems with regard to strengthening democracy through increased e-participation. Similarly, Sæbø et al. (2008) call for greater in-depth knowledge of the citizen as an e-participant, especially given the differences in gender, nationality, social grouping, and cultural background.

Thus, in order to develop our methods further in the interdisciplinary field of e-participation we cannot assume the existence of general and unified ideas about what participatory processes actually mean, and methods utilised in this context should preferably recognise these problems and at least partly provide means of visualising differences and clarifying representativeness in the participatory process. In order to support interdisciplinarity in the field of e-participation it is necessary to state the underlying assumptions and ideologies in the concepts, stories, and vocabulary used when developing methods for participation in public decision making; what can be called democracy discourses.

Below we are investigating what participation actually means in theory and in our own practice. The next section looks at discourses about democracy in participatory processes. Using this apparatus, Section 2 analyses eight urban planning cases where we have been involved. Finally, some concluding remarks are provided and formulated in a "participatory map".

1. Discourses about (E-)Democracy in Participatory Processes

Not unexpectedly, definitions of e-democracy are not without problems and lack uniformity. Päiväranta (2006), for example, reviews various theoretical models of e-democracy and shows that

the definitions and meanings often deviate significantly from each other. To systematise the concept of e-democracy, Dahlberg (2011) suggests a model that displays which ideas about democracy are present in an e-democracy setting. The author creates four positions for digital democracy: liberal-consumer, deliberative, counter-publics, and autonomist-Marxist; and argues that most of the development of e-democracy takes place in what he calls a liberal-consumer position.

- The *liberal-consumer* position concerns the improvement of government “customer service”, i.e., providing better services, increased accessibility and information transparency through flexible information systems and more informed decision-making.
- To some extent, this is also about changing the representative system by making room for *deliberative* discussion on various issues, and for public opinion development. Here, there is less public investment in the development of technologies for e-democracy on a global scale. Nevertheless, ICT has, in this context, enhanced participation in global movements and global communities of interest.
- The *counter-public* position is about grassroots activism, network-based organizations, built on a shared interest, that use the Internet to create opinion and to engage members. Internet and mobile communications represent a cost-effective way of organizing a group and articulating opinions, and can also provide links to other similar interest communities globally.
- Democratization can also take place at a micro level, as in an *autonomous-Marxist* position, within companies and between individuals in a network-based form of production that is facilitated by the rapid exchange of information communication that technologies allow: here, ICT supports networked collaborations and peer-to-peer distribution and sharing.

These positions can be fruitfully combined with different perspectives on space and community as shown in Fig. 1. E-democracy is often seen in a macro perspective, looking at society as a whole as a framework that can be reformed by local national authorities (macro/local), or global NGOs (macro/global). But e-democracy can also be seen from a micro perspective, with a focus on individual or small-group interaction in specific situations, as the local citizen's rights in relation to the local community or nation-state (micro/local), or a way for the individual to act in relation to other individuals beyond the local institutional context (micro/global).

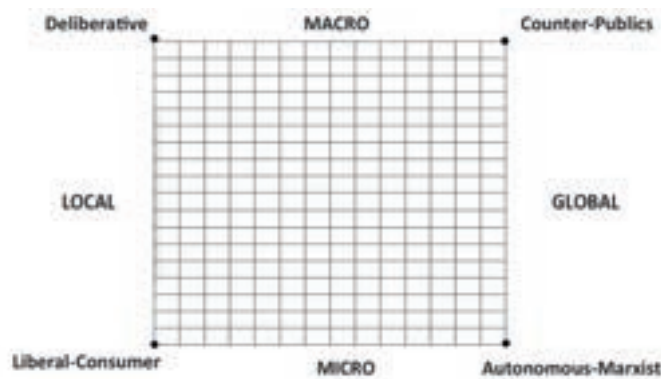


Figure 1: Map of Dahlberg's (2011) four e-democratic positions in relation to local/global positions and macro/micro perspectives.

Others, such as (Ansell & Gash, 2007), provide an analysis model based on collaborative governments. They emphasise the importance of initially *clarifying power relations* among interests and ask how much various participants have to actually participate in dialogues. Only thereafter, leadership is defined as well as the methods and moderation principles utilised. A similar model, obviously suitable as a basis for our purpose, not automatically taking the state perspective as a basis for democracy, is Dahl's (1989) model of democracy. The purpose of this more general analytical model is less about categorizing democracy but more on reflection over the degree of democracy in different participatory situations. Democracy in this sense is when *those affected by the decision-making are also involved in the decision*. In this context, decision means to define who is actually a *participant*, to define what the participation is about, to state how the *agenda* is set, and to clarify the rules for discussion and the actual decision making steps, the actual *method*. Transparency and an informed understanding of what is going on are important conditions for participation at all levels of the process.

2. Eight Cases of Urban Development Projects

We will now use Dahl's more general model as a starting point for an analysis of urban development processes in reducing the preconceptions about what these processes actually mean on a global and local level. We will focus on the issues regarding agenda setting, the perceptions of the participants, and the role of the method in the development process. With this perspective, we have analysed the planning processes and the methods used in eight urban development projects in which members of our research team have been actively involved as researchers coming from the field of computer science, urban planning, social science, and art. Thus, the projects, shown in Table 1 below, are not randomly chosen, but rather they are fairly typical for contemporary planning practice in Sweden.

Table 1:. Summary of eight cases of participatory processes in urban planning in Sweden.

Nacka Infrastructure	<p>The aim was to help the politicians to take a decision about if services such as roads, water supply, sewers, and marinas, should be in private or public hands. (Danielson et al., 2008)</p> <p>Method: Multi-criteria, multi-stakeholder decision analysis to enhance transparency</p>
Örebro Water	<p>The aim was to reach a more sustainable (long-term) solution with improved quality of the water quality of Svartån, Örebro. (Danielson et al., 2010)</p> <p>Method: Multi-criteria, multi-stakeholder decision analysis to enhance transparency</p>
Stockholm Transportation	<p>Future development of the infrastructure around Stockholm including new roads and public transportation.</p> <p>Method: Multi-criteria, multi-stakeholder decision analysis to enhance transparency</p>
Muskö Eco Village	<p>The aim was to develop a plan for an eco-village for a more sustainable living.</p> <p>Method: An iterative dialogue process in three steps with residents and</p>

	other stakeholders, e.g. the municipality, investors and NGO's and investors.
Stockholm Central Station	The aim was to develop Stockholm Central Station with new premises. Method: A dialogue with the two closest stakeholders. The resulting plans were displayed in public and consultation meetings with the public were held.
Högalid Urban Development	Because of the housing shortage the city wanted to densify centrally located neighbourhoods in Stockholm. Method: A Charette was used in the beginning of the plan process, where municipal officials, developers, and residents participated in a consultative and creative collaborative process.
Husby Urban Development	Municipal development plans included new houses and extensive renovations, and a redesign of the town centre. (Hansson et al., 2012) Method: The methods used by the municipal to involve residents were surveys, dialogue forums, and exhibitions. Residents used town meetings and online tools like blogs, twitter and social media to create debate.
Upplands Väsby Vision	Municipal plans included an increase of the population, but also an expansion of the number of workplaces and to strengthen public and commercial services. . (Hansson et al., 2012) Method: Surveys, dialogue forums and interactive exhibitions to involve residents in planning

In conducting this study, we adopted a strategy of successive approximation. We analysed additional cases while refining and elaborating our analytical model as we evaluate these additional cases in an iterative process. The goal is to develop a general model for analysing, highlighting, and identifying the underlying assumptions and ideologies in methods for participation, and to develop a common language for interdisciplinary researchers and practitioners in planning processes to communicate expectations and limitations. We view this paper as a starting point and a way of inviting others to add cases and further refine the model.

The eight cases summarized in Table 1 were selected to represent the width of the field, but a common denominator is that they represent urban development projects in which conflicting interests are present. In all but one case, it is a government agency that initiates the planning process and all of the cases have a local development perspective. In all of the cases the methods deal both with supplying the single participants with information (micro/local), and to view the local society as a framework that can be reformed by authorities to support a more deliberative process (macro/local). In two cases online participation framed the situation as global/macro, as it was connected to global counter-publics.

The researchers' roles in the projects have also varied, from more passive observers to a direct involvement. We have focused on the view of the *agenda* and the view of the *participants* in the cases. We are also interested in the role that the *method* plays. The concepts (agenda, participation, and method) that we have identified are not per se necessary for the analysis; other concepts could have been chosen as well. The purpose is primarily to identify underlying notions/values that are represented, and also notions/values that are missing in order to enable further joint development

of various types of methods. As we operate in the interdisciplinary field of ICT and urban planning, this is also a way to examine the different views on knowledge that are represented in our interdisciplinary research group.

2.1. The Role of the Agenda

The first aspect we examined in the projects is agenda setting. How is the agenda set? What are the problems targeted? Who is setting the agenda? What issues are given priority? Is a solution proposed? Is the agenda open for discussion and possible to develop? How do you handle the presence of powerful interests that dominate the agenda?

The agenda in most of our cases is already set, or is more or less defined by the initiating authority. One case is an exception. In the case Muskö Eco Village it was an association that initiated the process and the development of the agenda was made with the help of a variety of groups invited by the association in order to prepare the agenda prior to political decision-making concerning the frame and focus of the project. The ambition with Muskö Eco Village was to combine an organic farm with a timeshare. The association wanted all buildings to be environmentally friendly, and dedicated farmers would operate the completely organic farming. The idea was that consumers could become partners in everything from a mobile hen house to the farm dairy.

The project could be seen as a local project, but not without a global character as the global environmental movement's success helps to justify the project locally. Decision-making can therefore also be seen as something that takes place in a global public sphere that affects local public opinions and therefore politicians' decisions. In this case, the agenda is defined by the local association, but also defined globally by the dominant discourses that restrict the types of solutions that are possible to express. In the case of Muskö, the global environmental movement can be seen as an important e-participant in the local agenda setting; what Dahlberg (2011) calls a counter-public e-democracy position.

Explicitly or implicitly, the agenda is a powerful tool in our cases. By taking the initiative and forming the agenda, the initiator gains two powerful advantages. First, the agenda offers an opportunity to formulate the problem. In most of our cases it is obvious that the "problem" underlying the project can be formulated in different ways. For example, in the case of Högalid in Stockholm, the City authorities perceived the problem as a shortage of housing while residents living adjacent to the proposed development saw the improvement of urban and green qualities as the main problem to be addressed. Second, by shaping the agenda the initiator have an advantage, including and excluding issues as he/she finds appropriate. Also, the way in which the agenda is structured (priority and links between issues) has impact on the outcome of the project.

In most of our cases, the agenda is not problematized, except when there is a clear conflict, as e.g. in Nacka municipality where conflicts between antagonistic interests created a stalemate. The municipality of Nacka belongs to the Stockholm region and parts are situated in the inner Stockholm archipelago. Although originally inhabited by summer residents, at some of the islands, particularly those that are easily accessible either by car or commuter boats, the summerhouses have evolved into permanent residences. The proximity to Stockholm has made property prices surge, so on some islands houses built by relatively affluent newcomers now neighbour older houses inhabited by residents who have lived there for generations. This influx of permanent residents into the areas raised demands for public services such as roads, water supply, and

sewers, and also for marinas to facilitate commuting to islands inaccessible to cars. For almost a decade, the debate regarding the issues concerning whether the above-mentioned services should remain in private hands or be run by the municipality had been on-going. All groups had lobbied politicians for many years. What complicated the situation further was that Swedish law requires prospective real estate owners to apply for permits for every planned building. However, the municipality has the ability to postpone a permit application for only two years, after which it automatically passes without alteration, thus creating a planning chaos. In this case, a multi-criteria, multi-stakeholder decision analysis tool was used to clarify different solutions for the stakeholders, and to enhance transparency in the decision process for everyone involved.

Also in the district Husby in Stockholm, the development has halted due to participants having different views of the problem. Here, the plan to develop the area was first presented in 2007 and is still (2013) frozen for the time being due to inhabitants' protests. Husby has slightly more than 11,000 inhabitants and is a suburb in the northern part of Stockholm built in the 1970's. The neighbourhood consists of prefabricated multi-storey buildings constructed as a response to the housing shortage prevailing at the time due to rapid urbanisation. The neighbourhood has over time come to be regarded as a problem area and is one of the parts of Stockholm associated with segregation, exclusion, unemployment, and other social problems. In addition, the houses have become run-down and there is a great need of renovation in the area. As a reaction to the negative image of Husby, and as a way of creating debate about the cut-downs, residents have been using town meetings, public demonstrations, and online tools like blogs, twitter, and social media to create a counter-public, which has influenced the hegemonic discourse and forced the city to stall its plans. There is thus a broad perception in the dominating public discourse that Husby need to be developed, and there are a number of players in different areas that have plans for Husby's development. But many of the people who live in Husby today have another opinion than the one held by the City. The development plans also coincide with cut-downs and changes in public services, and there are political controversies surrounding many of the initiatives included in the planned investments.

In Nacka as well as in Husby the problem is thus not only that the stakeholders cannot agree on what the solution to the problem is, but also that they cannot agree on the definition of the problem, and therefore the process of agenda setting is surrounded by conflict.

2.2. The Role of the Participants

The second concept examined is the participants' roles in the process. The problem here is to define who the participants are. The key question is – who is a stakeholder?

The case of Upplands Väsby and the plan for development of the railroad station and its vicinities could be taken as an example to illustrate this ambiguity. Upplands Väsby is a municipality with slightly more than 40,000 inhabitants, located in the northern part of the Stockholm region. Municipal plans include an increase of the population, but also an expansion of the number of workplaces and to strengthen public and commercial services. An important feature of the municipality's development strategy is to change its image, from being a mono-functional "sleepy" suburb to being a part of the region characterized by urban qualities; i.e. creating an urban fabric with higher density where different functions are physically integrated. The significance of culture and the promotion of street-life are stressed in the visions for the future. At present, the municipality is engaged in a number of activities to realize these ambitions. A long-term vision is

being developed. This activity includes a variety of measures aiming at active involvement of the residents. Substantial new construction and “fill-in” are carried out in the central part of the municipality with the ambition to create and strengthen urban qualities. This comprehensive change process is complicated as it involves a number of stakeholders with varying interests.

The plan for the development of the railroad station illustrates this complexity. Residents living in close vicinity to the railroad station, and whose local environment will be affected by the project, consider themselves self-evident stakeholders. But also other individuals will be affected, directly or indirectly, by the project. For example, train commuters from other parts of Upplands Väsby will benefit from improved means for intermodal public transport. For individuals working in the area, the project means that the adjacent outdoor environment will change dramatically, and for current and potential Stockholm residents suffering from the housing shortage in the Stockholm region the plans for a railroad station and adjacent land could imply housing options. Thus, an initial issue is to define groups with an interest at stake. Having done that, it becomes obvious that these interests are often diverse and conflicting. The issue of weight and power related to various stakeholder groups becomes crucial in participatory processes. Especially when we translate these processes to digital mediated systems, the necessary inequality between different participants has to be addressed.

Thus, all the potential interest owners might be regarded as potential participants, as in the case Muskö Eco Village where all affected by the construction of the village were invited. Or you can view only those directly active in the process as the main participants, in this case the association that took the initiative and the politicians who make the formal decision. Some of the cases also emphasized the participants' diverse opportunities to participate, as in Husby where, by involving local youth in the dialogue process, the municipality reached many that would otherwise not have been reached because of language difficulties. In the Upplands Väsby case the municipality also viewed lack of representation as a problem, and tried to use different forms of dialogue to reach different groups. Here the question is how the use of ICT can improve the representation of different groups of people, rather than favouring groups already influential. Obviously, some people see themselves as participants while others do not. How can participation in creating the vision of the municipality be extended? Maybe participation here is not so much about participation in single questions, but rather about engaging in a development of a community of participants who engages in all sorts of questions.

2.3. The Role of the Method

The third concept we focused on is the method in the development process. We talk about method in a broad sense, from the approach chosen by the initiator in order to involve the participants/stakeholders in the development process to concrete technical systems. This calls for establishment of long-term rules and institutions for participation.

The case of Stockholm Central Station exemplifies how the method also can be used as a way to restrict participation. Here, the statutory methods of public dialogue required due to Swedish law were used, but the process owners tried to limit the number of active participants in the discussion of the development of the project. The process was about how to create a new station entrance for the central station to cope with increasing passenger volume. Two key players were setting the agenda. The first one was the Swedish Transport Administration (Trafikverket) which has the main responsibility for communications in Sweden. Of critical interest to the Administration was

the creation of an appropriate station with high capacity and efficient links to the train station and the metro. The second key player was the owner of the real estate who developed a proposal for a new building that could accommodate the station, hotels, and offices. The proposed building was significantly larger than the current one. In this case, the planning process followed the formal rules that are prescribed in the Planning and Building Act, i.e. formal plans are developed, displayed, and consultation meetings are held, but no initiatives were taken to more systematically identify stakeholders' possible interests or understand how the proposed building would be perceived by the citizens. The process was instead characterized by a bargaining game, which in essence was held behind closed doors. The developer was claiming that extensive exploitation is necessary to finance the station, and Stockholm city was concerned also with the new building's impact on the city's skyline. Though the method emphasizes the importance of a deliberative discussion, the discussion was in practice only open to two participants. Other participants' possibilities to participate in the discussion were deliberately minimized by withholding information. In this way, the conflicts that otherwise could easily have slowed down this process were avoided.

Another example of how to look at method is the case of Nacka infrastructure where the regular dialogue process stalled because of antagonistic interests, and the municipality decided to try a decision support system for political public decision making in order to sort out the complexity of the situation and allow for a decision. Here, the role of the method was to provide participants with better information so they could make informed decisions.

In the two cases where the process was stalled, Husby and Nacka, this was due to the lack of visibility of certain interest groups that had not actively been taken into account which therefore resulted in infected conflicts. It can for instance be, as in the case of Stockholm Central Station, where they purposely tried to avoid inviting some stakeholders. But mostly it is about ignorance, as in Husby where they based the agenda on a discourse dominated by people with no personal experience of the site; instead of at an early stage developing the agenda together with a broad group of stakeholders.

2.4. Summary of the Results

Table 2 gives a rough overview of the results of the case studies. As can be seen from the first column, the agenda in most cases is already *set*, but often dialogue methods are used as a way to *develop* the details of the agenda. Only when it creates a conflict, it is noted that powerful groups might *dominate* the agenda setting. In the second column, different views on participants are represented, from the case of the participants as a well-defined group that consists of *all* those affected by the decision, to looking at participants as mainly those who are *active*, to looking at the participants as a *diverse* group of people where a need is acknowledged to reach less active groups and individuals. The third column shows a lack of methods to actively *visualize* different groups' and individuals' unequal influence on the processes. Instead, most emphasis is on methods for deliberative discussion and on tools that give participants access to more accurate information.

Table 2: Different attitudes, in eight cases of urban planning processes in Sweden, to how the agenda is set, to how the participants are defined, and to the role of the method in the process.

	Agenda			Participants			Method		
Cases	Set	Develops	Dominated	All	Active	Diverse	Info	Discuss	Visualize

Nacka Infrastructure	Set	Dominated	All	Active	Diverse	Info
Örebro Water	Set	Develops	All			Info
Stockholm Transportation	Set		All		Diverse	Info
Muskö Eco Village		Develops	All	Active		Discuss
Stockholm Central Station	Set			Active		Discuss
Högalid Urban Development	Set	Develops		Active		Discuss
Husby Urban Development	Set	Dominated			Diverse	Discuss
Upplands Väsby Vision		Develops		Active	Diverse	Info Discuss

What our case exposition shows is that even in a local planning process, within the framework of a geographically restricted representative democracy, the agenda is still set in a public sphere dominated by interests that can be locally as well as globally situated.

Instead of a model that is non-iterative and one-dimensional, or consists of a field of different types of decision making, we suggest looking at different types of participation, agenda setting, and methods as intersecting axes according to the map in Figure 2. Where the three axes intersect on this map, decisions are made based on given information, the agenda is set, and those who make the decisions represent all groups affected. “Method” means collecting and presenting information in a proper way as a service to participants. The ontology here is a positivistic one, where facts are reliable and decisions rational. A little further out, a more interpretative and critical ontology dominates; the information is under development and the agenda is more negotiable, and those who take an active part in the discussions will influence the policy-makers. Here, participatory methods are about moderating the discussion. It is important to develop tools that address the inequality between different participants, but also to acknowledge issue of weight and power related to various stakeholder groups. The map’s external fields show the development of public opinions. Dominant interests that are not representative for those affected by the decisions control this field. This field is influential for the decisions made in the inner layer. This layer involves methods of clarifying the dominating interests and to increase the visibility of groups and interests that are not visible. (As seen in Table 2, we here have a lack of available methods.) By putting these concepts in a sphere, we emphasize that these different participatory approaches are not either/or, but represent different parallel on-going participatory decision-making situations that influence each other in an iterative process.

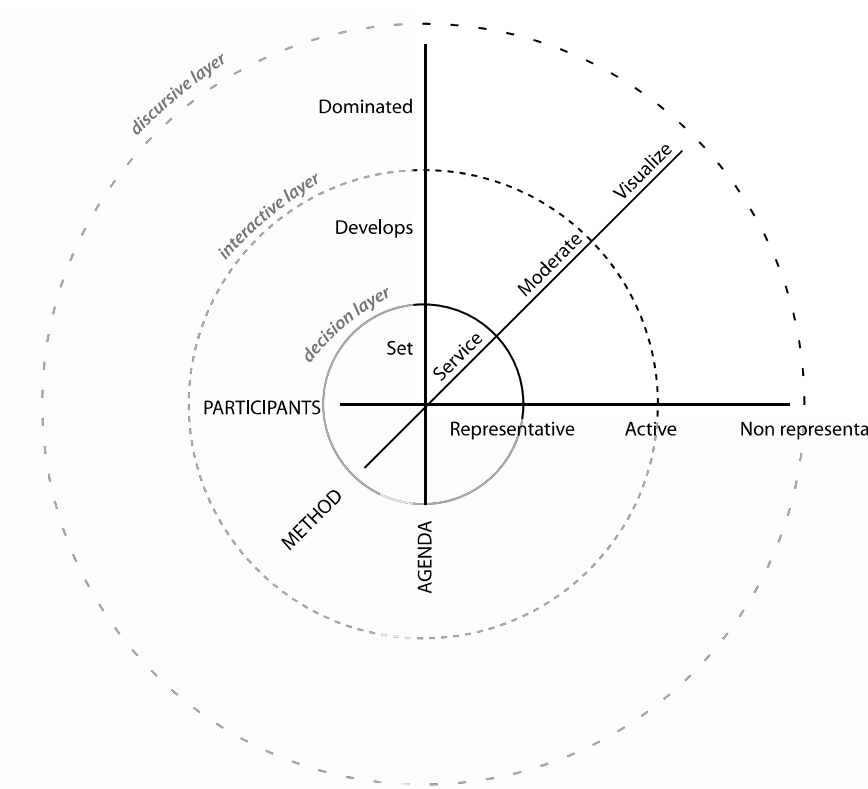


Figure 2: An e-participatory map over process methods in urban planning.

To clarify the different types of methods and approaches relative to each other, we have divided our map into three composite layers that contain different types of solutions:

1. The *discursive layer* that contains the deliberative process of setting the agenda, using a broad spectra of multimodal tools to support organization and discussion, and using web statistics to clarify the representativeness of the information.
2. The *interaction layer* containing interaction with affected stakeholders, organized stakeholder groups and citizens, using web-based techniques for interaction.
3. The *decision layer* typically consisting of the local government's administrative process making the investigations and assessments necessary for taking the process further. But it can also be seen from a single participant's perspective, or a global NGO.

The layers also describe the different ontological and epistemological positions represented in our interdisciplinary research team, and can help us see how a mixed method approach can enrich our understanding of the situation and help us to create tools that constructively combine quantitative methods with critical reflexion.

3. Concluding Remarks

Urban planning processes are often complex, involving many stakeholders. The decisions often have a large impact on society as well as on the environment. Many citizens and organisations are

affected by the outcomes. Therefore, it is important to have a model that brings together and triangulates different types of participatory approaches; from the mediation and visualisation of discursive processes in the media, to citizen dialogue, to transparency in public decision processes. By moving between different types of ontologies and methods and building a transferable and more pragmatic approach to participation, deeper insights into the complex nature of urban planning processes will be obtained.

In clarifying the purpose of different methods by positioning them in a participatory map over process methods in urban planning, different ambitions are made explicit, and we may reduce the problem of ambiguity because of contradictory or exaggerated expectations on what technology and organizational change can bring. This is also a way of discussing different ontologies and epistemologies in the interdisciplinary research group, making possible a creative mix of methods.

By placing the local processes in a wider global perspective, we can see the planning process not only from a government perspective but also from other participants' perspective. In this way we might better understand what role the planning process play in the participants' lives, on a micro/global level, and which other processes are competing for attention. How will local participation make sense for an individual on his or her journey between different global spheres of interest? These are issues that must be resolved in order to involve a diversity of participants in public dialogue work.

In the on-going project in the municipality Upplands Väsby, we are exploring how ICT can be utilized in public participation processes in urban planning. Our project group consists of a diversity of competencies from multiple disciplines and with different approaches to research. Here, the participatory map is useful as a way to sort out the project team's expectations, to define common concepts, and to understand how different types of participatory methods can interact. The map also works as a way to put ICT into a wider framework, and to emphasize that ICT is not the only solution but one of many ways to involve those affected by the decisions. A dialogue process around an issue can also create an expectation that it will yield a direct outcome. Here, the map can clarify for participants how the input is being used and in which way this will impact the final outcome.

There is a clear lack of procedures and methods to actively visualize different groups' and individuals' unequal influence on the participatory processes. Therefore, we are now working on developing a support system that separates not only the different interests and opinions contained in the debate, but also makes clear how representative they are to the general population and different stakeholders. ICT is then used as a means to analyse participatory processes in the discursive and interactive layer on the map in Figure 2, and thus produce information services for participants in the decision layer.

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About the Authors

Karin Hansson,

Artist and PhD student at the Department for Computer and System Science at Stockholm University & The Royal Institute of Art in Stockholm. Senior lecturer at University of Skövde.

Love Ekenberg

Professor in Computer and Systems Sciences, Stockholm University. Visiting Professor in Societal Planning and Environment at KTH - the Royal Institute of Technology. Head of Department of Computer and Systems Sciences, Stockholm University (DSV).

Göran Cars

Professor in Urban Planning at KTH - the Royal Institute of Technology in Stockholm. Visiting Professor at the Department for Computer and System Science, Stockholm University.

Mats Danielson,

Professor in Computer and Systems Sciences. Dean of the Faculty of Social Sciences, Stockholm University.
Scientific Advisor and Senior Researcher of the DECIDE Research Group.

The Role of ICT in Smart Cities Governance

Enrico Ferro, Brunella Caroleo, Maurizio Leo, Michele Osella, Elisa Pautasso

Business Model & Policy Innovation Unit, Istituto Superiore Mario Boella, Turin, Italy,
enrico.ferro@ismb.it / brunella.caroleo@ismb.it / maurizio.leo@ismb.it / michele.osella@ismb.it /
elisa.pautasso@ismb.it

Abstract: *This position paper discusses the role of information and communication technologies in the governance of the transition process that urban areas will have to undergo in the coming years. The topic is analyzed from a value-oriented perspective and in the light of almost two decades of technology-driven innovation in both the private and the public sector. All this has been examined in an attempt to take stock of past mistakes and to embrace the opportunities deriving from some important paradigm shifts appearing on the horizon. A conceptual framework is proposed identifying three main contributions: the enablement of new production, distribution and governance processes; the transformation of organizational and institutional arrangements; and the information of individual choices and behaviors. Finally, the combined diffusion of Social Media and computer-based simulation in policy making is argued to lead to significant improvements in the management of smart cities by enabling value-driven, data-intensive and participative governance models, labeled as “extended governance”.*

Keywords: Smart Cities, ICT, Governance, Policy, e-Participation, Innovation, Value, Simulation.

1. Introduction

An overwhelming body of scientific evidence now clearly indicates that climate change is a serious and urgent issue (Stern, 2007). In parallel, the unprecedented growth in the world population occurred over the last centuries coupled with the gradual increase in developing countries' spending power has contributed to exacerbate the unsustainability of existing consumption patterns. The drawing of world's natural resources at a faster pace that they can be restored has been proven over the decades to be one of the main pitfalls of modern socioeconomic systems (Meadows et al., 2004). The combined effect of the above phenomena is gradually but steadily leading the world towards a global environmental, economic and social collapse. As put in Stern (2007): “There exists a serious risk of major irreversible change with non-marginal effects on modern life as we know it today”.

We are living momentous times, probably one of the few points in human history when mankind is called upon to act united and focused to face a number of major collective challenges. Contemporary governments, businesses and individuals are faced with an unprecedented responsibility towards future generations. The situation calls for a quick and significant

reconceptualization of current economic and societal models and the governance of the required change poses complex policy challenges with little or no room for errors.

In such a scenario, cities have been identified by many commentators as the battle-ground in the fight against climate change. As a matter of fact, cities are responsible for over 70% of the world's greenhouse emissions and, at the same time, they are places where the greatest efficiencies may be obtained (UN-HABITAT, 2011). As of 2010 half of the world population lived in urban areas and 150 metropolitan urban regions across the world generated almost 50% of the global GDP (World Health Organization & UN-HABITAT, 2010). In other words, cities are the *locus* where a process of deep societal and economic reform should start from, where global issues may be addressed locally. They have a sufficient critical mass in both demographic and economic terms to ignite a planetary revolution.

The European Commission recently launched the strategic energy technology plan (SET plan) which entails a smart city initiative to encourage and support urban areas which are willing to go beyond the well-known 20-20-20 objective. Such initiative poses a significant emphasis on the role of ICT as a strategic lever in the attainment of higher levels of sustainability and quality of life. A view shared by many international institutions and think tanks which promote the vision of a "wired", ICT-driven form of development.

To summarize, the situation depicted above highlights three main messages: firstly, the need to revisit the way society is organized and managed thus giving birth to a global process of reform; secondly, the identification of cities as fertile soil where to start the reorganization from; thirdly, significant expectations placed on information and communication technologies as a central ingredient of such change.

The focus of the article at hand cuts across the above messages and may be delimited by two simple yet fundamental questions:

- How is the transition that cities will have to undergo going to be governed?
- What role will ICT play in the governance of such process?

The discussion included in this paper offers some reflections on the above questions and proposes a conceptual model containing a unifying representation of the role that, in our view, ICT may play in the governance of smart cities.

The remainder of the article is structured as follows. Section two provides a review of the literature strands discussing important concepts on which the discussion will be based. Section three contains the conceptual framework proposed to portray the role of ICT in the governance of smart cities. Section four introduces an emerging paradigm of governance enabled by information and communication technologies. Finally, section five contains some conclusive remarks and indications of future possible research directions.

2. Literature Review

The discussion that will be conducted in the following sections will address the role of ICT in the governance of smart cities oriented towards the creation of value for society. The review presented in this section will thus provide a glimpse of the three main concepts that are at the heart of our investigation, that are: the idea of smart city itself as well as the concepts of governance and value.

The aim of the review is to create a clear and shared understanding to be used as a starting point for further discussion.

As many commentators highlight, the term “smart cities” is not new. It probably finds its roots in the late nineties with the smart growth movement (Bollier, 1998) calling for new policies in urban planning. Nevertheless, it was not until 2005 that some of the main ICT global players — CISCO (Abulhakim, 2005), SIEMENS (Siemens, 2004) and IBM (IBM, 2009) — started referring to smart cities as the integration of information systems with urban processes (Harrison & Donnelly, 2011). Since then, the term has evolved to capture a more complex concept that many scholars have ventured in trying to craft a comprehensive definition for.

Recent reviews of such efforts have been published by Chourabi et al. (2012) and by Caragliu et al. (2009). The former asserts that the idea of a smart city itself is still emerging, and the work of defining and conceptualizing it is in progress. The latter, instead, underlines the importance of human capital by suggesting that the availability and quality of ICT infrastructures are not the sole ingredient of smart or intelligent cities; Berry & Glaeser (2005), for instance, show that the most rapid urban growth rates have been achieved in cities where a high share of educated labor force is available.

In this article we do not intend to propose a definition of smart city to be added to those already present in the literature, as this is not felt to generate significant value. Therefore, for the purpose of the discussion to be conducted in the next sections, the definition proposed by Caragliu et al. (2009) will be employed. Such definition was chosen on the basis of its ability to reasonably capture all the relevant aspects previously highlighted:

“a city is smart when investments in human and social capital and traditional (transport) and modern (ICT) communication infrastructure fuel sustainable economic growth and a high quality of life, with a wise management of natural resources, through participatory governance”. Caragliu, A., Del Bo, C., Nijkamp, P. (2009).

As the chosen definition suggests, the concept of smart city includes the notion of governance. According to Forrester Research, smart governance is the core of smart cities initiatives (Belissent, 2011), therefore it has become paramount to better understand such concept to draw its boundaries and single out its components (Misuraca et al., 2011).

In the late nineties governance was viewed by international organizations such as UNDP, World Bank, UNESCO and OECD primarily as a form of political regime (Kauffman et al., 1999). More recently, the European Union, in an attempt to tackle some issues having to do with the effectiveness of its action and the recognition of the results achieved, published a white paper on European Governance (European Commission, 2001). The document proposed to revisit governance practices by introducing the concept of good governance based on five pillars: openness, participation, accountability, effectiveness and coherence. The OECD also provided a definition of good governance which unfolds along a number of dimensions. According to such organization, good governance is participatory, consensus oriented, accountable, transparent, responsive, effective and efficient, equitable and inclusive and follows the rule of law. It assures that corruption is minimized, the views of minorities are taken into account and that the voices of the most vulnerable in society are heard in decision-making (OECD, 2001).

Little literature on smart cities addresses issues related to governance (Chourabi et al., 2012). According to Mooij (2003), the presence of leadership is important for good governance. In the same way, Lam (2005) emphasized on the presence of a “champion” that collaborate with all

stakeholders as an essential factor for good governance characteristic of a smart city that is based on citizen participation (Giffinger et al., 2007) and private/public partnerships (Odendaal, 2003). According to Johnston & Hansen (2011), smart governance depends on the implementation of a smart governance infrastructure that should be accountable, responsive and transparent (Mooij 2003). This infrastructure helps allow collaboration, data exchange, service integration and communication (Odendaal, 2003).

By looking at the evolution undergone by the concept of governance over the last fifteen years, it is possible to notice a gradual shift in focus from a mere application of administrative and political authority towards a bidirectional discourse with a diversified constituency who is more and more recognized as an authoritative interlocutor in the process of value creation for society. In this respect, good smart city governance should attempt to achieve two important operational objectives: produce effective decisions - i.e. make the best use of information to optimize decision making - and provide adequate incentives - i.e. given that all individuals act in their own self-interest, provide the incentives that produce the best/desired outcome. But, in order to achieve these results, it is paramount to have developed a clear and strategic vision detailing what value needs to be generated.

For this reason, in the final part of this review the focus will shift to the notion of value³⁸.

As Adam Smith reminds us, when talking from an economist's perspective:

"the word value has two different meanings, and sometimes expresses the utility of some particular object, and sometimes the power of purchasing other goods which the possession of that object conveys. The one may be called 'value in use'; the other, 'value in exchange'. The things which have the greatest value in use have frequently little or no value in exchange; on the contrary, those which have the greatest value in exchange have frequently little or no value in use" (Smith, 1776).

When taking a philosophical stance, traditional axiology shows how it is possible to distinguish between intrinsic value and instrumental value. In other words: if something is good only because it is related to something else, then its value is instrumental to the achievement of a given objective. To exemplify, money is supposed to be good, but not intrinsically good: it is supposed to be good because it leads to other good things such as the possibility to buy food and water (Schroeder, 2008).

In addition, the so called point of view theory (Schroeder, 2008) sheds some light on the difference between what is good *simpliciter* from what is good for a specific stakeholder: the former defines what has value from a more generic point regardless of the circumstances, while the latter is perspective-dependent.

Finally, the perception of value is strictly correlated with the needs of a society. In this respect, it is useful to mention that individual as well as collective needs may be hierarchically organized in order to provide a priority ranking. The work conducted at the beginning of the last century by the American psychology Abraham Maslow represents a cornerstone in this field (Maslow, 1943). His celebrated hierarchy of needs identifies five categories of needs having to do with physiology, security, belonging, esteem and self-actualization. In a resource constrained situation, such classification represents a useful tool in identifying and prioritizing the long term strategic priorities that should be targeted in order to create value for the society. A value that, as Savitz

³⁸ A first definition may be drawn from (Wikipedia, 2013).

(2006) reminds us, unfolds along a number of dimensions touching upon financial, social, environmental aspects.

3. From Technological Infrastructures to Value Creation

To be properly understood, the use of ICT in governance processes needs to be framed within a longer process of technology-driven public sector reform. This process over the last decades has contributed to shape a novel vision of the public sector, where information sharing, transparency, openness and collaboration are key concepts with tremendous organizational and policy implications. This slow, yet steady, process has considerably contributed to render more complex the “business of government”, in terms of competences required, institutional/organizational arrangements, policy actions' responsiveness and appropriateness (Ferro & Gil-Garcia, 2010).

In the governance of urban areas, city managers are faced with the challenge of balancing three overriding concerns: achieving a high quality of life for all citizens, maintaining economic competitiveness and protecting the natural environment (GlobeScan & MRC McLean Hazel, 2007). More and more, ICT is becoming a vital tool in the governance balancing act as buildings, transport networks and utilities systems (Economist Intelligence Unit, 2010).

There seems to be a general belief among the political, academic and professional world about the importance of role that ICT may play in the governance of city. In this section the discussion will try to shed some light on what type of contribution such technologies may offer as well as on how their potential may be turned into reality. In this respect a number of questions seem to be of particular relevance: are ICTs contributing to enable new and better decision making processes and/or incentive systems? May information and communication technologies help tackle the pressure on public budgets without cutting on service provision? How may the pervasive presence of connected devices in large metropolitan areas help reduce CO2 emissions and stimulate economic development? All these interrogatives may probably be considered a specification of an overarching and more fundamental question about how a technological infrastructure may be turned into value for society.

Answering these questions is of course not a straightforward task. Nevertheless a number of reflections may be put forward drawing from the experience gained over the last two decades in studying the role of ICT in promoting public as well as private sector innovation.

The first aspect worth considering is the acknowledgement of the fact that technology alone is not enough and that a number of complementary investments are required to fruitfully exploit its potential (e.g. training, organizational change, new policy frameworks). Secondly, it is key to understand that the diffusion and adoption of ICT as well as the “intelligence” that such technologies are supposed to generate do not possess an intrinsic value but an instrumental one. That is to say, they may be considered valuable only to the extent to which they allow the city to attain a set of objectives that are perceived as being of intrinsic value either for society (good *simpliciter*) or for a specific target group of stakeholders. In other words, ICT is a means to an end. For this reason, innovative solutions developed by public and private organizations should be assessed not on their technological intensity but rather on the value they generate for a given set of stakeholders. Therefore, it is important to question the often advocated assumption whereby the usage of the latest technology equates to more value for the final user. While this may sometimes be true, it nevertheless requires a thorough check since often the use of cutting edge technologies entails higher costs that may jeopardize the financial viability or long term sustainability of the

associated solution (this is even more true in times of recession). In addition, the economics of innovations literature shows that incremental product innovation is characterized by a decreasing marginal utility (Adner, 2002). In this respect it is important to assess what functionalities generate the most utility, as they are most likely subject to a Pareto distribution whereby 20% of the functionalities account for 80% of the utility.

Other two additional aspects to consider are causality and time. As the literature on information systems tells us, the understanding of the interaction between technology and ecosystems of actors (as cities may be considered) has gone through three main phases over the last two decades (Helbig et al., 2009). The first was characterized by the presence of a technological deterministic view according to which impacts mainly came from the inherent features of technology which was thought to be able to solve social, political, economic, and organizational problems. According to this vision, the simple infusion of technology into an ecosystem was enough to introduce significant performance improvements. The second phase, instead, taking stock of the numerous failures occurred during the previous phase, was characterized by a contingent approach in which human choices within social structures determined the impacts of technology. In this view, technology could be compared to a tailor-made suit that needed to be customized on the specificities of the ecosystem considered. This view slightly improved success rates, but did not fully take into account the time dimension. The third and more recent phase promotes an evolutionary view according to which there exists a mutual and iterative influence between technological solutions and the social ecosystem in which they are implemented. In other words, technological solutions should be designed to meet the needs and wants of the targeted group of stakeholders, while accounting for the fact that the adoption of the solution itself is changing them.

Moving now onto discussing the role of ICT in the governance of the transition process that smart cities will have to undergo, a synoptic framework has been devised providing a unifying view of such role as well as of the ingredients necessary to turn technological infrastructures into value for society.

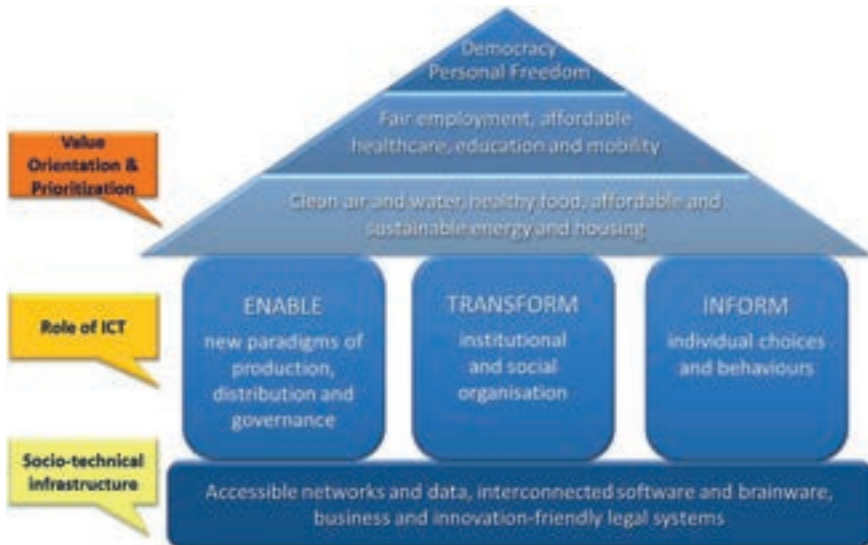


Figure 1: The Smart City House: ICT in Smart Cities Governance

The framework was baptized “the smart city house” model with the intent to run a parallel between the process of building a house and that of value creation. The model should be read from the bottom upwards. In the foundations of the house, it is possible to find a socio-technical infrastructure (Lock & Sommerville, 2010) containing the contextual factors that need to be present in an ecosystem in order for it to be able to fully exploit the potential of ICT. The key ingredients are networks, data, software, “brainware” (i.e. people) and laws that should be respectively accessible, interconnected and innovation-friendly. It is, in fact, important to underline that value does not only reside in the individual resources (e.g. data or software) but also in the links and connections that it is possible to establish between the different resources. This of course in the belief that, as asserted by complexity theory (Laughlin, 2006), the whole is greater than the sum of its individual parts. In this respect, interoperability in all its possible declinations (technological, semantic, organizational, etc.) represents a key value driver for society.

Moving up one level, we find the pillars of the house representing the key strategic contributions that ICT may offer to the creation of value and to the transformation of cities in smarter and more sustainable environments. In particular, three main contributions have been identified. The first has to do with the possibility of enabling new paradigms of production, distribution and governance. To exemplify, let’s think of the energy sector, where the emergence of distributed generation paradigms is bringing along significant changes such as the need to build networks with smarter peripheral nodes. In such a framework, ICT may cover a complementary role by offering an important contribution in terms of management, planning and control of production to both energy “prosumers” and energy network operators. The second contribution pertains to the possibility to transform the way in which many daily activities are conducted. In this respect, we may think of telework and telemedicine which are leading to a decoupling between activities and the physical location in which they are conducted. Another example could be the opportunities offered to local communities to self-organize (Cottica, 2010) to manage different aspects of their lives (e.g. fair-trade collective purchasing promotes the consumption of local products and the disintermediation of the distribution chain with deep social and environmental impacts). The third and final contribution has to do with the role of ICT in informing individual choices and behaviors. As a matter of fact, the reduction of the carbon footprint of an urban area inevitably requires the modification of everyday choices of millions of individuals. Inducing such change is not an easy task and surely may not be achieved by a mere top-down approach. In this respect, the wise use of ICTs and, in particular, Social Media may help in diffusing a greater environmental awareness and sensitivity leading to the emergence of social norms incentivizing more virtuous behaviors.

Moving now to the final part of the house, the roof represents the value orientation that any smart initiative should never lose sight of in order to generate positive externalities for society. The triangular shape has been divided into three different layers in order to generate a stack configuration with diverse and interrelated levels. Each level, in fact, depends from the level below in terms of existence similarly to what happens in other hierarchical models present in the literature (e.g. Maslow pyramid, OSI/ISO stack). The introduction of society’s needs in a layered structure intends not only to stress the importance of a value orientation but also to stimulate the reflection of what value should be produced. To exemplify, the mere push towards economic growth to the expenses of the environment and public health that has dominated the world’s economy over the last century, when put in relation with this hierarchical schema clearly shows its shortcomings linked with the attempt to build the second layer without having assured the

existence of the level below. We are of course aware of the fact that the model proposed represents a simplification and that in the real world it may be necessary and possible to privilege economic aspects to the expense of more fundamental needs. At the same time, it is important to stress that this misalignment of priorities may only be considered a temporary solution as it is clearly unsustainable. Long term strategies should therefore attempt to wisely balance the actions aimed at producing resources with high value in exchange and actions aimed at better employing environmental resources with a high value in use.

Concluding, the framework proposed provides a simple and synthetic representation of how ICT infrastructures may be turned into value within urban areas and, more in general, in any type of social ecosystems. In our view, it contains an organic depiction of the relationship between the necessary inputs (the foundation), the expected outputs (the pillars), and the desired outcomes (the roof) of a smart and sustainable urban ecosystem. This representation on top of offering a useful tool in the definition of smart city strategies may also provide precious inputs in the design of impact assessment frameworks for the evaluation of a city performance against a number of long term policy objectives to be operationalized in terms of value creation.

4. Towards an Extended Governance

Even though many factors may influence the success or failure of public policy, here we would like to underline one aspect that has been identified by Cottica (2010) as fundamental. According to him, in fact, *“most public policies fail due to a deficit of attention”*. The wide portion of the attention that the public sector may offer is usually allocated to monitoring, supervising and influencing the process of program design. Little or no attention is instead devoted to the process of projects implementation, thus leaving a critical aspect of public policy success almost unattended. As Tapscott et al. (2007) puts it, Governments no longer have in-house sufficient scope, resources, information or competencies to respond effectively to the policy needs of an interconnected, fast-evolving and unpredictable global environment: policy makers must seek out new partners and participants to help identify problems and create innovative solutions.

In this respect, ICT may allow to create decision processes relying on distributed attention, thus enabling a new form of governance, an *“extended governance”* whereby the intelligence and the attention of actors residing outside governmental boundaries are harnessed in the management of public resources. According to Shirky (2008), in the governmental opening up, social and technological drivers generated by Web 2.0 applications and Social Media platforms have brought with them new organizational forms, through the capacity of the Internet and its users to *“organize without organizations”*. The lowering of communication and coordination costs brought by ICT coupled with the emergence of behaviors driven by non-financial motivations, values and reputational incentives has ignited a process that through sharing and collaboration leads to collective action. A proof of this lies in the fact that citizen-developed applications are an emerging trend around the world (Economist Intelligence Unit, 2010).

Thanks to ICT the eyes and the brains of people may be turned into useful governmental *“antennas”* that can help to oversee the intricacy of city processes and functions that would otherwise be impossible for local administrations to constantly monitor. In addition, creativity and knowledge residing in citizens' brains, if harnessed, may significantly contribute to improve the outputs of the policy making cycle by allowing it to be more demand-driven, to tap into additional

skills and competences and to analyze the problems at stake from a multitude of perspective and cultural backgrounds thus reducing the risk of biased or oversimplified problem setting.

Another aspect worth considering for the improvement of public policies success is the possibility to conduct *ex-ante* impact assessments of policy options in order to produce relevant evidence to inform the decision making process. In this respect, the use of computer-based simulations could provide a useful contribution in the promotion of a scientific management of policy issues (Ferro & Gil-Garcia, 2010). Simulation, in fact, represents a valuable support tool for the accurate definition of complex and articulated problems, allowing a better understanding of the dynamics present between the main determinants. Computer-based simulation, if combined with classical statistical analyses, may also be employed as an input to carry out a number of useful and cost-effective analyses (e.g. *ex-ante* comparative evaluations of alternative policy solutions, sensitivity analyses). Finally, if adopted in a more open and collaborative environment, computer simulation could be useful in eliciting the trade-offs in the allocation of scarce resources as well as in making more evident the aggregated impact of individual behaviors (on environmental issues, for example). The net result of such usage of computer simulation may thus be summarized in the generation of more informed, qualified and realistic contributions by the involved stakeholders.

In the future, these activities could also be conducted taking advantage of the integration of public information (PSI) such as data on census, mobility, environment, etc. In addition, a wider availability of real-time and machine-readable data could allow improving “forecasting” as well as “nowcasting” abilities. The development of three-dimensional representation tools coupled with the diffusion of GPS-enabled devices and the affirmation of an Internet of Things (IoT) paradigm represent three concurrent propelling factors that could significantly expand and increase the applications and value of such tools. As a matter of fact, the inclusion of a wider range of data inputs (coming from objects as well as from people) in combination with the possibility to add spatial information to the contributions received, constitutes an incredible opportunity to provide perspective-dependent representations of issues, as well as to conduct context-dependent analyses.

In order to move the discussion to a more concrete level, we inserted some examples of how ICT could practically contribute to improve the governance of the different domains in the life of city.

- **Budgeting:** a combination of Social Media, visualization and simulation tools could be useful in participatory budgeting activities. In particular, it could help the citizenry in understanding the trade-offs in the process of scarce resources allocation as well as the effectiveness of alternative courses of action. This would represent necessary and solid stepping stone to make educated choices in a process of priorities definition that keeps into account not only the perceived need but also the marginal value generated by any specific policy action.
- **Emergency management:** to enhance buildings’ security, simulation could be run to support the allocation emergency exits and fire extinguishers or to test the level of safety of existing buildings in events of fires. The implementation of such applications could also result in a further refinement and improvement of the exiting legal requirements and standards.
- **Urban planning and management:** the use of real-life data collected from the citizenry (on most common mobility needs weighted by frequency) coupled with traffic data could be used, instead of rough estimates, to plan public transportation routes and time tables in order to minimize the commuting time for citizens and the aggregated costs of mobility (environmental, health-related).

- Environment and energy: the aggregation of energy consumption data (e.g. per condos or per post code) could be used to stimulate more environment-friendly behaviors thanks to the possibility to adopt context-dependent policies and to ignite virtuous circles of competition. In addition, an easier visualization of the aggregate impact of individual behaviors may help to increase the environmental sensitivity of the citizenry thanks to intuitive and reliable results.
- Healthcare: possible alternative policies aimed at reducing the impact of aging populations on the healthcare systems could be cost-effectively tested. In addition, anonymized aggregated data could be used to manage the diffusion of contagious illnesses on robust estimations and real-time data rather than on more emotional approaches.

To conclude, we are convinced that the wise and diffused use of ICT tools in policy making may lead to significant improvements in the management of urban areas by enabling value-driven, data-intensive and participative governance models.

5. Concluding Remarks

Starting from the acknowledgement of some of the grand challenges that mankind has to face in terms of environmental and economic sustainability, this paper attempted to promote a discussion about the role of ICT in the governance of the transition process that cities will have to undergo in the coming decades. The theme was looked at from an interdisciplinary and value-oriented perspective, taking stock of the lessons learnt in the promotion and implementation of ICT-driven innovation in the public and the private sector over the last two decades.

A number of inspiring elements emerged from the discussion: the need for complementary investments; the instrumental nature of the value possessed by technology and the consequent need to assess the development of potential solutions on the basis of the intrinsic value generated rather than on mere technological intensity; the desirability of adopting an evolutionary approach accounting for the mutual influence present between technological solutions developed and the context in which they operate; and, finally, the relevance of a bottom-up *modus operandi* in the elicitation of stakeholders' needs and wants aimed at the identification of key value drivers.

The conceptual framework proposed describes the role that ICT may play in the governance of smart cities. Three main contributions were identified: the enablement of new production, distribution and governance processes, the transformation of organizational and institutional arrangements and, finally, the information of individual choices and behaviors. In addition, an overview of the required inputs, possible outputs and desired outcomes was provided. The value offered by such framework is twofold. It provides a simple and concise representation of the process of turning a technological infrastructure into value for society and it constitutes a useful tool for the design of assessment frameworks aimed at evaluating cities' smartness both in terms of readiness and outcome generation.

Finally, the notion of "extended governance" was introduced. In particular, the combined use of Social Media and computer-based simulations in policy making was identified as an important ingredient in exploiting the availability of an increasing amount of data as well as of "connected intelligence" present in urban areas. The new paradigm appearing on the horizons seems to introduce new models of governance that are value-driven, data-intensive and participatory.

As far as future research is concerned, a number of important steps are required in order to turn the new governance paradigm into a mainstream practice. Advances will have to be made along a

number of dimensions among which: effective management of large and heterogeneous communities, real time elaboration and visualization of unstructured content, lead time and cognitive barriers linked with the production and effective usage of simulation models, assessment of the impact in term of marginal value creation of the new governance model.

In conclusion, there seems to be a great potential for the application of ICT in the governance of the change that urban areas will have to undergo in the decades to come. In order to deliver on their promises, such technologies will have to be employed not only to increase the intelligence of socioeconomic systems but also to establish incentive structures promoting the creation of sustainable public value. The real smart city will, in fact, have to learn how to reconcile individual and collective needs; in other words, to channel individual aspirations towards the creation of value for society at large through the attainment of economic, social and environmental objectives.

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About the Authors

Enrico Ferro

Enrico Ferro is the head of the Business Model & Policy Innovation Unit at Istituto Superiore Mario Boella (ISMB), a research team studying the economic, social and policy implications of information and communication technologies. Over the last ten years Dr. Ferro has worked in many projects financed by the European Commission with roles ranging from scientific supervisor to senior expert. Dr. Ferro also covers an adjunct professor position at the Polytechnic of Turin and at the International Labour Bureau of the United Nations where he regularly lectures on innovation management in both the public and the private sector. His research work has produced over forty academic publications, one handbook of research and over fifty research reports. Blog: www.enricoferro.blogspot.com - Twitter: @egferro

Brunella Caroleo

Brunella Caroleo is a researcher of the Business Model & Policy Innovation Unit at Istituto Superiore Mario Boella (ISMB). After graduating in Mathematical Engineering, she obtained her Ph.D. in Industrial Production System Engineering from Polytechnic of Turin. Her main role in the research team consists in giving strength to the methodological aspects of the research, thanks to her experience in mathematical and computational modeling and simulation, data mining, impact assessment and social network analysis. Her activity is conducted with the intent to support policy makers in the process of policy design and evaluation on ICT-related matters. Twitter: @BrunellaCaroleo

Maurizio Leo

Maurizio Leo is a researcher of the Business Model & Policy Innovation Unit at Istituto Superiore Mario Boella (ISMB). He works on national and European projects regarding the diffusion of innovation. His research activities focus mainly on the development of Simulations Models - in particular Agent-Based Models - aimed at providing to policy makers useful decision support tools which enable to simulate several policies and test their efficacy and effectiveness through the build-up of specific scenarios. Twitter: @MaurizLeo

Michele Osella

Michele Osella holds a researcher position at Istituto Superiore Mario Boella (ISMB). He works in the Business Model & Policy Innovation Unit, supporting policy makers and managers in using ICTs as leverage to favor socioeconomic development and competitiveness. In the academic sphere, he is Ph.D. candidate and adjunct lecturer in innovation management at the Polytechnic of Turin. Prominent strands of research on which he is focused are social computing, open innovation as well as Internet economics, with a keen interest on groundbreaking business models. Twitter: @MicheleOsella

Elisa Pautasso

Elisa Pautasso is a researcher of the Business Model & Policy Innovation Unit at Istituto Superiore Mario Boella (ISMB). She is in charge of the policy advisory activity that the research unit conducts for the Piedmont regional government. In particular, she supervises the research and data collection activities of the Piedmont ICT Observatory. Her research interests lie on understanding the dynamics and impact of ICT diffusion among the main socioeconomic actors (i.e. citizens, enterprises and local public administrations). Twitter: @ElisaPautasso

The UniteEurope Project

Social media analytics for policy making and decision support

Katharina Götsch*, Verena Grubmüller**, Igor Pejic***

* Katharina Götsch, INSET Research & Advisory, katharina.goetsch@inset-advisory.com

** Verena Grubmüller, INSET Research & Advisory, verena.grubmueller@inset-advisory.com

*** Igor Pejic, INSET Research & Advisory, igor.pejic@inset-advisory.com

Abstract: *This paper discusses the EU-funded project UniteEurope in which a social media analytics tool for integration policies is developed in close cooperation between IT specialists, demand carriers and integration experts. After the systems and mechanisms of data acquisition and analysis are explained, the functionalities of the tool as well as its contribution to sustainable policies are presented. Finally, the examination of the crucial challenges in the legal and ethical sphere leads to the identification of decisive questions that need to be answered in each comparable project. Therefore, this experience generated in the UniteEurope project delivers valuable insight for all social media analytics activities in the public sector.*

Keywords: Social media analytics, policy making, decision making, UniteEurope

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Social media being increasingly widespread in modern societies, they are not only used for private purposes but have become an essential source of information for polling, marketing and branding. Furthermore, as the Internet and social media play a more and more important role in civil society and government alike the usage and monitoring of public data available in online forums and social networks turn out to be of great interest. Thus, in order to make unstructured content from online and social media usable, “Social Media Monitoring” (SMM) or “Social Media Analytics” (SMA) tools have emerged, which are meant to automatically and systematically analyse public contents that are shared via social media services.

1. Introduction

First attempts to apply SMA in public and non-commercial fields have only recently been undertaken and can still be considered on a weak footing. One prominent example that shall be presented throughout this paper is the EU FP7 research project UniteEurope (www.uniteeurope.org) which aims at applying SMA as information and decision support mechanism for local governments in the realm of urban migrant integration. Similarly to conventional SMA tools (cf. Wetzstein and Leitner 2012), UniteEurope will collect contents on publicly accessible social and online media sites that are identified both as “integration related”

and “location related”, will categorise them according to a predefined taxonomy of integration issues and display the results in a way that the end-users (i.e. local authorities and NGOs) can be assisted in their decision making processes, whereby each of them shall receive a specially tailored version of UniteEurope by the end of the project.

These techniques themselves are not entirely new – after all there is a veritable landscape of SMA tools that have been established throughout the past years (such as BrandsEye or Simplify360 etc., see next Section). However, the application of social media analytics to the topic of urban migrant integration and for the purpose of supporting policy makers and public administrations – as done in the UniteEurope project, is completely novel and brings about a number of challenges.

In the first place, using social media as an information source for aspects concerning the general public and mainly directed towards public authorities as end-users is an undertaking of a totally different nature than serving private or commercial purposes, and thus requires different frame conditions. In addition to that, by dealing with the issue of migrant integration, UniteEurope is focusing on a particularly delicate field compared to most commercially driven SMA tools, e.g. due to legal and ethical issues concerning privacy and data protection (cf. Krieger et al. 2012). As Wetzstein and Leitner (2012) put it in the UniteEurope “Best Practices Report”:

“Clearly, UniteEurope does not focus on people as customers or consumers, but as citizens, and therefore excludes social marketing analytics and social CRM as basic concepts. (...) Moreover, the UniteEurope tool will definitely differentiate from social media investigations, which would imply cyber tracing, web crawling and the systematic use of digital personal data (dataveillance).”

Therefore, it is essential for the project to be based on a strong social-scientific groundwork undertaken by migration and integration scholars, closely accompanied by the prospective end-users. Next to that, whilst potential legal and ethical issues need consideration in all undertakings dealing with social media, they require particular attention when dealing with migrant integration and public authorities.

This paper will present the UniteEurope project in the light of these challenges and will therefore be structured as follows: After touching upon SMA usage for policy making and decision support more extensively (Section 2), we will describe the social-scientific and technical background of UniteEurope and present results of our first project year (Section 3). In Section 4, we will summarise the legal and ethical challenges of the project. Finally, a conclusion will be provided in Section 5.

2. SMA for Policy Making and Decision Support

Software tools that automatically collect, filter, analyse and visualize user-generated content from publicly available social media sources have been developed mainly for companies and organisations for company branding and product placement purposes³⁹.

While tools that allow the monitoring and analysing of public postings and other contents in online media, discussion forums, blogs and social networks are so far mostly used for commercial purposes, i.e. in the frame of broader business monitoring and social marketing concepts (cf.

³⁹ Such as Opinion Tracker, Simplify360, Radian6, BrandsEye, Brandwatch Tool and many others (cf. Goldbach Interactive Social Media Monitoring Tool Report 2012: <http://www.goldbachinteractive.com/aktuell/fachartikel/social-media-monitoring-tool-report-2012>)

Wetzstein and Leitner 2012), they can also be used for gaining information like citizens' opinions and sentiments on societal issues to serve as a decision support for agenda setting and policy making. In recent years political stakeholders are increasingly becoming aware of the potential benefits and capacities of social media mainly as a tool for communication and (self-)promotion but also as a source of information on citizens' opinions, trends and debated issues (cf. Götsch et al. 2012).

The interest of public authorities and non-profit organisations in using social media and monitoring specific sources relevant to their fields of activity has been growing over the past couple of years (cf. UN 2012, Rainer et al. 2013). Making user-generated content in social media usable and exploitable for authorities and first responders in crisis and emergency situations has been a strongly expanding field of application for SMA tools and research initiatives (cf. Doan et al. 2011, Nilsson et al. 2012, Johansson et al. 2012, Rainer et al. 2013, etc.). Examples of the extensive use of social media during crises and disasters are plentiful and range from earthquakes (Haiti, Tohoku) or hurricanes (Katrina) to floods as well as political or social mass incidents such as the riots in London or the social movements in Arab countries or Iran (cf. Müller and van Hüllen 2012, Howard and Hussain 2013). In the field of humanitarian aid and disaster relief the "Ushahidi" platform⁴⁰ has been the most prominent and influential open data monitoring and crowd sources contributor since its launch in 2008. How SMA can be used for decision support purposes in the political sphere will be described throughout this paper.

Social media analyses as *"technology tools to implement social listening and measurements programs" using data from social media sites for "reporting, dashboarding, visualization, search, event-driven alerting, and text mining"* (Jain 2012) are still mainly developed for the commercial context of social media marketing and branding and pose a growing field. However, the potential capabilities and benefits of social media and SMA for analysing trends in public opinions and public discussions on societal issues like political parties, policy measures, elections or the like have inspired several international research and development projects, many co-funded by the European Commission (e.g. <http://www.fupol.eu/>, <http://www.immigrationpolicy2.eu/>, <http://www.alert4all.eu/>, and others). Certainly, the common commercial social media monitoring and analytics tools that are available on the market in different price ranges are not suitable as a sound basis for political decision making as they are mainly based on quantitative methods (frequencies of names/keywords, number of "Likes" on Facebook etc.) *"with no further corroboration, explanation or interpretation"* (Centre for the Analysis of Social Media⁴¹ 2012). What is instead needed to ensure the highest quality and ethical standards for such a decision support instrument is a tool that is *"ethical, reliable, and usable"* (ibid.).

Policy makers and administrators in governmental institutions have specific needs and requirements towards an SMA tool that is usable, serves them with an additional value (time- and cost-savings), reduces information overflow and offers information that is not (easily) available through other traditional survey methods (cf. Wetzstein and Leitner 2012). Therefore, SMA for policy makers and political stakeholders, a still under-developed field, needs to be specially tailored and adapted for this end-user group and has to be based on sound scientific methods

⁴⁰ <http://ushahidi.com/> (10.2.2013)

⁴¹ <http://www.demos.co.uk/projects/casm/> (7.1.2013)

(combining qualitative and quantitative analyses) to offer a methodologically sound, usable and beneficial decision support instrument.

In the following we will present the UniteEurope project as an example for using social media and the instrument of social media analytics for the purpose of policy making in the particular field of migrant integration.

3. The UniteEurope Project

Within the research project UniteEurope, which is co-funded by the European Commission from 2011 to 2014 (FP7), IT specialists work together with social scientists from the fields of migration/integration and public administration, as well as civil servants in municipalities and NGOs to conceptualise and develop a social media analytics tool that will support integration policies and decision making in cities.

While there are several SMA tools available for monitoring and analysing public content from social media (e.g. Social360: <http://social360monitoring.com/>), a scientifically-based tool that aims at supporting policy and decision making and serves public administrations is a new undertaking.

The software tool developed in the framework of the UniteEurope project is based on a thorough social-scientific foundation consisting of end-user studies (distinguishing *local* target groups — municipalities and local subcontracted NGOs — and *pan-European* end-users: research centres/universities, national and international governmental organisations, and NGOs like humanitarian organisations), and especially the elaboration of the grid model, which constitutes the intelligent core of the tool and guarantees the effective filtering and analysis of the gathered mass data.

3.1. Data acquisition and analysis

The mass amount of publicly available data (APIs, feeds and other standardised interfaces) is collected from online and social media through a web crawler based on the Hadoop software framework which allows the storage and processing of this huge volume of data. In order to make these unstructured data usable for the purpose of political decision-making, a grid model with multi-layer patterns (sources, keywords, parameters etc.) was developed that filters, structures and analyses the collected user-generated contents.

In a first step, specific sources are defined (by the respective end-users) from which data should be acquired. Cities or NGOs can decide which local, national and global social networks (Facebook, Google+, Twitter etc.), blogs, discussion forums etc. they want to monitor and include in the analyses.

In a second step, the tool analyses whether the respective postings or articles include integration-related or -associated keywords which have been defined by the social scientists and integration experts within the project team based on the scientific literature of the international integration discourse (cf. Emilsson et al. 2012). The list of semantic keywords also includes slang words and geographical tags like street names or places in the respective cities and has so far been translated into nine relevant languages.⁴²

⁴² i.e. German, English, Dutch, Swedish, Bosnian, Serbian, Croatian, Turkish, and Polish.

The third layer is the categorisation of the keywords and, thereby, the postings into a taxonomy of integration areas and dimensions (socio-economic, socio-cultural, legal-political and spatial), which have been developed according to the scientific literature and debate in the field of migrant integration (cf. Scholten et al. 2012). Finally, UniteEurope defines parameters, indicators and alerts that will be used for the social media analytics tool.

3.2. Usage of the UniteEurope tool

In-depth analyses on actors, policies and workflows in public administrations that were conducted within the UniteEurope project have shown that the user group of policy makers and public administrators is especially interested in identifying new issues and problems that appear in the online discourse. The manifold modules of the SMA tool such as *Integration Monitoring* or *Multi Streams* allow the live (real-time) monitoring of selected online and social media sources and provide valuable information and analyses on integration issues which are debated by online users.

The future end-users of the UniteEurope tool will be provided with automatically gathered user-generated integration-related content from various, pre-defined sources (e.g. social networks, local blogs, online media etc.) that is analysed and visualised according to the needs and requirements of policy makers and practitioners on the issues of migrant integration. The SMA tool consists of different modules in which organisations are able to monitor their online presence (mentions in online media, social networks and other social media like discussion forums) or track online comments related to their campaigns. For example organisations can monitor media sources in a real-time manner through defined keywords (*Live Monitoring*) and receive analyses as well as collected postings related to particular integration issues (such as education, housing, political participation etc.). This information is also provided with intuitive visualisations, figures, charts and statistics to enable the tool's end-users to identify key issues and indicators and get a quick overview immediately on the most important topics which can also be compared between cities and organisations.

In addition to the social media monitoring and analysis modules, UniteEurope establishes a best practice library of integration measures and policies through which cities and other end-users can share their experience with certain integration measures and which gives an overview of implemented policies and measures across European cities.

Thus, municipalities and other end-user organisations will be offered an intuitive overview with visualisations and graphs on relevant integration issues, campaigns, discussions related to particular topics (e.g. education, inter-cultural contact, symbolic space), frequencies and context of keywords and the like. Furthermore, alert functions can be defined for each organisation to inform them on upcoming issues which enables them to react quickly and carry out (preventive) measures or campaigns. Thereby, the UniteEurope tool will be able to contribute to administrations' agenda-setting capabilities as new issues and topic are perceived very quickly; a feature very valuable for policy makers as well as NGOs that is not given by traditional opinion research methods.

In conclusion, the data gained through the UniteEurope tool will support effective, prompt and sustainable integration measures and policies as citizens' feedback to authorities' actions is available quickly and undistorted (concerning the question of representativeness see below) after their implementation and execution. While traditional opinion research methods (surveys, interviews, focus groups) are both expensive and time-consuming a social media analytics tool that

offers live integration-relevant content from online and social media as well as graphs, visualisations and figures on current integration issues poses a valuable (complementary) instrument.

3.3. Social media research and sustainable policies

The social scientists and stakeholders⁴³ collaborating in the UniteEurope project aim at providing politicians and administrators with bottom-up information generated by citizens in social media. The objective is to make the instrument of social media analytics usable as a scientifically developed means of data acquisition, analysis and visualisation in order to bring citizens' voices in an undistorted, direct and anonymous way into the policy development and decision making process on migrant integration. Hotly-debated topics, campaigns or issues in the context of integration can be identified easily and quickly through the grid model which is specifically elaborated for the requirements of policy and decision makers in the field of migrant integration at the urban level.

While UniteEurope is not decidedly an (e-)participatory tool, the project's target is to make integration policies and measures more sustainable by integrating the manifold voices of citizens as published in different social media sources. It has to be stated that the objective of the UniteEurope project and its SMA tool is to give public administrations and policy makers a new source of information from the grassroots level. This approach allows the real-time, cost-efficient and broad analysis of people's opinions as stated in conversations and postings while at the same time safeguarding those online users' rights against privacy violations — an issue that will be further elaborated in the following section. Although citizens do not directly and intentionally participate in this process (this distinguishes UniteEurope from e-participatory tools such as ImmigrationPolicy2.0⁴⁴ or Puzzled by Policy⁴⁵) it is assumed that the information provided for administrations by the SMA tool will contribute to more bottom-up and responsive integration policies. If specific integration measures or newly introduced policies encounter disaffirmation and induce negative comments in online forums or social networks, the UniteEurope tool gives immediate notice to its end-users which allows adapting or further explaining them at an early stage. Furthermore, organisations are given notice by individually customised alerts on important issues, i.e. an extraordinary concentration of postings on a particular integration issues (like migrants and language or the planning of a new cultural or religious centre), hate speech etc.

Thereby, the UniteEurope tool might contribute to the efficiency and effectiveness of campaigns, measures or policies because feedback is immediately available while at the same time the privacy of its content contributors (i.e. authors of online postings, comments, articles etc.) is safeguarded through several measures which will be described in the following section.

⁴³ Including the municipalities of Malmö and Rotterdam as well as the NGO ZARA (Zivilcourage und Anti-Rassismus-Arbeit) as consortium partners.

⁴⁴ <http://www.immigrationpolicy2.eu/>

⁴⁵ <http://www.puzzledbypolicy.eu/>

4. Legal and Ethical Aspects of SMA

Due to its very nature, dealing with SMA always requires the consideration of legal and ethical aspects. This is especially true for SMA applications for public purposes, notably when it is about migrant integration. Thus, as Krieger et al. (2012: 43ff) summarise, UniteEurope has taken up a very strong focus on legal and ethical challenges, supported by external experts in the fields of data protection and ethics. Thereby, they point at four different areas that demand particular care in the frame of and beyond the project:

- Considerations on data protection
- Selection of sources and the question of representativeness
- Processing and reporting of results
- Communication with stakeholders

4.1. Considerations on data protection

As the quoted project deliverable states, “sensitivity towards data protection issues” – both from a legal as well as from an ethical point of view – is of utmost importance in the project.

“Even though in legal terms, our undertakings are not obviously touching data protection provisions, we have learnt that in theory, we can happen to be dealing with personal data and thus we have taken safeguarding measures in order to acquire legal certainty” (ibid: 43).

These measures are, for example, the prudent selection of social media sources according to their fulfilment of privacy obligations, anonymisation of the authors’ names and acronyms, registering with the Data Protection Commission in charge, as well as continuous legal advisory, to name but a few.

Whilst the compliance with legal data protection standards can only be considered a minimum standard, the ethical dimension of data protection brings about further challenges.

“In this regard, the lack of ‘informed consent’ is an issue that requires precautions in order to protect the authors of postings who might not be aware of the public availability of their contents, let alone of their deployment for research purposes (...) All the more we consider it essential to take endeavours assuring complete anonymity by blanking out the authors’ names or acronyms which they are using for communicating on the internet” (ibid: 43).

4.2. Selection of sources and the question of representativeness

The question of the selection of social media sources is of central importance for UniteEurope, since these sources are “the fundamental basis of all content that will be produced by UniteEurope”. This being more of a methodological question, it has a huge impact on ethical and, as suggested above, on legal aspects.

“Whilst from a legal point of view, the core condition is that sources must be selected in a prudent manner with regards to their compliance with relevant data protection standards, the cultural and ethical perspectives impose more complex demands, coming close to the matter of representation in

social media (...) which brings about issues of 'digital divide' (exclusion of certain groups of people depending on variables such as age, computer literacy, gender, etc.), the strong presence of populist and extremist positions in social networks and, in contrast, the weak presence of (certain groups of) migrants" (ibid: 43f).

In this respect, we are currently working on a sound methodological approach in order to "provide for a set of social media sources that comes up to scientific standards and avoids random or biased results".

4.3. Processing and reporting of results

A direct consequence of the debate on appropriate social media sources is the question on how to display the results produced by the SMA tool. Whilst an SMA tool would be useless without at least some quantitative presentation or a ranking of results, one must be aware that frequencies do have a limited information value because they merely represent the "loudest voices" in social media which normally do not have much in common with a given population in terms of representativeness (ibid: 34ff). Thus, explanations of a qualitative nature will always be needed in order to make the results sound.

"This is mainly owed to the fact that in the (often very value-laden) discussion of integration related issues, the use of quantitative data only can be misleading in the sense that individual sources and/or individual users can produce above-average amounts of partial contents. As a matter of fact, it is important that those will be counted and considered by the tool; however, by providing additional context information (indication of sources and number of sources, extracts from the postings, links to the original pages, etc.), we make sure that the end user will be able to estimate the general relevance of the results by learning about their backgrounds" (ibid: 44).

4.4 Communication to stakeholders

Regarding these core challenges, it is becoming clear that the project consortium can only set the basis for a legally and ethically sound use of UniteEurope. A core part of the responsibility is remaining with the end-users, which is why the deliverable report is recommending comprehensive awareness-raising measures in order to prevent potential misuse:

"With regards to the end users, a license agreement, manual and training materials will be equipped with sensitising information concerning the critical aspects as well as the possibilities and limits of the tool (...). Furthermore, for assuring a wider impact, the recommendations and conclusions (...) will be part of the overall communication strategy of the UniteEurope project in order to inform stakeholders about the purpose of the tool and its dedicated outcome" (ibid: 44f).

5. Conclusions

In this project paper we have presented UniteEurope, an exemplary research project that combines technological software development with social-scientific research for the purpose of policy and decision making support. UniteEurope is an ICT project co-funded by the European Commission under FP7. Consisting of nine partners (software developers, social media experts, social scientists, NGOs and municipalities), the consortiums aims at developing a social media analytics tool for European municipalities and NGOs which will support their efforts in migrant integration by offering, analysing and visualising user-generated data from public social media in an intuitive manner. In contrast to common social media monitoring and analytics tools that are developed for

commercial purposes (i.e. brand and company monitoring and marketing) the UniteEurope tool is based on a quantitative-qualitative foundation. This is necessary in order to make SMA usable for policy and decision making. The significant differences between standard SMA tools and an instrument that is “ethical, reliable, and usable” for policy issues (especially in a field like the integration of migrants) pose great challenges which are currently dealt with in the UniteEurope project. The consideration of legal and ethical aspects that come along with collecting and analysing user-generated content from public social media is one of these issues that need not only be handled within our project but require a general discussion about social media analytics, ethics and the interests of social media users and stakeholders who will use this data.

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About the Authors

Katharina Götsch

Dr. Katharina Götsch works as Research Analyst at INSET Research & Advisory. She holds a PhD in Political Science from the University of Vienna and a Master degree in German Literature and Language from the University of Innsbruck. Prior to her appointment at INSET, she worked in the publishing sector for several years as editor and copywriter and she gained professional experience at the Austrian Embassy in Washington, DC and the International Organization for Migration. Her main research fields are international relations, migration and the integration of migrants. She is involved in international and national research projects in the fields of ICT, social inclusion, migrant integration, gender and diversity.

Verena Grubmüller

Dr. Verena Grubmüller is a senior researcher at INSET Research & Advisory. She holds Master degrees in Sociology and Social Economics and a PhD from the Faculty of Social and Economic Sciences at the Johannes Kepler University of Linz, Austria. Dr. Grubmüller is a scholar in international migration and EU policy research; her current research focus is on social inclusion, diversity and eGovernance. She leads the EU-FP7 project “UniteEurope” (ICT solutions for governance) as well as the national research project “FemSMA” (Gender oriented research).

Igor Pejic

Mag. Igor Pejic is a management consultant at INSET and has advised leading national and international clients, including Fortune100 companies. He has experience in communication strategy, marketing, industry analysis, strategic business development, and strategic management. Before joining INSET, Mr. Pejic has worked as a journalist at leading Austrian newspapers in the business area and taught various courses at the Communications Department at the University of Vienna. Mr. Pejic holds a B.A. and Magister degree in Communications from the University of Vienna, and a Magister degree in English and American Studies.

Social and Mobile Media for Public Administration

(peer-reviewed)

Government Activities in Social Media

An Empirical Investigation of eGovernments in Informational World Cities.

Sarah Hartmann*, Agnes Mainka**, Isabella Peters***

* Heinrich Heine University Düsseldorf (Germany), Department of Information Science,
s.hartmann@hhu.de

** Heinrich Heine University Düsseldorf (Germany), Department of Information Science,
agnes.mainka@hhu.de

*** Heinrich Heine University Düsseldorf (Germany), Department of Information Science,
isabella.peters@hhu.de

Abstract: *EGovernment is an important aspect of the development of Informational World Cities, i.e. prototypical cities of the knowledge society (such as Singapore, Seoul, or Hong Kong). Government 2.0 is a generic term and describes government activities which are built on technology and social media services. But which social media services are really used by governments? An empirical investigation of 31 Informational World Cities shows which platform is popular among users and cities for government-user-interaction.*

Keywords: Government 2.0, eGovernment, knowledge society, digital infrastructure, Informational World City, Web 2.0, social web

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1. EGovernance in Informational World Cities

With the emergence of the knowledge society a new generation of cities arises. Those Cities which aim at competing in the global economy trade knowledge as principal economic factor (Hepworth, 1987). According to Manuel Castells (1989) such cities are called “Informational Cities” (Yigitcanlar, 2010; Stock, 2011; Mainka, Khveshchanka, & Stock, 2011). Typically, in Informational Cities urban development and economic growth are based on infrastructures of information and communication technology (ICT) as well as on cognitive infrastructures. Informational Cities consist of two spaces: the space of places and the space of flows (Castells, 1994). The space of places (e.g., buildings, streets) is dominated by the space of flows (flows of money, power, and information). Those cities are metropolises of the 21st century. So we will call those cities “Informational World Cities” (Orszullok, Stallmann, Mainka, & Stock, 2012).

First of all an Informational World City is defined by its degree of “cityness” (Friedmann, 1995; Taylor, 2004; Sassen, 2001). The number of residents by itself does not constitute a world city.

Thereafter an Informational World City also has to offer important infrastructures as they are given in a digital city (Yigitcanlar & Han, 2010). The combination of those city features leads to a variety of different names for a similar concept: ubiquitous city (Hwang, 2009), smart city (Shapiro, 2006; Hollands, 2008), knowledge city (Ergazakis, Metaxiotis, & Psarras, 2004), or creative city (Landry, 2000; Florida, 2005). The economic success of a world city correlates with the emerging human capital (Glaeser, Scheinkman, & Shleifer, 1995). Accordingly, it is necessary for such a city to meet the needs of the knowledge society and to bring up the important infrastructures, like developing an excellent eGovernment as it is discussed in the given research literature. To find evidence for Informational World Cities we analyzed 126 references. In this literature set we found advice for 31 cities which show typical properties of Informational World Cities (Orszulok et al., 2012). Simultaneously, these cities reflect global centers distributed over the world (Figure 1).

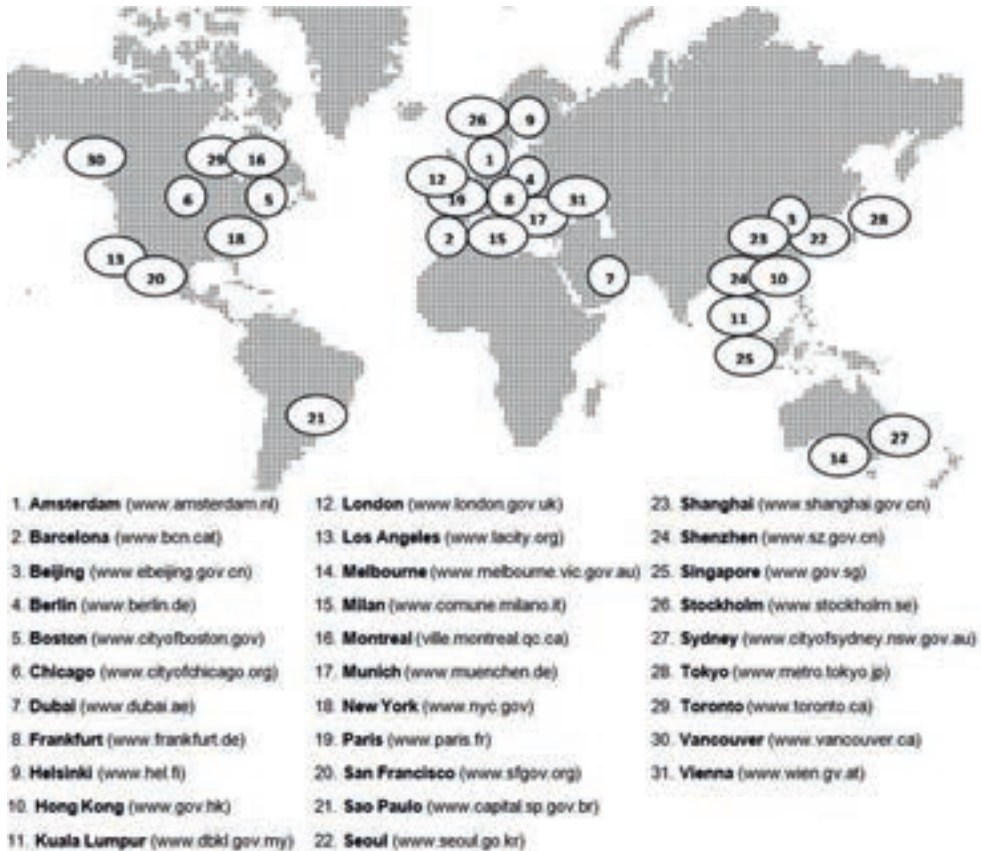


Figure 1: Found Informational World Cities and URLs of the official government websites.

In an Informational World City eGovernance is the basis for innovation (Yigitcanlar, 2010). The term eGovernance should be understood as a generic term for planning, innovation, and funding at city level (Sharma & Palvia, 2010). EGovernance comprises the aspects of eGovernment and eCommerce in addition to other important properties of a city, such as the improvement of living standards for the citizens and the increase of economic growth through better cooperation between

authorities with citizens and businesses of the city. Increased use of ICT and knowledge management approaches between authorities and citizens or businesses optimize services in eGovernment and call on citizens and companies to actively engage in political debate and decision making processes (Gisler, 2001; Kettl, 2002; Sriramesh & Rivera-Sanchez, 2006; Sharma & Palvia, 2010). In this paper we analyze this innovation and take a deeper look into eGovernment which is the fundamental pillar of eGovernance. According to Moon (2002) eGovernment includes the interaction levels information, communication, transaction, integration, and participation. To study the different interaction levels an empirical survey of 31 Informational World Cities' eGovernment activities in social media services like Facebook, Twitter, and YouTube was conducted. The main research questions were: (1) which social media services are used by governments? (2) Do governments make their social media activities visible in the net? (3) Do they reach social media users online?

2. Government 2.0

The increasing use of ICT and particularly the internet by the government is referred to as eGovernment or Government 2.0 (Bonsón, Torres, Royo, & Flores, 2012). In 2005 the term Government 2.0 was established by William Eggers who used this term to describe the enhanced use of technology in government and it was not driven by the upcoming social media services which are often called Web 2.0 (O'Reilly, 2005). In subsequent publications the term was used in regard to *"a more open, social, communicative, interactive and user-centered version of e-government"* (Meijer et al., 2012, 59) which also includes activities on social media platforms. The government should change its orientation to a citizen-centered perspective by implementing services which satisfies its customers (Eggers, 2005). The use of technology does not just reduce costs but also improves the interaction with the citizens (Warkentin et al., 2002). Additionally, transparency and open governance enhances trust and participation of its costumers (Bertot, Jaeger, & Grimes, 2010).

Social media is already detected as important marketing tool at the free market economy (Mangold & Faulds, 2009) and modern governments adapt this idea. Coursey and Norris (2008) argue that governments which use social media platforms do not automatically increase eParticipation, like voting online or engaging in online discussions. The governments need a strategy on how to deal with this media. Social media services are rather new tools and their use for government in terms of user interaction has not been scrutinized. On the one hand it is an ongoing process to participate in social media services and on the other hand it is about identifying which is the most profitable way to reach the citizens. The use of social media is the first step for governments to enhance their government-to-citizens communication, collaboration, and participation online (United Nations, 2010). For this purpose governments try to reach their citizens where they are; namely on Facebook, Twitter, YouTube, etc.

Social media activities in Government 2.0 are mostly analyzed for a specific purpose, e.g. communication (Skirbunt, Martinez, & Meskell, 2009; Zhang & Chan, 2013). The focus of our research is on the general use of social media platforms by governments. The empirical investigation of 31 Informational World Cities shows which social media services governments prefer to use and whether they reach users online. Furthermore, the study will highlight differences in the use of social media between the cities.

3. Method

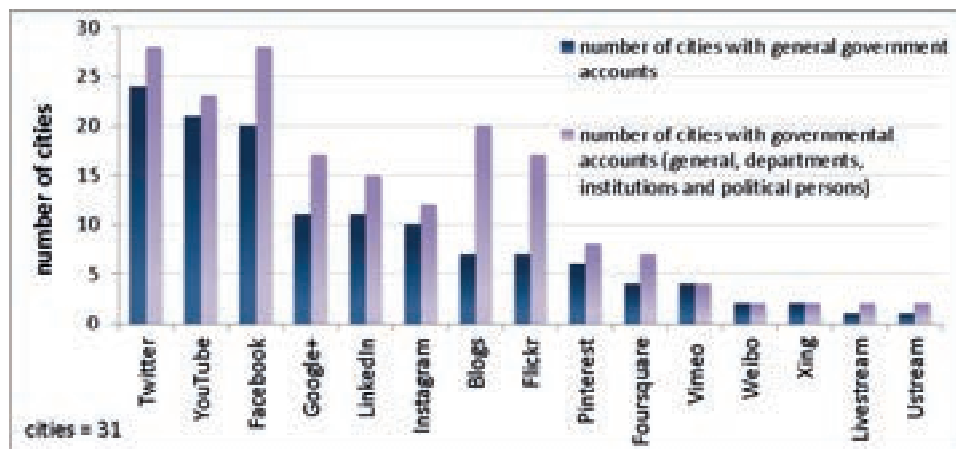
The first step when analyzing government's social media usage was to check whether official websites link to social media platforms and if so, to which services. After this we took the opposite direction and checked social media services for official government accounts which were not mentioned on the official governments' websites. The authenticity of the accounts was checked manually. The determined services are: social networking platforms like Facebook, Google+, and Hyves (a Dutch service); the business social networks LinkedIn and Xing (a German service); the location based social network Foursquare; the microblogs Twitter, Sina Weibo, and Tencent Weibo; the video platforms YouTube, Vimeo, Livestream, and Ustream; the photo sharing applications Flickr and Instagram; and content sharing services like Pinterest, Storify, and Blogs. The total numbers for every analyzed account of each social media service are: 541 on Facebook, 449 on Twitter, 195 on YouTube, 103 blogs, 80 accounts on Flickr, 21 on Google+, 20 on LinkedIn, 16 on Foursquare, and on Instagram respectively, 14 on Pinterest, eleven on Vimeo, four on Weibo, and two on Livestream, Ustream, and Xing; only one on Storify and on Hyves respectively.

These accounts can be divided into two groups: (1) official government accounts/blogs for general purposes (e.g., the Facebook account "City of New York" is a government account); (2) governmental accounts like governmental institutions, departments, or political persons (e.g., the account of the city's mayor). The accounts on Storify and Hyves dissatisfy the requirements for being count as government accounts and are not considered in the following study. However, inactive accounts (registered accounts without any post, photos, videos etc.) were included in our analysis.

To study the city's activity on social media platforms all available online data on these social services were scrutinized. Available data are: the quantity of followers, posts, tweets, photos, videos, pins, and tips; the admission date at social services and the date of the first post or other activity respectively. Because of their vast deviations in website structure and graphic characters the Chinese websites were analyzed with assistance of a Chinese native speaker, so that the social networks linked on the Chinese websites were reliably identified as well. For other government websites we used the English or German version if available or translate the website with Google translate. The research was conducted from November 28, 2012 until January 3, 2013.

4. Results

4.1. Governmental use of social media



Figure

Figure 2: Social media usage in Informational World Cities.

We begin with an overview on the used social media platforms. Figure 2 illustrates how many of the 31 cities use which social media service. The primary used social media platforms for a general government account are first Twitter, second YouTube, and third Facebook. In comparison, the most used services for governmental purpose (including general government accounts, governmental institutions and departments, and political persons) are Facebook and Twitter with 28 cities each, second YouTube with 23 cities and third blogs which are used by 20 cities. Except for three social media platforms (Weibo, Vimeo, and Xing), the analyzed cities have fewer general government accounts than other governmental accounts.

Based on the 15 detected social media platforms, Figure 3 shows the number of platforms used by the Informational World Cities for governmental interaction including all detected accounts and how many are used as general government accounts. On average there are 3.97 general government accounts for each city. For Beijing and Shanghai no accounts were found in the analyzed social services. Barcelona with twelve and Melbourne with ten general government accounts are represented at the most platforms. All governmental accounts summarized: Boston (11), New York (10), Chicago (10), and Helsinki (10) make moderate use of different social media. In contrast Berlin, Dubai, Tokyo, Vienna, Paris, and Sao Paulo have three and Shenzhen has only two governmental accounts; one on Sina Weibo and one on Tencent Weibo (Hong Kong also uses Sina Weibo). These two microblogging services are almost identical, but Sina Weibo is the most popular (Yu, Asur, & Huberman, 2011). In the following Sina Weibo is considered. Especially the social media usage of Helsinki is surprising: they offer a very detailed webpage within the official government website with links to many different social media services but none of those links refer to a general government account. London and Los Angeles are using more social services for representing their mayors than for reaching users with general government accounts.



Figure 3: Number of social media platforms used.

Figure 4 illustrates the development of the governments' social media activities in different services. It shows the date when the first government account entered a particular service in contrast to the average starting date of all analyzed government accounts. Depending on the available data the starting date of the social media activity (e.g., tweeting) does not necessarily reflect the accession date; it can be the first time of posting content as well. For Facebook, Twitter, YouTube, Flickr, and Ustream the date of account registration is available. For all other social services the first date of activity on the platform was examined.

Sydney is the city which first registered social media accounts. It was the first city with an official general government account on Flickr and YouTube. Flickr, Twitter, and YouTube are the longest used social services in an average period of all government accounts. Stockholm seems to be active in social media for a long time as well. It was the first in running a blog and a microblog. The first Facebook page was created by San Francisco in November 2008.

As illustrated in Figure 4 there are long periods of time between Flickr's and YouTube's first accession dates and the average accession dates of all cities, which is more than three years later. Twitter became a popular service among most of the cities almost at the same time with Flickr and YouTube, although Twitter's first account was registered in August 2008. Since January 2008 cities have been active in blogs, far earlier than in Facebook and Twitter. Younger usage numbers appear for Ustream, Google+, Instagram, and Foursquare. Accession dates for Weibo, Livestream, Pinterest, LinkedIn and Xing are missing, because those services do not publicly provide this information.

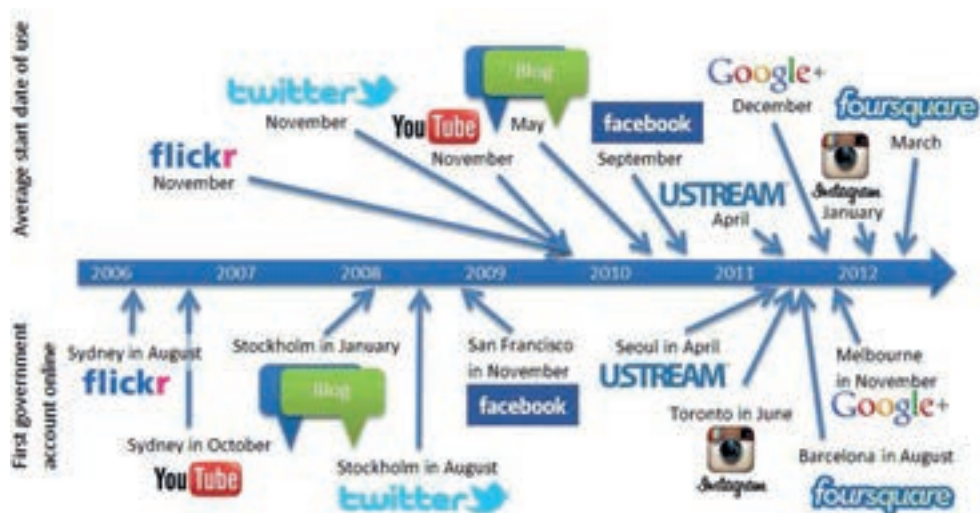


Figure 4: When did analyzed cities create an account on analyzed social media platforms? Comparison of the earliest and the average accession date of governments.

4.2. Visibility of social media activity

The World Wide Web is considered to be a network of links (Berners-Lee, Cailliau, & Groff, 1992). It could be assumed that the best way to popularize that the government is using social media would be links on their official websites pointing to respective social media accounts. Twenty eight of the 31 analyzed official governmental websites link to social media accounts and even 14 of them have a special website where all social media activities were listed. Some cities which do not link to a general government account offer specialized accounts, e.g., accounts of governmental organizations or the public library. Despite high social media participation rates, not all government websites have a digital reference to their accounts. Assuming that the homepage is the starting point for users to browse the webpages the homepage is considered to be the best place for linking to social media accounts. Alternatively, a separate webpage can summarize all available accounts. However, only 21 cities prominently highlight their connection to social services on their homepage and only nine cities link from their homepage to specialized social media webpages. Cities not prominently referring to their social media accounts from their homepage either force users into longer website browsing sessions or hamper the citizens' participation in the governments' social services. Berlin, Hong Kong, Helsinki, London, Los Angeles, Stockholm, and Toronto use social media but they have not linked their homepage to official accounts.

It is not only links from the official government website which could enhance the visibility of the cities' social media activities but also links between different social media platforms which may increase the users' attention. Table 1 shows which cities publish a link between the social services used. Ordered by the number of cities using a particular social service Facebook is the platform with the most outlinks to other services, followed by YouTube, blogs, and Foursquare. Google+ and Twitter get more inlinks from other services than they offer outlinks. The most inlinks gets the microblog Twitter, while Twitter itself offers only few outlinking possibilities from a profile page because of space limitations. Barcelona is the most crosslinking Informational World City,

considering the city's linking of governments' social media services. Sydney and Melbourne show a large amount of crosslinks as well.

Table 1: Cities with general government accounts linking social media services.

cities social media platform																	
	Facebook	Google+	Twitter	YouTube	Livestream	Ustream	Flickr	Instagram	Pinterest	Foursquare	Blogs						
Barcelona	5	2		4	4	5	1		2	1	1	1	2	2	5	4	
Sydney	4	1	2	5	4	3	2		2	1	2						
Melbourne	4	2	2		4	4				1	2	2	2	1			
New York	1	3		2	2	1				2		2	1	4			
Munich	2	2	1	4						2	1	1		3			
Seoul	3	1		3			2	1							1	1	
Boston	2	1		2					1		1	1	2				
Dubai	1	2		2	2	2	2										
Frankfurt		1	3		1	1											
Toronto				1	3			1								1	
San Francisco	2				1	1											
Milan	1			1													
Singapore				1	1												
Stockholm				1	1												
	number of outlinks																
	number of inlinks														cities = 14		

The third observed aspect of the governments' social media connections looks at the back linking from social services to their websites. The services with the highest backlink rates are YouTube, Pinterest, livestream, Xing, Weibo, and Foursquare. All government accounts contain backlinks to their official websites. In contrast, no account on Vimeo and Ustream link back to its official website and additionally all of these accounts on Vimeo are inactive. Instagram is a third social service with a high percentage of missing backlinks (62.5%) and primarily inactive accounts (60% of the accounts without backlinks are inactive). These observations suggest that inactive accounts without backlinks are no government accounts. But Instagram disprove this assumption. Eighteen percent of all government accounts on Instagram are inactive, although there are backlinks to the government's official website. Additionally, on the governments' official websites links to social media accounts were found which omit backlinks to their official website (for example Hong Kong's Twitter profile). Therefore backlinks approve an account to its government, but missing backlinks is not a disqualifier for a government affiliation.

4.3. Reach of government's social media activity

Figure 5 shows the activity of all analyzed governments according to their used social media services. Since not all services indicate their usage numbers or the accession dates on their pages city accounts on Facebook, LinkedIn, Xing, Livestream, Ustream, Google+, Pinterest, and Weibo had to be excluded from the analysis even if cities were active on these platforms.

The most activity can be found on the social media services Twitter, Flickr, Blogs, and YouTube. The cities with the most published tweets are Berlin, Seoul, and Barcelona. Barcelona also shows a high activity rate per month on several services. After Tokyo and Milan, Barcelona has the most published videos on YouTube and is the winner in posting photos on Instagram. But it is second after Vancouver on Flickr, and after Melbourne in distributing tips on Foursquare pages.

Melbourne’s Flickr activity is two times higher than its number of tweets on Twitter. Altogether Barcelona, Vancouver, and New York are the most active cities in government social media services considering their usage numbers in relation to the number of services they use. As suggested previously, not only Vimeo’s accounts without backlinks are inactive, all detected governmental accounts on Vimeo show almost no activity.

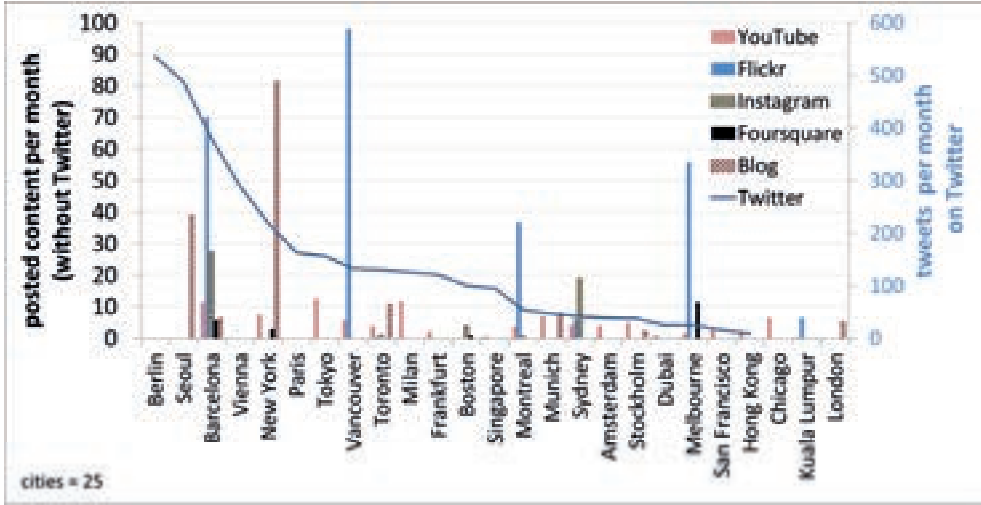


Figure 5: Activity of each city on social media platforms.

Considering all posted content on social services Shenzhen is more active on the Chinese social media platform Weibo than Hong Kong, however Hong Kong uses Twitter in addition. It is also important to examine to what extent governments are able to reach users with their social media activities. Table 2 illustrates the number of followers or likes of the government accounts. Again some social media services and cities were excluded from the analysis because of missing data on the accounts (i.e., Flickr, Blogs, Livestream, and Vimeo).

Facebook, Twitter (and Weibo), and LinkedIn are the most frequently used social media services regarding the number of followers or likes. Facebook’s competitor Google+ reaches considerably fewer followers than Facebook, however, incorporating its launch date in June 2011 in contrast to Facebook’s in February 2004 it continues being in competition to Facebook. Paris, San Francisco, and Munich have government accounts on Facebook which show the highest like rates. Paris is by far the winner in collecting likes on Facebook. This could be because Paris’ Facebook page is not marked as governmental page but solely as general city page with no distinction between the information about the government and the whole city. Other cities like Boston and New York offer separate websites, one for general city information and an additional one for governmental interaction. Both websites have their own social media accounts.

Similarly surprising is the number of Weibo followers, which underlines the popularity of Weibo in Chinese regions (Deans & Miles, 2011). Hong Kong, especially, reflects Weibo’s popularity among users in contrast to Twitter which is almost not used at all. In view of all analyzed cities, the total number of likes on Facebook is less than followers on Twitter. On average, cities started to use Facebook in September 2010 and Twitter in November 2010.

Table 2: Followers and likes on social media platforms.

cities social media platform	in the circles of Google+	likes on Facebook	followers on Twitter and Weibo*	subscribers on YouTube and followers on Ustream**	followers on Pinterest	followers on Instagram	likes on Foursquare profiles	contacts on LinkedIn and Xing***
Paris		2.099.985	43.138					
Hong Kong			457 659251*	1.343				
Munich	457	363.721	8.500	411	193		321	13***
Shenzhen			316576*					
San Francisco		269.835	13.127	236				
Frankfurt	142	183.724	13.806	160				
New York		50.456	53.758	52	257		37.561	
Barcelona	7	29.588	39.402	517	106	1.995	3.202	1.318
Seoul		13.593	42.422	3192**				
Sydney	10.200	24.574	17.362	1.003	322	1982		1.230
Tokyo		287	45.486	1.022				
Berlin	265	11.729	26.909					
Vancouver		10.549	21.085	363				2.701
Toronto			15.043	348		27		10.867
Boston	30	8.421	14.253		143	159	416	2.441
Amsterdam	168	106	10.851	6		3		4.733
Melbourne	198	1.630	9.722	179	116	5	85	2.336
Stockholm			6.681	124		5		2.490
Milan		2.580	3.630	110				1.492
Los Angeles		67						7.426
Vienna	38	5.441	962					
Dubai		1.764	4.222	1				
Chicago				259		5		5.692
Singapore		16	5.502	35				
Kuala Lumpur		3.271		0				
Montreal			1.856	149		53		
Helsinki								1.456
cities = 27								

5. Discussion

With this empirical investigation we want to answer whether governments' social media activities reach users and which social media service is the most appropriate service for government communication. The examination of 31 Informational World Cities showed that the most used platforms are Facebook, YouTube, and Twitter. It is conspicuous that Chinese Informational World Cities do not use these services. All of them use fewer or no globally accessible social media services, because the access is restricted by China's government. In contrast Beijing and Shanghai have their own government microblogs under construction, presumably to exercise a better content control about their political practices. Thus, a full comparability between the Chinese cities and the others is not given.

Fifteen Informational World Cities use at least four social media services for government accounts. The linking between the governments' websites and their used social services is an important means to draw the citizens' attention to the governments' social media activity. With the exception of Hong Kong, cities with missing links on their homepages achieved only low follower numbers. The social media services where most activity of the cities is performed are Facebook and Twitter. Additionally, the Chinese microblog Weibo achieves similar usage numbers. Moreover, no non-Chinese government uses Weibo. The results show that government activities in social media

reach users. Several cities attain exceeding numbers of followers (Paris, Shenzhen, and Hong Kong). However, those three cities are not the most active ones, which are Barcelona, Toronto, and New York. The correlation between governments' activity and number of followers depends on the used service. For Twitter a negative Pearson correlation value was detected (-0.13). The other services show a positive correlation value: YouTube with +0.26, Foursquare with +0.97, and Instagram with +0.98. The marginal correlation results of Twitter and Youtube show that there is no dependence between the self-initiated activity of a city and the number of followers. The opposite is proven by Foursquare and Instagram which numbers of followers and postings strongly correlate. However, that could be reasoned by Foursquare's and Instagram's later launch dates. Currently they are very popular but they may lose their attractiveness in the future.

The earliest active cities in social media are Stockholm, San Francisco, and Sydney. Although they are less active in posting content they achieve higher follower numbers than their activity suggests. Considering each city's total number of followers, there is no need to participate in many social services. The cities with the most followers (Paris, Shenzhen, and Hong Kong) operate with three social services at the maximum. However, whether the city is actually reaching its citizens or whether the high follower numbers are reasoned in the city's popularity cannot be clearly determined with the methods used in this study.

6. Conclusion and future work

We analyzed the social media activity of governments in Informational World Cities, which are metropolises of the knowledge society and have enhanced ICT infrastructures. Our study confirmed: governments of Informational World Cities are very active on social media services, primary on Facebook, Twitter (Weibo), and YouTube, although some of the 31 analyzed cities do not interact with their citizens on these platforms. The Chinese cities have to be analyzed separately, because of given political constraints they use social media platforms which could be guided by their government. However, the United Nations (2010) judged social media important for government-to-citizens-communication. Our study showed that governments can reach many people online via social media. For governmental purpose it could be sufficient for cities to concentrate their activity on the services which are primarily used by their target group (i.e., Facebook, Twitter (Weibo), and YouTube). All other analyzed services are only sporadically used by users what is reflected in low follower- or like numbers. Please note that low follower numbers may also be reasoned by recently launched social media services which are not popular among users yet. Cities should continually monitor upcoming services and evaluate their potential for reaching particular target audiences.

In future work we will analyze whether the social platforms are used for government-to-citizen communication or eParticipation as well as whether they reach the "real" citizens despite general users only interested in the city. Is social media used to circulate polls, provoke comments or discussions about future visions on the city? Do citizens really participate and are they allowed to publish own ideas, e.g. how tax money could be spent? Furthermore, we want to track whether these discussions are officially considered in the cities' governance.

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About the Authors

Sarah Hartmann

Is a Bachelor Student of Information Science and Language Technology at the Heinrich Heine University. She works in the research project “Informational World Cities and Social Media”.

Agnes Mainka

Is a PhD student in Information Science at the Heinrich Heine University in Düsseldorf. Her research interests include Social Media, the Knowledge Society and Informational Cities.

Isabella Peters, PhD

Is an information scientist at the Heinrich Heine University Düsseldorf. She researches the application of social media in knowledge management and in institutions.

arts at UTS. His research topic is the role of social media in participatory political activism.



Web 2.0 in Russian Open Government

Political Role of Internet Users Communities

Alexey Bunkov*, Radomir Bolgov**, Andrei Chugunov***

* Presidential directorate for application of information technology and the development of e-democracy, Moscow (Russia), avbunkov@gmail.com

** St.-Petersburg State University (Russia), rbolgov@yandex.ru

***e-Government Center, University ITMO, St.-Petersburg (Russia), chugunov@egov-center.ru

Abstract: Internet communities and individual users of social Internet networks are gaining political influence, and Web 2.0 technologies are increasingly political. This research identifies unique features of the e-Participation and Open Government assessment in Russia. The authors show Russia's place in the world e-Government and e-Democracy rankings. The authors analyze Russian projects providing for social Internet services to join government information systems with citizens, NGOs and business community. This research identifies basic advantages and limitations of using social media in Russian public administration, as well as problems of Open Government in Russia. Authors analyze public documents regulating the use of social media in the interaction of authorities with the citizens and business community.

Keywords: Web 2.0, Open Government, e-Participation, e-Democracy, Russian Public Initiative, Russia

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The question of whether we can consider online communities as political actors is of academic interest. In this case, the question is quite controversial. It is becoming increasingly obvious that social media (Twitter, Facebook, etc.) in and of themselves are not actors, but only tools to provide the interests of those participating in political process. Commercial companies that manage social web services (e.g., Facebook) often become stakeholders. These actors' interests lie in political, economic, social, cultural and other fields. In this case it is worthwhile to research political interests, and develop new tools to achieve them.

Currently, major political actors have embraced the use of advanced technologies. As for the government, web-pages of political actors have become an indicator of activity and progress. For example, 51 out of 83 heads of Russian regions actively participate on public blogs (Goslyudi.ru...). In general, regional and municipal officials are more active on social Internet networks than federal officials.

With the advent of Web 2.0 technologies, constituents (journalists, social activists and even soldiers) are increasingly participating and communicating on social Internet networks: sharing photos, videos, ideas, and comments.

It should be noted that Internet media are gradually replacing traditional media sources. Exemplifying this trend, in 2010, the results of a nationwide U.S. survey indicated that 34% of Americans received their news from online sources (up from 29% in 2008), whereas from traditional news papers - 31% (registered a decline from 34% in 2008) (Katz, Lai, 2009). According to WCIOM polls conducted in April 2012, 64% of Russian respondents trust information obtained from the Internet, and since 2008 confidence in the Internet as an information source has grown from 49% to 64% ("Vsya Pravda...", 2012).

The business community has not been left out of the race for cyberspace and plays an active role in the information landscape. The number of crowd sourcing projects began in the mid-2000s with the realization on the part of commercial companies that the "wisdom of the Internet crowd" could be harnessed for free, increasing effectiveness, rather than hiring highly paid experts. Then government authorities, having learned from the experience of private sector, realized that crowd-sourcing projects can be used in the field of public administration.

The Digital Data Survey 2010 showed that only 20% of heads of state blogged on Twitter. Analysis as of December 2012 reveals that 75%, or three out of four heads of state used Twitter regularly. Out of 164 countries, 123 world leaders had Twitter accounts set up in their own names or through an official government office, a stark contrast to 2011, when only 69 out of 164 countries had embraced Twitter. The new figures represent a 78% increase from 2011 in the number of heads of state and national governments on Twitter (Top-10 rankings..., 2012).

Barack Obama is the most obvious example of politician whose campaign and work in the U.S. administration demonstrates the active use of social media to communicate with the public (Katz, 2011).

There are many similarities between business community and government in terms of management methods. It should be kept in mind that profit is not a concern in public administration as opposed to the commercial environment.

The most successful tactics harnessed by both business and government in social media is what John Arquilla and David Ronfeldt call "swarming" (Arquilla, 2000), when applied to the sphere of conflict tactics, which refers to the cumulative effect of small actions. A good analogy is a "weak cooperation" of users shaping the content of Wikipedia or similar projects in public administration (for example, e-petitions).

Some applications of crowd sourcing are the following:

- The identification of socio-political trends and public services quality assessment;
- Recruitment of new followers (crowd recruiting);
- Fundraising (crowd funding);
- Raising public awareness;
- Various forms of coordination etc.

This creates opportunities to improve internal communication (G2G), shape a positive image and investment attractiveness (G2B), increase accountability to citizens (G2C), form a set of ideas, save money and time, and provide feedback.

1. Unique Features of the e-Participation and Open Government Assessment in Russia

The United Nations Department of Economics and Social Affairs is the most authoritative structure assessing the level of e-government readiness, including e-participation. It regularly publishes the E-Government Readiness Report. This assessment is done by monitoring official government web-sites. This allows for the evaluation of the presence or absence of e-governance indicators.

For some time Russia has occupied the lowest positions in the «UN E-Government Survey» ranking (58th in 2003, 52nd in 2004, 59th in 2010). However, it rose to 27th place in the 2012 ranking (United Nations e-Government Surveys...). This is due to the active development of e-governance in Russia, including the launch of the Integrated Portal of Public and Municipal Services of the Russian Federation (<http://www.gosuslugi.ru/>) in December 2009, which has become the official site for all regions and municipalities in Russia, as well as the "E-democracy» system (<http://e-democratia.ru/>) in 2011 and a number of other major national projects.

Table 1: e-Government indicators in the Russian Federation (UN e-Government Survey 2003 - 2012)

Report's publication, year	2012	2010	2008	2005	2004	2003
e-Government Development Index	0,7345	0,5136	0,5120	0,5329	0,5017	0,4430
Place of the Russian Federation in the rating	27	59	60	50	52	58
Rating Components:						
– Online Services *	0,6601	0,3302	0,3344	0,4538	0,3900	0,2230
– Telecommunication Infrastructure	0,6583	0,2765	0,2482	0,1947	0,1852	0,1850
– Human Capital	0,8850	0,9397	0,9589	0,9500	0,9300	0,9200

Source: United Nations e-Government Surveys.

* Note: *Government Websites Component- in the reports of 2003 - 2008. Online Services Component- since 2010 after a change in the practice.*

Russia entered the top 20 countries with the highest e-participation index in terms of eGovernment 2.0 according to the "UN E-Government Survey" 2012 with a rating of 0.6579 (UN E-Government Survey, 2012). In 2010 the value was 0.129 (medium level). However, Russia placed among countries with a weak legal framework on the right to information in the ranking of Open Government Partnership (OGP) "The Right to Information" (RTI) in 2012. The survey was conducted in 55 countries. Russia received only 60 points out of 150. It should be noted that this was the first year Russia participated. In addition, the OGP is directly linked to a set of formal requirements, which includes specific documents approved within the participating countries. Considering Russia's OGP accession and national action plan for Russia's continued OGP accession, it is not premature to expect Russia to rapidly ascend in the rankings.

However, the implementation of the transition to open government and data disclosure, in general, requires compliance with the principle of reasonable sufficiency that should ensure an adequate level of security and personal data protection. The issue of economic feasibility of disclosure data which are not socially significant or required is not less important.

The Freedom of Information Foundation noted the weakness of Russian legislation in terms of information transparency. Since 2007 the Foundation has been regularly monitoring government information transparency in Russia.

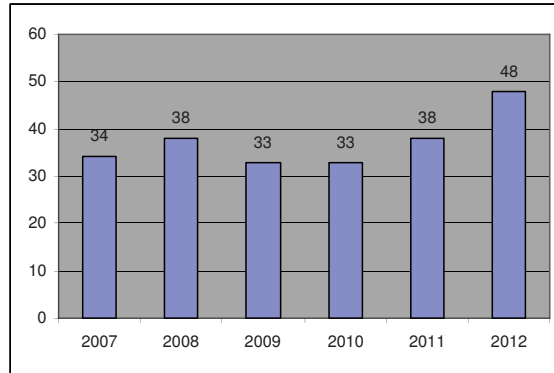


Figure 1: Russian regions executive authorities' websites openness, 2007-2012.

In 2011 and 2012 there has been a positive trend of increasing degree of transparency on regional Russian government web-sites (Freedom of Information Foundation, 2012), which can be traced in the diagram (Figure 1). Currently a Presidential decree requires authorities to provide access to open data –

"The Government of the Russian Federation to ensure the following activities prior to July 15, 2013:

- To provide open data access to the Internet contained in the information systems of the Russian Federation public authorities". (Decree..., 2012)

In recent years Web 2.0 tools have emerged to assess e-Governance and Open Government. It is worthwhile to note the studies of R. Heeks (Heeks, 2006), D. Osimo (Osimo, 2008), A. Schellong (Schellong, 2009), N. Hanna (Hanna, 2010), L. Reggi (Reggi, 2011), K. Mossberger & Y. Woo (Mossberger, Woo, 2012), and the document "Open Government and Public Value: Conceptualizing a Portfolio Assessment Tool" (Open Government and Public Value..., 2011), prepared by The Center for Technology in Government (CTG) at the University at Albany.

Today the trends of public services benchmarking are the following:

- Focus on the results and implications for social and economic development;
- Expansion outside of government institutions;
- Erasure of the boundaries between internal and external policies;
- Movement to the grassroots level;
- Departure from the "ranking paradigm".

Instead of traditional e-benchmarking tools (analysis of site content, user surveys, focus groups, etc.) new tools are gaining popularity, such as traffic analysis, visits and transactions estimates, comparative valuation metrics, custom tools (Google Analytics, Alexa.com), social media monitoring systems (IQ BUZZ, Babkee, Buzzlook, etc.), opinions and emotions analysis, new generation web crawlers, and visualization tools (spatial data, georeferencing, etc.)

The e-Government Center (St. Petersburg, Russia) in late 2011 conducted an expert survey on the problems of e-government in Russia (Bershanskaya, Chugunov & Trutnev, 2012). Experts said that after government sites, social Internet networks garnered the highest demand from the authorities (G2C). Citizens (C2G) are expected to strive for personal contact with the elected officials. The most popular social Internet network is "Regionalochka", which is used by 73% of respondents, followed the network GosBook (53% response rate). About one third of respondents participate in Facebook's "Electronic government in Russia" group.

In 2010, the Graduate School of Management at St. Petersburg State University surveyed students about e-democracy in Russia (Ishmatova, Golubeva, 2012). The survey polled 199 out of 476 students. Respondents were asked about their awareness of information sources on government activities, the perception of respondents' personal influence on government decisions, the use of traditional mechanisms of participation, as well as the preferred e-participation tools. According to the results, 32% of respondents regularly participate in federal, regional and municipal polls, 32% participated from time to time, 30% said that they did not participate in the vote. Out of the same group, 21% had participated in public debates, and 11% in public examinations. It was discovered that about 12% participated in community events rarely and about 48% did not participate at all. The study found that most young people assess their awareness of the current activities of the government as low. Despite the interest in information about the current activities of the government, the information available is not considered credible: 43% of respondents said they do not trust the information provided by the public authorities, and another 40% were undecided. Only 12% believed that they have the ability to influence decision making. Another reason for the low public participation, as the survey showed, is ignorance (68%), lack of information about government activities (59%) and distrust of government (56%). The greatest interest of open government 2.0 tools was the online records of the authorities, as well as e-petitioning (52%) and politicians chat records (44%).

Interestingly, opinions about e-participation's potential in addressing the lack of democracy in Russia were divided, with about half of the respondents believing that the use of ICT for public participation can help solve the problems of Russian democracy, and the other half is certain that ICT is a tool to support existing political processes, but not the means of addressing the dearth of democracy. It is worth noting again that the survey was conducted only among the students of St. Petersburg State University.

2. Open Government Projects in Russia

The projects for integrating social media into the interaction of government information systems with citizens and commercial companies are becoming more and more popular in recent years. For example, the official puts a survey on his page on the social Internet network. Citizens respond to it, the data center receives answers, and then you can see results of the survey online. Here you can ask questions of members of parliament in the public environment, know more about MPs' incomes and so on (E-Partizipation, 2008, p.133). A citizen can attach a text file, image, a point on the map, a reference to an expert. Here it is possible to form a public poll examination of documents, organize a meeting led by a moderator, or hold a "brainstorming." An official acting in the social network as the unofficial person can tell citizens how to act in a given situation, so that citizens do not lose time while in compliance with all official regulations. At the same time, he (and the state) gets feedback from citizens. However, the major problem is that the implementation of

the feedback does not always take an effect. The official is not required and can not guarantee that all citizens will respond to questions in the social network. Citizens, in turn, are often expecting of government an official document, not a post in a personal blog.

In recent years, quite a lot of such resources have appeared in Russia. Among the most significant it is worth noting such web-services as E-Demokratia.ru, Gosuslugi.ru (portal of public services), Zakon.government.ru (public discussion of the laws), sites of public procurement, bidding, ordering, Fedstat.ru (official statistics), GosBook.ru (a network of experts in the field of public e-services), "ACK Open Budget" (developed by the BFT, which simply inform citizens, without their participation), Gosdiscuss.ru, GosLyudi.ru, Govweb.ru, and Vashkontrol.ru.

In November 2012, Council of Federation Speaker Valentina Matvienko took the initiative "E-parliament" (V.Matvienko predlozhila..., 2012). It provides for the creation of an Internet portal with the possibility of a bill's public discussion. The project includes the disclosure of parliamentary decisions, a number of internal documents, the use of social media by members of the legislative bodies to interact with citizens, consultations and opinion survey, online broadcast of meetings, disclosure of legislators' incomes, the legislators' opportunity to participate online in meetings, electronic voting, the citizens' participation in the discussion and consideration their proposals on bills, e-petitions to the legislature, the opportunity to vote for the budget, the intraparlimentary e-flow of documents' organization, etc. The only thing that is not provided is the disclosure of information about the legislators' participation in voting.

In May 2012 the Decree of the President of the Russian Federation established the creation of information disclosure system about official regulations projects, the results of public consultation and putting of all the listed information on a joint site (Decree..., 2012). The same decree was instructed to adopt the concept of "Russian Public Initiative", creating conditions for starting April 15, 2013 a public presentation of the citizens' proposals via a dedicated resource on the Internet. The concept provides the consideration of proposals supported of at least 100,000 people within a year, after the approval of the expert working group with the participation of members of Duma (Lower House of Parliament), the Council of Federation (Upper House of Parliament) and the business community. The development of e-petitions tools at regional and municipal level is the next step of these processes. The concept of implementation of the above instructions is adopted in August 2012 (Concept..., 2012).

The Decree of the President of the Russian Federation "On consideration of public citizens' initiatives with the use of the web site "Russian Public Initiative" adopted in March 2013 (Decree..., 2013) promoted the official web-portal of "Russian Public Initiative" launching (at April 2, 2013) as well as the order of the authorities' respond to citizens' proposals. The first 3 weeks of the portal operating were marked by increasing activity of the citizens (Table 2).

Table 2: The dynamics of civil initiatives' emergence on "Russian Public Initiative" portal (<https://www.roi.ru/>), April 2013

Theme/ Level of Governance	1st week	2nd week	3rd week
Development of Infrastructure	55	130	219
Economic Sphere	27	67	146
Public Administration and Legislation	25	65	160
State Support and Social Services	26	84	172
Ecology and Security	31	61	115
<i>Level of Governance</i>			
Federal	114	218	435
Regional	7	26	38
Municipal	7	10	14
Total	128	254	487

* Note: The total number of initiatives doesn't match the amount of initiatives on the thematic focus, as one can get to several thematic groups due to decision of portal's administration.

The above-mentioned projects can be considered as the beginning of e-democracy institutionalization in Russia.

3. Problems of Open Government in Russia

The state program of the Russian Federation "Information Society (2011 - 2020)" was established in 2010. The program provides e-services support the public debate and the control of government, and online and mobile tools for public input in the decision-making process (Executive..., 2010). In April 2012 at a meeting of the Government in the Novo-Ogarevo Vladimir Putin said that

"we need to make greater use of the possibilities of modern technology public examination, in which every Internet user can offer proposals and solutions without any restrictions." (Cit. on Naumov, 2012)

In August 2012 the Concept of citizens' proposals e-presentation mechanism formation for Russian government consideration was introduced. According to the Concept,

"all proposals, expressed with the use of specialized e-resources, supported no less than 100 thousand citizens for a year, are subjected to consideration by the working group of the Government Commission for Open Government Coordination." (Concept..., 2012)

Other countries (U.S., UK) already have an experience of e-petitioning. For example, on March 1, 2012 the amendment to the Finland Constitution, which requires MPs' consideration of public suggestions signed by 50,000 citizens, has come into operation.

Government of the Russian Federation accepted the Directive on assessing the effectiveness of the heads of regional executive bodies by the citizens in December 2012. It provides the forming of online system for officials monitoring effectiveness of, i.e. citizens will be able to evaluate e-services, and decision based on their assessment will be taken on the inspection of the official (Directive..., 2012).

The implementation of such projects should consider the risk of becoming "Potemkin e-villages." This term was introduced by Katchanovski and LaPorte to indicate significant differences between external and internal content of democratic governance e-forms (Katchanovski, 2005). Åström et al note that "Potemkin e-villages" are inherent to some non-democratic states which are offering e-participation mechanisms without providing the means of using those (Åström et al, 2012). These include filtering and suppression of Internet content, demonstrating the lack of Government's interest in public participation. The key instruments in Russia to reduce these risks are the mandatory public discussion of e-democracy tools, as well as the participation of civil society, NGOs, and businesses community when considering e-petitions of citizens that spelled out in the above-mentioned concepts.

Among other problems, it is worth noting the weak awareness of citizens about the Open Government activities. Up to 95% of visitors to the Open Government site were not aware of the purpose of the initiative (Open Government...).

Projects of government, commercial companies and NGOs data disclosure (draft laws, data on air polluting firms, recipients of funds from crowd funding, donations to political parties, income and expenses of officials, etc.) include opportunities to comment this information. However, open data has a dark side: it can be used by extremists, terrorists, and unfair commercial companies etc. Thus, in India disclosure of property allowed the rich to evict the poor from the city center to the slum (Morozov, 2011).

4. Conclusion

ICT's impact on governance may be characterized in terms of a "vector" (direction) and "degree" (impact power). The dual nature of ICT's impact on governance is manifested not only in its contribution in democratization, but it is important to note that the vector of influence depends entirely on the actual policies pursued by the authorities. The degree of impact depends on the level of decision-makers' competency in the field of e-governance.

Web 2.0 technology is merely a tool. It performs a fairly narrow set of functions: recruitment of new supporters, identifying social trends, raising public awareness, fundraising and coordination.

So far, the Internet community can hardly be considered a fully-fledged political actor on the same level with the government and big NGOs. Small, isolated groups with different interests are often unable to participate. The Internet's audience is often unable to discuss the question, offer a viable idea. The Internet's audience is on the impact of its leaders and is exposed to the emotions rather than the rational. It is not clear who is responsible.

However, the influence of these groups is growing and will continue to grow with the development of e-democracy tools. Moreover, there is reason to believe that in addition to the "wisdom of the crowd", the role of the expert community will increase, which will accelerate the efficiency of crowd sourcing for the governance purposes.

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About the Authors

Alexey Bunkov

Participated in e-Gov projects since 2003. At 2011-2012 worked in the Ministry of communications and mass media in the sphere of e-democracy projects. Since 2012 he is working at Presidential directorate for application of information technology and the development of e-democracy. Working on PhD.

Radomir Bolgov

Senior lecturer of the School of International Relations, St.-Petersburg State University. He achieved the PhD in political science in 2011. He lectures on the courses "Government information systems",

"Information Security", conducts seminars on the course "Information society and international relations". His current work focuses especially on the study of international aspects of the Government 2.0 (e.g., international e-cooperation between national parliaments).

Andrei Chugunov

The Head of Governmental Information System management Department, the director of e-Government Center, University ITMO. He achieved the PhD in political science in 2000. Having more than 20 years of experience in the field of education and training courses conduction he is the author of 6 courses in the sphere of eGovernment and Social Informatics and has published more than 100 papers dedicated to information society development, eGovernment technologies and educational services implementation. Since 2002 actively involved in e-Government development projects.

Social Media Analytics for government in the light of legal and ethical challenges

Verena Grubmüller*, Bernhard Krieger**, Katharina Götsch***

* INSET Research & Advisory, Vienna, Austria; verena.grubmueller@inset-advisory.com

** University of Potsdam, Potsdam, Germany; b.krieger@cantab.net

*** INSET Research & Advisory, Vienna, Austria; katharina.goetsch@inset-advisory.com

Abstract: Whilst the use of Social Media Analytics (SMA) has become increasingly widespread for marketing and commercial purposes in the past couple of years, public bodies are just starting to show interest in these techniques for information and decision making support. However, due to the weak legal footing of social media and social media analytics techniques, current research projects providing SMA tools for government experience legal and ethical challenges that need to be considered thoroughly. Reflecting the evidence of current SMA usage by government, this paper addresses these challenges and provides recommendations to handle them in a practical context.

Keywords: Social media, social media analytics, privacy, data protection, ethical issues, methodology

1. Introduction

In the past decade, social media have increasingly entered people's daily lives and as such have tremendously influenced our communication behavior. As Omand, Bartlett and Miller put it, "(w)e are transferring more and more of our lives onto vast digital social commons" (2012: 9). This is also true for political communication, be it to make political statements, to express political attitudes, to judge political measures or to mobilize for political purposes. Hence, social media also increasingly pervade the political discourse in many countries. Analysing more than three million tweets, many hours of YouTube videos and thousands of blog entries in Tunisia and Egypt, Howard, Duffy et al. (2011) for instance came to the conclusion that "social media played a central role in shaping political debates in the Arab Spring" (ibid: 2). They found that revolutionary activities in the brick-and-mortar world often followed after a large rise of social media communication. Investigating the role of social media during the post-election upheavals in Iran in 2009, Müller and van Hüllen distinguish between a power shift and media shift. They found an "interplay between a mediascape, where many-to-many media increasingly matter and the powerscape, where reaching many will always matter" (Müller and van Hüllen 2012: 202). Evidence shows that also in "Western" societies, citizens increasingly make use of social media for campaigning for their political goals (cf. Krieger 2012).

Considering these developments, it is not surprising that public authorities themselves start to get involved in and actively make use of social media for their own benefits. Beside using them as communication or marketing means (see e.g. <https://www.facebook.com/nycgov>), they also prove to be increasingly interested in receiving feedback on their political activities. Most of them do that by manually following contents on specific Web 2.0 sites, which tends to be time-consuming and rather limited in scope. Thus, software systems that automatically find, filter and analyse user-generated contents produced on social media – a technique commonly referred to as “Social Media Monitoring” or “Social Media Analytics” (SMA) – are becoming more and more popular. The European Commission is currently funding several research and development projects venturing this field. The most visible projects are to be found in the fields of public security, such as the “Alert4All Project” (cf. Brynielsson, Johansson, Quijano 2012) aiming at making use of SMA in order to estimate citizens’ alertness in crisis situations. But also in other fields, public authorities start to benefit from SMA technologies. The R&D project “UniteEurope” (www.uniteurope.org, funded by the European Commission) employs SMA to provide an information and decision support mechanism for local governments in the realm of urban migrant integration.

Whilst Social Media Analytics has so far primarily been used for marketing and commercial purposes, its application in public and non-commercial fields can still be considered in its fledgling stages. However, as we shall explore in this paper, dealing with aspects concerning the general public and serving public authorities is a more delicate endeavor. In particular, SMA needs to be critically reflected in the light of legal and ethical aspects that have so far received minor considerations in pertinent research. Considering these perspectives will promote social acceptability of the governmental usage of SMA for public purposes such as policy development and decision support.

After introducing the concept of SMA and its corresponding opportunities for public authorities (Section 2), this paper is presenting relevant data protection standards for (public) SMA usage (Section 3). Section 4 will draw the attention to the ethical challenges and will contain recommendations for providers of SMA serving public authorities. Conclusions will be provided in Section 5.

2. Social Media Analytics for Government

As the UN E-Government Survey 2012 states, governments all over the world nowadays use the internet for collecting citizens’ opinions (currently in 123 countries). Whilst most of them still rely on conventional online surveys and simple feedback forms, governments do increasingly make use of social networking tools too (cf. UN 2012: 46). Having said this, governments show an increasing interest in receiving feedback on their “performance”, as well as in involving citizens in their decision making processes (e-participation):

“Thanks to the provision of government information through social networks such as Facebook and Twitter, citizens are able to make comments and suggestions to governments while these sites also offer governments a useful tool for reading into public opinion” (ibid.).

Thus, technologies that allow systematic analyses of social media contents enjoy increasing popularity with governmental bodies.

Social Media Monitoring (SMM), respectively Social Media Analytics (SMA; the terms are often

used synonymously) is an information gathering and opinion mining technique that has emerged with the rise of these Web 2.0 technologies. The vast amount of user-generated content constantly published and shared on social websites, such as forums, message boards, opinion sites, blogs, bookmarking, as well as social networks such as Facebook, Twitter or Google+, is increasingly being considered a valuable data pool. In the commercial context, Lange (2011: 655; quoted in Wetzstein, Leitner 2012) considers SMM/SMA a new method of market research. The essential difference to conventional methods is that people do not need to be consulted, e.g. with questionnaires, but rather provide their information without being asked. This makes people's opinions publically accessible on the web. The demand for making use of these data in a filtered and categorized manner gave rise to a number of "Social Media Analytic Tools" (SMAT). Examining best practices of SMATs, Wetzstein and Leitner find that most SMATs are based upon predetermined social media sources and keywords. Such software systems are able to collect and analyse relevant data in real time:

"(...) SMAT transpose phrases and words in unstructured data into numerical values, which are linked to a database that enables different ways of analysis, using traditional data mining techniques, and of visualization of the results" (Wetzstein and Leitner 2012: 9).

In principle, the data gathered through SMAT are mainly used to *"inform business decisions"* and for *"gauging customer opinion to support marketing and customer services"* (Rouse 2011, quoted *ibid*: 9). Moreover, for the commercial context, Wetzstein and Leitner (*ibid*: 8) found that

"(t)he use of SMAT is most often connected to brand management – for example to make a brand more attractive on the basis of conversation analyses and to measure the impact and sentiment on a brand –, as well as to market research, when using (more authentic) online conversations instead of traditional survey methods often producing 'socially desirable' responses (effect of social desirability). Besides brand management and market research, the management of campaigns and reputation are other areas which some SMAT promise to support".

The application of social media monitoring and analysis techniques in non-commercial contexts, notably for political decision-making support, has only recently become popular and can still be characterised an emerging field (cf. Rainer, Grubmüller et al. 2013). As the UN E-Government Survey 2012 emphasises though, it is a desirable development for governments to integrate social media techniques in their e-services portfolio, because they help to *"(...) improve public services, reduce costs and increase transparency"* (UN 2012: 108). This is especially true if governments want to *"(...) seek public views and feedback, and monitor satisfaction with the services they offer so as to improve their quality"*, because *"(...) government agencies can quickly engage citizens as co-producers of services, not just passive recipients"* (*ibid*).

Pertinent analyses show that public social media usage is already practiced by governments in 78 UN member states (i.e. 40 per cent of all member states), indicated by a statement such as *"Follow us on Facebook or Twitter"* on government websites (cf. *ibid*: 109). However, whilst it is evident that governments increasingly make use of social media for feedback and monitoring purposes, there are no corresponding data when it comes to the usage of systematic and automated means to collect and analyse social media contents. Out of the prevailing information, it can be assumed, however, that the deployment of SMAT is rising also in the governmental sector. For instance, in the project UniteEurope, it is local governments that show a major interest in applying a SMAT that allows collecting and analysing citizens' statements on social media with regards to urban migrant integration. For this purpose, the tool, which is to be developed

throughout the project, shall be able to retrieve those social media contents out of predefined global and local social media sources that contain “integration-related” or “integration-associated” keywords. The collected contents will be automatically categorized in a set of predefined integration areas. According to the future end-users of the tool (i.e. city municipalities), their interest lies mainly in gaining insiders’ knowledge concerning specific integration situations in their cities, learning which topics are debated more than others, but also receiving citizens’ feedback on campaigns and measures that are taken in the realm of integration policy. Future government users also state that this information might further serve them as decision support.

3. Legal Challenges of Public SMA usage

In contrast to non-public usage, applying SMA for governmental purposes needs more elaborate considerations on legal aspects for different reasons. In the first place, as Wetzstein and Leitner elaborate, public bodies using SMA mostly do not “*focus on people as customers or consumers, but as citizens (...) and often act in fields of “great societal relevance and political interest”*”. Thus, methods such as “*cyber tracing, web crawling and the systematic use of digital personal data (dataveillance)*” that tend to be applied with conventional SMAT need to be avoided with SMAT for public purposes, yet categorically omitted with socially and politically delicate undertakings such as the UniteEurope project (cf. Wetzstein, Leitner 2012).

3.1. Data protection and privacy concerns

Observations suggest that the rise of social media has changed our very notion of privacy. Inhibitions seem to be low when it comes to sharing personal information about oneself, about one’s friends or networks in digital environments that often make it difficult for their users to distinguish what is “public” or “private” (cf. Omand, Bartlett, Miller 2012). “*The space for private, unidentified, or unauthenticated activity is rapidly shrinking. (...) nearly every human transaction is subject to tracking, monitoring, and the possibility of authentication and identification (...)*”, Kerr, Steeves and Lucock figured in 2009. The fact that the concept of privacy is becoming increasingly blurred is further exacerbated by the lack of privacy regulations that come up to the fast pace of technological developments in and around social media.

As Kerr, Steeves and Lucock put it,

“(p)rivacy is a normative concept that reflects a deeply held set of values that predates and is not rendered irrelevant by the network society”; it should thus not be “contingent upon or conditioned by the existence or prevalence of any given technology”. (Kerr, Steeves and Lucock, 2009)

Whilst it can be perceived that practitioners dealing with social media are increasingly in favor of privacy laws and regulations to yield to the technological progress, the appraisal in Kerr et al. (2009) is a welcoming appeal that must be taken particularly seriously by government, as Omand, Bartlett and Miller (2012: 10f) argue. Notably, they are detecting a dilemma for government emerging from the increasing significance of social media: Whereas social media are supposed to pave the way towards “*more effective, agile and responsive government*”, they demand for a “*firm legal basis*” of these new methods of information and intelligence gathering in order to serve democratic legitimacy needs. The authors conclude that

“Social media does not fit easily into the policy and legal frameworks that guarantee to the public that intelligence activity in general is proportionate, accountable, and balances various public goods,

such as security and the right to privacy” (Omand, Bartlett and Miller, 2012: 10f)

Whilst it appears that privacy concerns tend to be of minor importance to social media users in general, empirical evidence shows that concerns over security and privacy are mounting when it is about direct interactions with government, e.g. through the usage of e-government, mobile government or other e-services.

“(...) citizens often express concern about the security of their private and confidential information, possible surveillance, and anonymity (...). Without strong protection or the quick resolution of any breach, citizens will be wary of sharing their information with the government, and efforts to connect and interact would quickly be undermined” (World Bank 2012: 99).

As a consequence, the social acceptability of governments reading into social media – a sphere where the legal framework is weak and users tend to feel unobserved – needs to be earned. Therefore, strong compliance with existing legal standards shall be in the focus in order to ensure *“trustworthiness, traceability, security and privacy of citizens’ data” (UN 2012: 63).*

3.2. Relevant data protection standards

A core principle for keeping privacy impacts low with SMA is to commit to use publicly available data only. This means that, taking the example of Facebook, a SMAT must not be able to collect information which individuals post on their private profiles, but limit its access to postings which are explicitly marked “public” (which users can decide themselves by selecting “public” for their comments or by posting them on a public Facebook site). From a data protection perspective, this limitation already reduces impacts on the privacy challenge, but by far not entirely. In particular, there are standards and principles of legitimate data processing that need to be taken into account, notably imposed by the European Data Protection Directive (Directive 95/46/EC) as well as by the relevant national acts that transpose the Data Protection Directive (DPD) in the EU member states.

According to the DPD and the national regulations in the EU member states, data protection issues do still exist even when using publicly available postings exclusively, which was confirmed in a judgment of the European Court of Justice (ECJ) in 2008. The ECJ held that:

“a general derogation from the application of the directive in respect of published information would largely deprive the directive of its effect. It would be sufficient for the Member States to publish data in order for those data to cease to enjoy the protection afforded by the directive” (C-73/07 Satakunnan Markkinapörssi and Satamedia [2008] ECR I-9831, § 48).

One main issue arising of the analyses of social media postings is the question of the “data subject”. In principle, the author of a posting is not necessarily the only “data subject” referred to in that posting. This said, one author can publish “sensitive data” of another “data subject” which constitutes illegitimately published information that, in turn, would be collected and processed by the SMAT. The action of processing illegitimately published “sensitive data” of a “data subject” does constitute an issue that is relevant from a data protection perspective and holds the processor, i.e. the provider of the SMAT, responsible (Rainer, Grubmüller et al. 2013).

Exploring the case of the UniteEurope project, Krieger, Grubmüller et al. (2012) conclude that any SMAT used in a public context that claims to secure citizens’ privacy needs appropriate

safeguarding measures. Besides the software system strictly sticking to the DPD and the relevant national transpositions for using the collected data, the authors suggest a careful selection of social media sources alongside their compliance with European and national data protection principles. Furthermore, they recommend rendering the authors of social media postings anonymous by hiding both their names and nick names to the tool end-users. This means that all information the end-users can get, be it about the author's point of reference, location or any other personal information, is merely coming from the text of the posting.

In addition, the end-users — i.e. the government representatives — should be made aware of the legal situation, for example by adding legal aspects to the handbook and training materials for the SMAT. Furthermore, the authors advise consultation with and registration at the relevant national Data Protection Commission (DPC). This is a way both to ensure legal compliance for the SMAT as well as to keep the DPCs informed about current technological developments and the necessity of according legislation.

In particular with regards to the latter, it must be stated that still nowadays, social media are in a legal “grey zone”, and so is Social Media Analytics.

“Legislation and jurisdiction lag behind the opportunities that social media offer. (...) legal provisions come a lot more slowly than the fast technological development” (Schmaus, quoted in Krieger, Grubmüller et al. 2012).

In this context, Schmaus (ibid) refers to the above mentioned decision of the ECJ which confirms that published data must still be considered subject to the DPD (case of *Tietosuojavaltuutettu v. Satakunnan Markkinapörssi Oy and Satamedia Oy*).

For SMAT projects, at least when they are operated by public administrators to facilitate public policy making, this means that the activity of collecting and processing publicly available data (i.e. data that has been published in all types of media) explicitly falls within the scope of the DPD and thus of the corresponding national legislation (Schmaus, ibid). In line with this protective approach, the European Commission has recently initiated an amendment process with a communication titled *“A comprehensive approach on personal data protection in the European Union”* (COM(2010)609 final). The European Commission highlights the DPD as *“milestone in the history of the protection of personal data in the European Union”* and states that *“rapid technological developments and globalization have profoundly changed the world and brought new challenges for the protection of personal data. (...) ways of collecting personal data have become increasingly elaborated and less detectable”*. Thus, the European Commission has proposed a Directive (COM(2012) 10 final) and a Regulation (COM(2012) 11 final) for replacing the Framework Decision 2008/977/JHA and the DPD respectively, setting out *“rules on the protection of personal data processed for the purposes prevention, detection, investigation or prosecution of criminal offences and related judicial activities”* (Schmaus, ibid).

As can be concluded from these current developments, SMA is standing on a weak legal footing whilst data protection legislation and jurisdiction fall short in grasping the potential consequences coming from these new technologies and their rapid progress. In spite of a certain protectiveness towards privacy rights that is shown in the current legal debate, social media and, more specifically, SMA remain in large parts unregulated. This being a deplorable situation that is not very likely to change in the near future, it makes the usage of SMA delicate for government since public bodies owe their citizens a legitimate and legally sound process of information gathering (cf. Omand, Bartlett, Miller 2012).

4. Ethical issues and methodological consequences

In addition to the legal issues touched upon in the previous section, there is a range of ethical aspects that come into play when governments make use of SMA technologies. These are, to a great extent, depending on the very purpose of the SMAT application. Taking the example of the UniteEurope project, using SMA for supporting integration policy making is a very value-laden field per se, which demands according precautions for protecting individuals, but also for appropriately addressing political misuse. Similar concerns arise when applying SMA in the fields of public security and safety, where the question of “surveillance” is a much debated issue. Concerns of this type are rather secondary in the private/commercial usage of SMA, which is thus a new challenge that confronts SMAT providers and public SMAT users.

Next to topic-specific ethical concerns, there are also a number of more general questions that arise out of the very nature of social media. On the one hand, Omand, Bartlett and Miller (2012) mention the issue of interpretation.

“There are new forms of online behavior, norms and language that make analysis and verification difficult. Translating often unprecedentedly large, complex and conflicting bodies of information into actionable, robust insight is a significant challenge that has not been overcome”. Omand, Bartlett and Miller (2012)

On top of that, consciously-spread rumors on social media are coming more and more into the focus of current research, notably in the fields of SMA use for crisis mitigation (cf. Mendoza, Poblete, Castillo 2010). Public bodies that intend to use the information retrieved from social media for decision making and policy making need to be aware of these deficiencies in order to know how to interpret and evaluate the information.

A more severe issue that is related to the question of privacy is that of “informed consent”, comprehensively dealt with in Krieger, Grubmüller et al. (2012).

“Being in compliance with the law is one step to diminish ethical concerns, but must be considered a minimum standard only for coming up to ethical requirements concerning data protection. In this regard, the lack of ‘informed consent’ is an issue that requires precautions in order to protect the authors of postings who might not be aware of the public availability of their contents, let alone of their deployment for research purposes” (ibid, see also Krieger 2004).

Whilst in principle, the question of informed consent can be considered a general issue of ethics in science which, for instance, is also relevant for the social scientific method of unobtrusive observation, the authors consider it particularly delicate with SMA “due to the very nature of ‘digital reality’ that allows fast and easy detection of data”. Also, it is important to re-emphasize in this context that citizens do express their concerns about the security of their private information when it is about interacting with government online (cf. e.g. World Bank 2012: 99). Whilst they tend to take according precautions in the direct interaction, e.g. when using e-services, they rather do not do so when using social media. Also, it must be assumed that many of them are not aware of the consequences of their public postings (cf. Kerr, Steeves and Lucock 2009), more specifically that they might be used as information source for government. Thus, it can be concluded that public acceptability for governments using SMA cannot be taken for granted. It is all the more important to assure complete anonymity of social media users in SMA, notably by blanking out their names or acronyms that they use for communication on the internet. More generally speaking, “(g)overnments will need to exercise care in securing their systems and software to avoid any perception of

surveillance" (World Bank 2012: 99).

Further ethical issues and constraints come with a number of methodological questions. As such, the selection of social media sources that the SMAT browses for data gathering has a tremendous impact on the outcomes generated by the tool. They decide about the quantity, the quality as well as the explanatory power of results and determine who (which groups, which comments, which opinions) is considered in the analyses. Whereas legally speaking, it is essential that the selection of sources is made according to their compliance with data protection standards, this question holds further implications when the ethical perspective is added.

As Krieger, Grubmüller et al. (2012) put it,

"(t)hese demands are centered on the question of 'Who is active on social media?', which brings about issues of 'digital divide' (exclusion of certain groups of people depending on variables such as age, computer literacy, gender, etc.), the strong presence of populist and extremist positions in social networks and, in contrast, the weak presence of (certain groups of) migrants", the latter being specifically relevant for the UniteEurope project. The methodology that is applied for the selection of social media sources shall take these (and potential topic-specific) aspects thoroughly into account in order to generate a balanced outcome of represented opinions.

That said, it must be clear and communicated clearly to governmental end users that the analyses of user-generated contents in social media can never be considered representative for society or even for a particular community or social segment (cf. Warschauer 2003, OECD 2001, Brandtzæg et al. 2011, Krieger, Grubmüller et al. 2012). In terms of e-participation, it is indeed often argued that by using SMA, a higher participation rate can be yielded than with conventional e-government applications, especially with the rise of mobile social media usage (cf. UN 2012, World Bank 2012). This is certainly true for alleviating the "digital divide" as such, since *"(...) these media help to foster social inclusiveness by reducing the e-service usage divide among different socio-economic groups"* (UN 2012: 109). However, involving social media does not tackle the lacking representativeness that internet analyses use to suffer from. This is, in principle, not a major problem, and not peculiar to SMA but also to many conventional survey techniques. The decisive factor, particularly in politically delicate questions, is the awareness of governmental bodies that what they retrieve out of social media is in general not speaking for society.

With an appropriate methodological approach for the SMAT and awareness raising measures for end users about the explanatory power of their results, these issues remain manageable. Methodology is always dependent on the purpose of the tool, but in any case requires profound social scientific expertise. In general, as Krieger, Grubmüller et al. (2012) recommend, quantitative results (e.g. frequencies of names/keywords, number of references through users etc.) which are very useful for SMAT in a commercial context, should be accompanied by qualitative data and additional context information (such as the indication of sources, the number of sources, extracts from the postings, links to the original pages, etc.). Otherwise, as they claim, results based on frequencies only *"(...) can be misleading in the sense that individual sources and/or individual users can produce above-average amounts of partial contents"* (ibid). Also sentiment analyses (i.e. categorization of content entities as positive, negative or neutral), which use to be very widespread with commercial SMAT, can be problematic and often not applicable for SMAT for government that deal with value-laden subjects such as migrant integration.

Finally, awareness raising measures for end users shall inform them of both the opportunities and risks that these new technologies hold for government. This is also to prevent potential

(unintended) misuse of such tools. Thus, Krieger, Grubmüller et al. (2012) recommend for SMAT providers to *“providing manuals and training materials that contain sensitizing information with regards to how these data are being gathered as well as both the significance and limits which the results bear”*.

5. Conclusion

In this paper we presented legal and ethical challenges that arise out of Social Media Analytics (SMA) usage by government. The paper is based on experience from ongoing European research projects aimed at serving public authorities with SMA technologies for different purposes. Rooted in polling, marketing and commercial research, most currently available SMA-tools are made for private and commercial purposes and thus are not sufficiently fit for application in a public environment. This is due to several reasons, most of which are related to legal and ethical requirements that governments need to be committed to in a different extent than private actors when applying SMA.

For receiving accurate and appropriate SMAT for public purposes, public authorities get increasingly involved in pertinent research projects, as the case of the project UniteEurope shows for local governments. Projects such as UniteEurope make it very obvious that the commitment to utmost legal and ethical compliance brings about methodological specificities that can differ considerably from those in conventional SMAT. Often, well-approved technological potentials cannot be exhausted with these SMAT because of contentious political issues (e.g. the sentiment analysis with migrant integration policies). As a consequence, SMAT developed for public purposes in many cases remain on a rather basic technical level, though require thorough and specialised social scientific groundwork that leads to elevated production costs. It can be assumed that this is likely to hamper the interest for SMAT providers to produce their tools for government.

In addition to that, as this paper argues, whilst ethical compliance can be yielded with methodological concessions, the legal aspect is more complex since relevant legal standards are far from being up to date with technological potentials. In principle, SMA can be considered in a legal “grey zone”, in particular with regards to data protection standards. In order to assure legal certainty it is essential to closely follow legal developments in legislation and jurisdiction. In practice, this requires thorough expertise in the sphere of data protection which SMAT providers often do not have.

However, knowing about these challenges should not be a barrier for governments to explore SMA. As this paper mentions, involving social media activities in e-government strategies bears a number of advantages mainly linked to the spreading and mainstreaming of social media.

“Government use of social media – though not a prerequisite for open government – is often highlighted as a good example of open government, which builds on principles of citizen centricity and information transparency” (Social Media Strategy 2010, quoted in UN 2012: 108).

Weighing privacy concerns against information gains and aiming at maximum social acceptability, governments will have to decide on an individual and subject-specific basis whether SMA is an appropriate analytic method as decision support.

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About the Authors

Verena Grubmüller

Dr. Verena Grubmüller is a senior researcher at INSET Research & Advisory. She holds Master degrees in Sociology and Social Economics and a PhD from the Faculty of Social and Economic Sciences at the Johannes Kepler University of Linz (Austria). Dr. Grubmüller is a scholar in international migration and EU policy research; her current research focus is on social inclusion, diversity and eGovernance. She leads the EU-FP7 project “UniteEurope” (ICT solutions for governance) as well as the national research project “FemSMA” (Gender oriented research).

Bernhard Krieger

Dr. Bernhard Krieger (Cantab.) is a senior research associate at the University of Potsdam (Germany). He holds a M.A. degree in Ethnology of the University of Munich, as well as a M.Phil and PhD in Social Anthropology of the University of Cambridge (UK). Dr. Krieger is a scholar in science and technology research. His research focus is on the production of technology and eGovernment. He contributed to various European Commission funded research projects in FP 5, FP6 and FP7.

Katharina Götsch

Dr. Katharina Götsch works as Research Analyst at INSET Research & Advisory. She holds a PhD in Political Science from the University of Vienna and a Master degree in German Literature and Language from the University of Innsbruck (Austria). Her main research fields are international relations, migration and the integration of migrants. She is involved in international and national research projects in the fields of ICT, social inclusion, migrant integration, gender and diversity.

Bottom-Up Movements

(peer-reviewed)

Relations of power within a field of contemporary activism

Activist Capitals in Network Societies

Jakob Svensson*

* Karlstad University, Sweden, jakob.svensson@kau.se

Abstract: *This paper seeks to understand relations of power within a middle-class activist community in southern Stockholm using online communication platforms in tandem with more traditional offline activist participation to organize and mobilize participation in order to save their local bathhouse. The method for studying this group is (n)ethnographic, conducting participant observations and interviews online as well as offline. Adherence to, and socialization into, community values are of utmost importance for understanding relations of power within a community. At the same time community values are structured by the acts of identifications of the individual participants and vice versa. Understanding this dialectic between community values and participants identifications as enacted in processes of positioning, this paper seeks to discuss relations of power within the activist community. By reference to Bourdieu, the activists are approached as forming a social field in which core/periphery positions are negotiated through interactions between field specific values, the activists habitus and capitals. In this paper, the activists relative positions to each other and the community are understood by outlining the contours of participation, mobilization, legitimacy and networking capital. Through these capitals core/periphery positions within the community were negotiated.*

Keywords: Activism, Capital, Habitus, Networking, Political Participation, Social Media

1. Introduction

One day I got a message via Facebook suggesting I should sign an online petition against the plans to demolish the old community-run (but city-owned) bathhouse two blocks away from where I lived in southern Stockholm. Since I had enjoyed the bathhouse and the different activities organized there, I signed the petition, joined the Facebook-group, started to follow their Twitter feeds, and added many of the participants as Facebook- friends. I soon come to realize that online visibility through practices of updating on platforms such as Facebook and Twitter would get me closer to the core of the activist community. By echoing popular arguments through retweeting and through posting encouraging entries on the Facebook-group page, I was not only showing my sympathy for the participatory values of the activist group, but I also reinforced these values and the core-positions of certain other active group members by commenting and retweeting their tweets. In this paper the aim is to understand such relations of power within the

activist group by studying core/ periphery positions, how they positioned themselves and others in relation to their habitus, previously acquired capital(s) and community values.

In a network society - characterized by an infrastructure of social and media networks enabling organizations at all societal and individual levels (van Dijk, 2006: 19-20, 27) - communities become increasingly technologically mediated (Andersson & Jansson, 2012: 106). This is also the case for activist communities. The bathhouse activists acted and communicated offline as well as online. They relied heavily on social media platforms for communication, organization and mobilization. Such online communication practices clearly impacted on the activist community as a whole, its values and inner relations. Hence, these activists constitute an interesting case to study when aiming at understanding relations within a contemporary activist group in a network society.

In this paper, activist communities are understood as political communities, acting outside the institutions of representative democracy, but with an outspoken aim to influence elected decision-makers (in contrast to parliamentary and popular cultural political communities, see Svensson, 2011). Following this definition, activist communities using social media platforms include both social movement types of communities - representing an institutionalization of struggles - as well as temporary and small-scale commitment to political causes (Breindl, 2012). Resembling rather a small-scale and temporary commitment to a political cause - saving the bathhouse - the activists in this study were flexible and embraced a wide variety of individualized protest activities, such as joining Facebook causes, signing letters of support, contributing actively to campaigns and rallies among other things.

The focus of this paper is on relations of power in this setting of contemporary activism in a network society. Numerous studies have been conducted on how activists use the internet to mobilize support and organize themselves and their campaigns (see Breindl, 2012 for an overview). Some argue that internet-based organization facilitates more horizontal and equal distribution of power between participants in a community, and that politics and participation become more accessible because the internet lowers the threshold, even for groups previously excluded from the public sphere (see Bruns, 2008; Shirky, 2009). In this way participatory hierarchies are supposed to be flattened out. While acknowledging that the landscape of power is changing in network societies, there is reason to be skeptical that increasing practices of social organization in networks will cause less power relations. The network metaphor emphasizes a multiplication of connections and connectivity between people (van Dijk, 2006: 24). And if we adhere to a conception of power as processes that take place *between* people (Elias, 1970/1998: 115-116; Foucault, 1979/1994: 324), it becomes important to investigate into changing power relations. By understanding network societies as consisting of relations, and understanding power as a type of relationships, this paper departs from an assumption that relations of power are still at play and vital in network societies (see also van Dijk, 2006; Castells, 2009; Breindl and Gustafsson, 2011; Kozinets, 2011)

Relations of power may be played out in different ways, through hegemonic power struggles *between* communities claiming supremacy (see Laclau & Mouffe, 1985), or *within* communities through socialization and contestation of its shared norms and values (Carpentier, 2011). Such power games are related to practices of positioning, positioning of an *Us* against a *Them* (see Svensson et al., 2012) - as well as participants negotiating agency within the community by positioning themselves and others in relation to community norms and values. Keeping in mind that power relations between and within communities are interconnected, this paper focus on

relations of power *within* the activist community in southern Stockholm. This focus is translated to the following research question: how did activists position themselves in relation to each other and the community values?

To answer this question, this paper will undertake two analyses. First an analysis of the values of the activist community in southern Stockholm has to be undertaken since it is in relation to these that participants positioned themselves and other participants. After this analysis, attention will be directed to Bourdieu's analytical framework in order to analyze how activists positioned themselves and others in relation to the community values. But first I will attend to the setting and method for data-gathering.

2. Setting and Method

Social media practices are important for contemporary middle-class activist communities in network societies. But to fully understand such practices we need to account for cultural and societal contexts. Therefore it is important to attend to the specific context in southern Stockholm to understand the activist community there. Technology and society evolves in tandem (Feenberg, 2010, Svensson, 2011). Hence, social media platforms should be understood from its uses and social contexts. Therefore, before accounting for methods used for empirical data-gathering, the setting and context will be described.

Aspudden together with Midsommarkransen are two suburbs in southern Stockholm populated by an educated and politically aware middle class. They are the oldest suburbs, situated close to the water front, with buildings dating back to the end of the 19th century, and located just two subway stops away from the inner-city. Nearby Midsommarkransen is located the University College of Arts, Crafts and Design, Konstfack, famous for student happenings and as for the bar/club/restaurant Landet. In Midsommarkransen you also find the community run Cinema, Tellus, where members organize activities and show movies, documentaries as well as children blockbusters. Hence, these suburbs are popular both with hip urban middle-aged couples looking for bigger apartments without having to go too far away from the inner city, as well as with youngsters studying at, or attracted to, the creative atmosphere around *Konstfack*. The suburbs are a political stronghold of the Green Party with up to 23 percent voting for them in the 2010 national elections, compared to seven percent nationally.

Inhabitants in these suburbs started to rally already in 2007, first to renew the bathhouse, and later to save it from destruction. Together with traditional offline activist campaigns, online social media platforms were used to call for engagement, to spread information and to gather support for keeping the bathhouse. Most online activities took place during the couple of months leading up to the overtaking and demolition of the bathhouse late November 2009. The bathhouse was demolished despite of heavy protests, campaigns and even an occupation/ guarding. What remained was a network of activists that later formed the group SÖFÖ (the Southern Suburb, my translation: Södra Förstaden) that has continued to act in the suburbs against development plans, and for the preservation green areas and playgrounds among other things.

The activists used a blog during the battle, through which they disseminated information, mobilized participation and mocked municipal politicians. During October and November 2009, the activists also used a Twitter-feed, mostly to spread information on activities as well as a means to mobilize participation. On Twitter a total of 27 tweets were posted, the last on November 26th, one day after the police had stormed into the bathhouse. For more lengthy comments, activists

posted both on the blog as well as on a Facebook-group *Rädda Aspuddsbadet* (Save the Aspudden bathhouse, my translation). The first few posting on the Facebook-group are from November 2007. Activities reached its peak December 2009 with 142 postings. After that, activity steadily declined to less than ten postings per month during autumn 2010. During the eviction month of November 2009, 135 postings by 57 different users were made on the Facebook-group. Most users only made one posting each, but one core activist posted 26 times during this month, followed by ten and six postings by the second and third most active poster. A core action group of activists, consisting of around 15 people were the most active, online as well as offline.

Some of the bathhouse activists continued their participation in SÖFÖ. Today, the board of SÖFÖ consists of six participants out of which three are very active online. The activities online have been considerably less than during the campaign to save the bathhouse. The activists switched to a *Södra Förstaden* Facebook-page in December 2010. In February 2012 there had been 18 postings, all from the chairperson who used a SÖFÖ profile to post information, mostly about meetings and events. After February the page has been used more frequently. During the month of November 2012 more than 20 postings were made. A total of 106 users have pressed the "like" button at the end of 2012.

More central for SÖFÖ is the Ning- community platform on which participants have their own profiles, can connect and message each other as well as start discussions, specialized groups, blogs et cetera. The SÖFÖ Ning community had 195 participants in December 2012. However, only fifteen individual blog posting were made during 2012 (up to December 12th) out of which seven were made by the chairperson. 29 discussion threads have been started all together by 15 different users, nine of which were started by the same top-poster from the Save the Aspudden bathhouse Facebook-group. Five threads have attracted more than three replies and half of them, no replies at all. Apart from this, there are also seven specialized groups within the Ning community. The most active group concerns green areas and exploitation plans in the neighborhood and has approximately one posting in the discussion forum per month. The most active section of the Ning community is the event information page with approximately four unique events posted per month.

If we now turn to methodological considerations, the choice of case for this study is not based on representativity or a quest to test pre-established hypotheses. Rather the choice is made for ethnographic reasons, through having lived and shared experiences with the group and the circumstances they found themselves in and therefore easy access and entry into the community. The results of this study may thus not be generalized to all forms of activist participation in all types of activist settings in network societies. Nonetheless, being more explorative and hypothesis generating in its aims (see Gerring, 2007: 27-39), the results will point to aspects that I believe will resonate in similar settings and may generate hypotheses that perhaps could be tested on similar cases. However, rather than to generalize, the main aim of this paper is contribute to discussions of relations of power within activist communities in network societies.

Having been a resident in Aspudden and shared experiences with many of the activists, this study is ethnographic as well as netnographic (see Berg, 2011; Kozinets, 2011) since considerable focus has been directed to online communication. A netnographic study focuses on user-generated information flows and researchers are hence released from physical place to conduct observations in a virtual context (ibid.). I followed the activists on all their different social media platforms, took field notes and screenshots once every week or more often if I observed something I deemed

particularly interesting. During the height of the battle for the bathhouse, I collected screenshots every day. I have used the activists social media platforms as archives of information (see Berg, 2011), but I have also created my own archive with screenshots. As a resident in Aspudden, and with the purpose to reach an embedded cultural understanding of the activist community (see Kozinetz, 2011:108), I have also participated in discussions on Ning, Twitter and Facebook. I have commented on postings, retweeted tweets, forwarded invitations et cetera, as well as participated in offline meeting, rallies and campaigns. How has this double role of an inhabitant/activist and a researcher influenced the study? I have certainly benefited from having had access to people and from an understanding of the situation and issues at hand as well as an insiders perspective on relationships and core/periphery positions. Still, I have consciously attempted to be as open as possible to the empirical material and to reflect upon it from a theoretical rather than personal point of view.

Netnography works well in combination with a more traditional ethnographic method, especially since the online and offline world mutually influence each other (van Dijk, 2006; Baym, 2010). This was especially the case in southern Stockholm with activists using both social media platforms and traditional offline methods. The observations and interventions online have therefore been complemented with continuous offline observations and participations. Five in-depth research interviews were also conducted with different activists during 2010 and 2011. The selection was made considering experiences from both core and periphery activists, while reflecting participants' differences regarding age, gender and background. The first to be interviewed was a middle-aged mother belonging to the absolute core of the activist community. Second a female artist was interviewed who joined at a later stage but did gain a central position. An interview was also conducted with a Green Party politician who first joined the group actively when it established itself as SÖFÖ. He has been active in the SÖFÖ Ning community but was more of a peripheral follower during the battle for the bathhouse. A young student who did not live in southern Stockholm was also interviewed. He is politically engaged and wanted to contribute to local forms of grassroots democracy. He did not belong to the core in the activist community but contributed to the bathhouse cause occasionally and participated in offline demonstrations and online rallies. He has continued to follow the community more passively on SÖFÖ. Finally, I interviewed a retired media entrepreneur belonging to the periphery but being very involved in different activist causes in the Stockholm region. In spite of the small number, the interviews made were rich enough as to provide depth to the study. The interviews were recorded and transcribed in Swedish. Hence, in the following analysis direct quotes will not be used. Respondents answers will be translated to english by the author and rewritten to fit the flow of the text.

3. Values within the Activist Community in Southern Stockholm

In previous work on the southern Stockholm activists I have discussed the importance of the values of *reflexive connectivity* and *responsiveness* and how these encouraged/demanded a social negotiation of the activist's self, something that was done through practices of updating (see Svensson, 2012). Using online social media platforms in this way seemed to push/discipline activists to participate (ibid.). I will continue to outline the values of the activist community here, but this time more systematically. As discussed in the introduction, power relations within communities are taking place through socialization and contestation with its shared norms and values (Carpentier, 2011). Through community socialization, identifying the individual "I" with

the collective "we", community values are spread, adhered to and modified. Thus, to understand participants relative position to each other - something that will be done in the second analysis - we first need to outline the values in that community.

Values are used in this study as analytical tools, tools that will later be used to analyze practices of positionings within the southern Stockholm activists community. Hence, I will leave out here normative discussions of values and their desired societal/ community functions. For this purpose I find it beneficial to use Hofstede's (1991) analytical model for understanding values in a community (or culture as he labels it) and their functions. Values according to him are at the very heart of a community and values can be discerned by studying more outer (and hence more easily observable) layers of community manifestations such as symbols, heroes and rituals (ibid.: 16-18). Similarly Baym (2010: 78) argues that terminology and genres used by online groups are indicative of their core values. This directs me to closely study what words, gestures, images or objects were of special importance in the activist community (symbols). Which individuals served as exemplars for the rest of community and what traits of character were celebrated (heroes)? Which collective activities were considered necessary among participants and why (rituals)? By asking these questions and thus analyzing the outer manifestations of the Aspudden activist community I can start outlining the values of this community.

Revisiting interview material and field notes it seemed that the location itself was important as a symbol worth fighting for. Activists talked about a unique southern suburb character consisting of old buildings among green leafy areas as well as neighbors knowing each other and doing things together, such as running the Aspudden bathhouse and cinema Tellus. When participating politically, they gathered around issues that were easy to grasp and that were framed in ways that they could relate their everyday life to. Location bound issues thus stand out. Examples ranges from fighting to save open outdoor spaces, playgrounds and buildings in the neighborhood, and not the least the bathhouse. The Aspudden bathhouse was frequently described as a non-commercial meeting place, run by the inhabitants for the inhabitants. Thus, the bathhouse was clearly a symbol of a cherished value of a location bound community of neighbors. This value of location bound community, of organizing and doing things together as neighbors, resonated in the terminology used at meetings and rallies which revolved around being active, engaged, to participate, making your voice heard and to show support for the neighborhood and its unique character of old houses, green areas and neighbor collectivity. Many of the interviewed activists also reflected upon the importance of a geographical location together with a cherished idea of a community, in order to get attention and mobilize participation.

Framing issues in an easy-to-grasp way, often involved using conflictual images of *Us*, the people, against *Them*, the political establishment (see Svensson et al., 2012). While you clearly could sense a kind of hopelessness and a bitterness towards politicians and the political system among some participants, a dominant genre was still a belief in change. Participants indeed believed that another world was possible and that they could influence the future of their neighborhood if acting in concert. The artist interviewed for example articulated this believe in change, "to see and seize opportunities". Hence, accompanying the value of location bound community seems to be a value of being active and involved. Collective activities that were highly esteemed were to participate in the first place, and also to be active by voicing concerns, showing support, and contributing to the cause. Activists interviewed also talked positively about how they were inspired by others' enthusiasm as well as how they nursed an urge to tell others about

injustices and thus engage others to the cause. Other activists I met during offline campaigns and rallies often underlined that everyone pulled their bit, from artists - arranging exhibitions, to parents - organizing game days, and pensioners - cleaning the bathhouse after such events. And rather than only to be *reactive*, participants should be *proactive*, do something and engage others. For example, instead of just appealing a decisions on new apartment buildings, activists also suggested where in the neighborhood they preferred the buildings instead. This value of being proactive is confirmed when looking at what heroes were referred to during the battle for the bathhouse. The individuals that were used as exemplars were the engaged ones, so-called fire starters and activists who succeeded in engaging many others to the cause. Especially individuals fighting the establishment were admired. When asked to describe activists they looked up to, informants talked about certain individuals as being watch dogs of the establishment and being entangled into a lot of things. This reveals how the value of being active and involved intersected with the conflictual framing of the issues in terms of *Us* - the people - versus *Them* - the political establishment.

To sum up the discussion on values, in previous studies I found that disciplined rituals (practices) of updating on social media platforms were pivotal among the activists in southern Stockholm (see Svensson, 2012). Focusing on social media use I found that such practices of updating were based on values of *reflexive connectivity* and *responsiveness*. Having broadened the analysis here I conclude that the activists practices were also based on values of *location bound community* and being *active and involved*. Having outlined these values, we can now turn to the analysis of positions and positionings in order to address the bigger question of power relations within the activist community.

4. Positions and Positionings within an Activist Community

Departing from an understanding that individual participants' practices of identification structure the values in a community and vice versa, the values in southern Stockholm, outlined above, need to be analyzed in intersection with how participants positioned themselves and others. In other words how did such positioning practices intersect with the formation, maintenance and renegotiation of values?

Bourdieu and his theories of social fields, habitus and capitals are helpful to understand practices of positioning. A social field consists of relations, of people having different positions in this fields, positions that are important for understanding the field specific practices (Andersson & Jansson, 2012: 37-38). A social field is a collection of people that gather around a common belief worth fighting for (Bourdieu, 1993: 16). Agents within the same field can very well be of different opinions, it is the belief that the fight is worth the effort that binds them together (ibid.: 17). The idea of social fields thus travels well to activist communities in network societies dominated by a single issue. In southern Stockholm, the fight for the bathhouse was the common cause that bound activists to each other as a social field. This cause was later transformed to preserving the unique character on the southern suburbs in SÖFÖ. This underlines that the boundaries of a field are not definitive, but rather loose and may change.

A social field of activists gathered around a common cause, is a structured space of positions (Urry, 2007: 194). It is also within the field that agents position themselves and others. According to Castells (2009: 26, 34) practices of positioning are primarily used to determine two types of positions within a community, belonging to the core or the periphery. Core/periphery positions in

online activist communities have been further conceptualized by Breindl & Gustafsson (2011) as concentric circles of participation. Core activists are the leaders, setting up email lists, creating applications and being highly involved in contacts with authorities. They are in charge of following the political process, analyzing as well as orchestrating the campaign. These core activists are supported by core contributors, who are inscribed and contributing to email-lists and discussion forums, helping with analyzing legislative texts, editing the campaign sites, spreading information and holding a certain technical or political expertise. More towards the periphery we have occasional contributors who follow closely what core activists do and participate from time to time, and mere followers who are inscribed on discussion lists and possibly engage in particular actions, but do not actively contribute to the organization of the campaign itself (ibid.). People closer to the core can be described as more powerful, often due to their more detailed knowledge of the issue as well as campaign at stake.

It is important to underline that core positions tend to be less stable in network societies where participants rather unite around temporary issues than in political parties. Nonetheless by taking control of a discussion, digital media platforms offer spaces for some to negotiate core positions and thus gain power (Breindl, 2012). In this way Breindl hints to that practices positioning are not done in vacuum but in a context of relations of power. Inspired by Breindl and Gustafsson's concentric circles and by referring to the value of being proactive rather than reactive, I understand belonging to the core or the periphery in southern Stockholm along lines of who updated/engaged others and who were updated/engaged by others. Being updated indicates a more peripheral position in this activist field, while being in charge of doing the updating, indicates a more central position. This was clearly illustrated by one core activist when asked about her Facebook practices, she stated she received no information, she gave information there.

To understand why certain come to be entrusted with, hold and maintain core positions, Bourdieu's theories of *habitus* and *capitals* are helpful. Habitus refers to socially learned dispositions, the luggage an agent carries with him/her, which in turn positions the agent in relation to language, culture, class and the future (Bourdieu, 1993: 12, 14). Andersson & Jansson (2012: 38) describe habitus eloquently as acquired knowledge that give the bearer a sense of an embodied navigation skill on the field in which he/she is acting. An agent's habitus both have a bearing on the field – in terms of organizing, structuring and determining how field practices are conceived (Bourdieu, 1993: 300) – as well on the agent him/herself – by being connected to his/hers position within the field, providing meaning to practices and perceptions (Bourdieu, 2010/1984: 166). In this way Habitus, identity and class are tightly connected.

If we apply the concept of habitus among the activists in southern Stockholm, core activists referred to experiences from solidarity and animal rights movements. Engagement in the cinema Tellus also seemed to have built both a sense of a southern suburb community feeling, as well as skills and knowledge for organizing and mobilizing participation (i.e. being proactive). Interviewed activists also referred to experiences from student councils, student nations and the scout movement and similar organizations (organizations that indicates that they have had a middle-class upbringing). Talking to activists and asking about important skills and knowledges for their participation and how these had been acquired, many referred to previous experiences in such organizations. Breindl & Gustafsson (2011) argue similarly that activists closer to the core often possess features such as education, sociability, technical and organizational skills, i.e. habitus. If we look how this habitus - grounded in student unions and vocal NGOs - organized practices

within the activist field and how these practices there were conceived, the belief in change - that you could make a difference - as well as the value of being active can be traced back to this. This further indicates that an activist's habitus is interlinked with middle-class belonging as well as a perceived competence as a participant (Bourdieu, 2010/1984: 43).

This leads us to Bourdieu's notion of capital. There have been many attempts to outline internet specific capitals by references both to Bourdieu and Putnam's (2000) elaborations of social capital. Ellison et al. (2011) discusses online social capital, or socio-technical capital, as based on technological affordances. I have myself underlined that online social networking requires a new form of competence in order to manage ones visibility online at the same time avoiding being subject for surveillance (Svensson, 2012). Concepts such as online social networking skills and digital literacy (Hsieh, 2012) have been elaborated in order to understand differences among users and groups of users in their ability to process meanings of digital content, why some are more successful than others in negotiating status online. One of the most detailed account is Urry's (2007) outline of network capital. He argues that contemporary societies are more and more organized around the value of circulation – mobilities - and by investigating how social relations change from such mobilities, he discerns an ability to form and sustain networks, something he labels network capital (ibid.: 196-197). This is about the potential of being mobile and connected at the same time, the capacity to engender and sustain social relationships with those people who are not necessarily geographically proximate but do generate emotional, financial and practical benefits. Andersson & Jansson (2012: 109) relate network capital to the resources people possess to be able to move around, connect to new people, not the least outside the local context.

According to Urry (2007: 198) network capital is a product of increasing possibilities of relations between individuals afforded by travel and communication technologies. The importance of values of connectivity and responsiveness can thus be understood in light of Urry's reasoning. According to him network capital is about being connected, making yourself connectable for capital enhancing purposes (ibid.: 203). At the same time Hsieh's (2012) ideas of social networking skills and digital literacy underlines that not everyone is equally skilled in using social media platforms for such network capital enhancing purposes. This is about how technology is used rather than access to technology, what possibilities for reflection, exchanges and interactions that different groups and individuals may claim (Andersson & Jansson, 2012:165). Network capital is in this way connected to changing geometries of power.

Bourdieu (1993: 269-270) himself defines capital as a social relationship, an energy that only exists and produces its effects within the field it is used. The notion of capital is also related to practices of positioning because capital use cannot be understood without reference to the agents position within the field (ibid.). The field position is in turn dependent on the specific capital the agent can mobilize (ibid.). In southern Stockholm, the value of being active and engaged made it possible for certain activists to accumulate and use a type of *participation capital* when positioning themselves in the field. For example, many postings on Facebook revolved around having attended rallies and campaigns or that they were intending to show up. The importance to update others on your participation and make it visible online could be understood as acts of positioning within the activist field. This resonates in Biggar's (2010) study crowd-sourcing activities. He claims that taking part in such activities can be understood as building one's online portfolio and leveraging the users cultural and social capital within a community (ibid.:10). Similarly in southern Stockholm, to write to politicians, being their watch dog and "bark" as soon as they made something considered bad for the cause, was also a way to collect this participation capital. For

such activities, activists needed to possess knowledge on how society and politics work in order to for example appeal a decision, knowing where and how to find information in order to engage, be proactive and an eyesore for politicians. Here we can clearly see how there is an exchange between education capital - which in turn is connected to activist habitus and belonging to a middle class - and this kind of participation capital.

Effects produced by this type of participation capital were a number of appeals, debate articles as well as a bathhouse festival and an arts barricade. However, while participation was considered important, there were other things that were even more highly esteemed in the community - mobilizing and engaging others. As discussed previously, there was a difference between peripheral activists positions - being updated, mobilized, reactive - and being in charge of the updating and mobilization from core positions. One core activist was for example mentioned several times for what was labelled as an "infectious" engagement. He was considered a very diligent blogger and was especially praised because he mobilized many others. Each field sets its highest price on the outcomes being created within it (Bourdieu, 2010/1984: 81), and here it was clearly the actions themselves that were the most desired outcome. In southern Stockholm activists wanted to do something, and not just sit in meetings and discuss. This reasoning was often invoked when asked why not taking their engagement to a political party. Hence, I could discern not only a participation capital, but also a kind of *mobilization capital*. Similarly, Breindl & Gustafsson (2011) refer to temporal elites whose power comes from the possibility of mobilizing others around specific issues. Hence, power here is about having a wider supporting group who can spread information through social networks and rapidly mobilize.

Bourdieu argues that authority and relationships are as important as competence for capital accumulation and use. It is thus important to consider offline and previous experiences in order to understand why certain come to occupy core-positions. Or as Bourdieu (2010/1984) frames it "agents enter the social field with previously acquired capital" (p. 105). And if previously acquired capital can be exchanged and invested, it may affect the agents position within the field. In other words, when discussing capitals in this social field of activists, recognition and reputation are of pivotal importance. Examples from southern Stockholm range from being recognized as efficient runners of the cinema Tellus, reputation as having successfully led political actions in the city hall during bathhouse debates. Also campaign and rallies from previous activists groups were invoked. This resonates with Bourdieu's (1993: 100) discussion of *legitimacy capital*, that certain activists entered into the field already with a kind of legitimacy as participants from previous activist fields which could be used as a currency when negotiating core positions in this field. At the same time, accumulated participation and mobilizing capital could be exchanged for this legitimacy capital which in turn influenced how competent activists were conceived by others in the field (see also Bourdieu, 1993: 104). In this way the boundaries between participation, mobilization and legitimacy capital were permeable and not clear-cut.

Recognition and reputation are especially important in online realms where relations are counted, measured and put on display together with ones ability to attract and maintain relationships with like-minded others. Agents carry with them their recognition and reputation as activists, the actions they previously have been involved in, and this will impact what future activities they will be entrusted with. Since recognition and reputation are easily displayed on social media platforms - often using algorithms based on online rankings, listings and search engines - the importance of recognition and reputation becomes even more accentuated in network

societies. Recognition has become a commodity online as boyd (2011) phrases it. This was also the case in southern Stockholm where recognition and reputation constituted a type of legitimacy capital used to negotiate core positions. Activists who had a track record were for example often referred to in the interviews as important for the bathhouse campaign, just because they had this track-record from previous campaigns.

Recognition and reputation exchanged into legitimacy capital is perhaps better understood if related to the notion of *fitness* in network theory (see Barabási, 2011). If we take the notions of nodes and links and replaces nodes for activists and links for relationships/connections between activists, fitness would refer to an activist's ability to attract other activists and connect with them. Being recognized and reputed as an activist would make the activist more fit, in the sense of being more likely to attract the attention of other activists and form relationships with them. In information overloaded network societies, knowing who to trust and who to connect to, is increasingly based on agents past achievements and others evaluation of these (Urry, 2007: 221). In online realms the number of postings/actions of a user and their level of interaction/participation in a shared project, has become a currency in many online environments (Bruns, 2008: 55). Applying Barabási (2011) idea of fitness helps us understand the importance of being recognized and reputed as an activists. And reputed activists will become even more reputed since others are more likely to stumble across them online, learn about them, connect and link to them and hence contributing to their ongoing accumulation of legitimacy capital. For example, rather soon after having joined the bathhouse campaign I come to realize which were more esteemed simply by observing who was retweeted and whose Facebook-postings received links and likes. In this way legitimacy capital could also be understood as a measure of *habitus*, of which activists possessed a sense of knowing how to navigate the field.

Online legitimacy capital is intertwined with perceived social and networking competence. Here its is important to underline that networking is based as much on social skills as technical (Bruns, 2008) and political abilities. Charisma and social competencies are conceived of as resources for networking. In an information overloaded network society, getting noticed is everything. Knowing how to network, which is interlinked with gaining recognition and sustaining reputation, also becomes a capital resource (Wellman, 2001), important for negotiating core positions (Bruns, 2008: 314). Breindl & Gustafsson (2011) talk about networking skills here creating new elites in a political landscape in which the importance of networked political activism grows. I suggest to label this *networking capital*. This capital is made possible by previous achievements (legitimacy capital), active participation (participation capital) and successful mobilization of others (mobilization capital), done through through a sense of knowing how (*habitus*) - and being in a position to - network in a social field. Such networking capital was important for negotiating core positions in southern Stockholm.

Networking capital can help us understand that activists communities are not devoid of power relations. According to Castells (2009: 45, 430) it is especially along lines of who has the ability to connect networks to each other that constitutes power in network societies. Online communication has enabled individuals to act as social switchboards, centre points for multiple changing and overlapping networks of interaction (see also Breindl & Gustafsson, 2011). Nodes/ activists that can act as switches between networks/ communities become fundamental sources of power. Discussing capital and power in this manner, the discussion of bridging social capital is impossible to overlook. In contrast to bonding social capital, bridging social capital refers to connections with weak ties (Putnam, 2000). In network theory researchers have underlined bridging social capital as

most important for online networking because they give people access to new and different resources through connections with weak ties (Baym, 2010: 136). Weak ties are conceived of as resources since it is through such ties that new information/ opportunities reach in-groups of users, and it is through weak ties a community can reach out to other communities (Wellman, 2001; Ellison et al., 2011). In this way bridging social capital is tightly connected to networking and mobilizing capital and thus has a bearing on a activist positions within the field. The activists interviewed were all active in other causes at the same time as fighting for the bathhouse. The artist claimed for example to try to create bridges between the Aspudden activists and other groups she participated in, and hence she negotiated a core position through her networking, as well as mobilizing, capital.

The question is whether these bridges can be conceived as week ties? Barabási (2011) criticizes the notion of week ties and instead suggest the notion intermediate ties for understanding bridging (or networking) capital. According to him, real bridging/ networking capital does not come from weak ties but from intermediate ties since users rarely pay attention to the weak ties in their networks overflowing with updates and information from ever growing social networks (ibid.). The idea of intermediate ties is important to understand networking and mobilizing capital - who possesses the ability to act as bridges and connect networks to each other, mobilize other participants to a cause, and this way negotiate core-positions in the field. Examples in southern Stockholm ranges from activists also being active politicians (in the Green Party) and thus functioning as important bridges between activists and the political system, to activists also being parents and thus being able to engage strong and politically important groups to the battle. This exemplifies Breinld & Gustafsson's (2011) claim of the existence intermediary elites in contemporary societies (even though they are referring to intermediaries between citizens and politicians in their paper).

5. Conclusion

In conclusion, power within the southern Stockholm activist field - understood in terms of holding a core position - was connected with knowing how to network, to maintain intermediary ties and being in a position to mobilize these intermediary ties as well as other bathhouse activists. This was also dependent on the habitus of the activists, their luggage of previously learned skills and sense of knowing how to navigate this field of online activism. In order to accumulate and exchange these different capitals, and to negotiate core positions, activists needed to relate to the values of southern Stockholm activist community. The value of location bound community - the idea of the unique character of the neighborhoods - was even transformed into a central belief that continued to bind activist together in SÖFÖ after having lost the battle for the bathhouse. Activists also needed to be constantly reachable, updated in order to accumulate participation and legitimacy capital as well as networking capital in the form of holding intermediary positions between networks. This is the value of connectedness which is interlinked with the value of responsiveness. In network societies, community influence is time bound to the participation of the user. Hence, constant participation in the form of continuous practices of updating is mandatory for accumulating participation and legitimacy capital that could be exchanged into core-positions. Activists that had not participated for some time lost legitimacy and thus also their core-positions. One activist for example complained that he had to start from scratch after having been offline a longer time. He was left behind in plans, discussions and had not participated in several events.

Hence, to participate, to be connected and to be contacted and recognized is part of a semi-public performance, symbolizing a position of power (Katz & Aakhus, 2002: preface xx). Or phrased differently, to attract attention, connections and built reputation - to be *fit* as Barabási would phrase it - is part of reaffirming your position in the field. This is about the value being active. In this way positioning practices in southern Stockholm was interlinked with maintenance and negotiation of community values.

While far from a detailed account, the aim here is to contribute to the understanding of contemporary activism in network societies and how relations of power are still at play even though the internet and social media platforms often lowers the threshold for political participation. By outlining the contours of participation, mobilization, legitimacy and networking capitals in southern Stockholm and how they relate to each other, I hope to have shed some light on why certain activists come to occupy core positions and others more peripheral positions. By previously acquired skills and knowledges from social movement and reputation from other activist campaigns, as well as being recognized within the location bound community through location based activities, and by having a sense of using social media platforms to engage and mobilize others, by acting as bridges between communities, and by being active, connected and responsive, some activists were positioned more to the core than others in southern Stockholm.

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About the Author

Jakob Svensson

Jakob Svensson is Assistant Professor in Media and Communication studies at Karlstad University where he directs the MA program in Global Media and the BA program in Media and Communication Studies. He is also director of the research network HumanIT at Karlstad University. His research focuses on political communication from a participatory and civic perspective.

From mobilization to consensus

Innovating cross-media services to organize crowds into collaborative communities

Montathar Faraon*, Victor Villavicencio**, Robert Ramberg***, Mauri Kaipainen*

* Södertörn University, {montathar.faraon, mauri.kaipainen}@sh.se

** Art-O-Matic, victor@artomatic.se

*** Stockholm University, robban@dsv.su.se

Abstract: *The purpose of the current paper is to contribute to the field of e-participation by presenting a design concept for mediating technology that incorporates current information technology such as social and collaborative media designed for the purposes of civic engagement in society. Such technology could empower people to mobilize and engage themselves in proactive consensus-seeking and co-creation. Social media are broadly adopted in the reactive mobilization of citizen-initiated participatory activity in society such as protests like the London riots and the Occupy movements. In our view, there is a demand to organize mobilized crowds to collaborate in a consensus-seeking manner. For instance, online applications do not yet exist that specifically serve the purposes of massive simultaneous co-editing of documents by citizens seeking consensus in societal issues. However, as we argue, there is no reason for such not to be integrated from existing technological components that are commonly accessible.*

Keywords: bottom-up democracy, e-participation, grassroots, social media, consensus-seeking, digital engagement, micro-democracies

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The way people communicate online has been drastically changed by the introduction of social media (e.g., Facebook, Twitter, WordPress, and YouTube), defined as “Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of user-generated content.” (Kaplan & Haenlein, 2010, p. 61). The commonly applied concept of Web 2.0 suggests that Web 1.0 preceded it and that a process of development is described by the sequence (Rosen & Nelson, 2008). It is clear that the web has transformed from being a static consumer-oriented publishing area into an interactive, social, and participatory driven area of communication. Applications and services developed within the realm of social media are often characterized by participation, conversation and cooperation (Lee & McLoughlin, 2008). The potentials created by social media are, however, not limited to user-generated content

serving social relations for their own sake but can also support the contribution of citizens to the democratic society, provided they are combined with effective collaborative tools. Media systems embedding such tools, referred to as collaborative media, are the key to our design concept. Further, social media have provided new and more efficient ways for people to align into groups in reaction to commonly identified concerns on a local level of society. Such groups emerge, act, cooperate and dissolve without external control on social media platforms. Elsewhere, several governmental or non-governmental projects that promote participation by means of online services have been developed with the aim of facilitating the inclusion of the public but few have been successful (Sæbø, Rose, & Flak, 2008). Two factors contributing to the failure are: (1) excluding the public in decision-making processes and (2) the lack of a direct communication channel in which to allow the public to express their opinions in an efficient way (Kolsaker & Lee-Kelley, 2008).

The protests in Great Britain (i.e. London riots), the Indignados in Spain, Occupy Wall Street in New York and the subsequent global Occupy Together movements during 2011 suggest a change in individuals' practice of organizing reactively against dissatisfactory political, economic or human rights conditions (Castells, Caraca, & Cardoso, 2012; Mason, 2012). Apparently, a common denominator among these examples is the use by individuals of social media to mobilize their protests. They allow an effective way for people to discuss burning issues in their social networks and facilitate quick organization of reactive action within large crowds. This appears to have happened in the London riots of 2011, where the frustration of people observing major regression without possessing means to influence the government might have fueled broad restlessness and even violent reactions. While it has been pointed out that social media should not be credited for *causing* such events whose reasons lie in political, economic or moral injustices (Howard, Agarwal, & Hussain, 2011; Lotan, et al., 2011), they are likely to have an important role in channeling the general dissatisfaction. Due to the distributed structure of the Internet and social media, it has become more difficult for governments to obstruct the mutual communication of individuals. Although it is possible to close down Internet access, as witnessed in Egypt during the Arab Spring, and mobile networks, as seen in the protests in Great Britain during 2011, such actions have drastic effects on society and are by no means invisible or quiet. Secondly, even so, technical solutions for circumventing media remain (Faraon, Atashi, Kaipainen, & Gustafsson, 2011).

Nevertheless, more important for the present study is that the apparent difference between movements that have been mobilized by means of social media and their historical predecessors: the presence of strong leadership, or *monophony*, is not necessarily to be assumed. The organization of the crowds in the former is, at the least, distributed without necessarily being authoritatively led by someone. If there is any leadership at all, then it would be hierarchically more flat than in the case of traditional movements in which already the mobilization required extensive efforts and labor through strong leadership.

Another consequence of mobilization without predetermined leadership is that a solid argumentation or mission does not necessarily exist that motivates crowds to gather, as in classical mass mobilization. In the recent cases, social media-based mobilization can gather large crowds with a *polyphony* of issues altogether expressing only a general dissatisfaction. Figure 1 illustrates the distinction between the monophonic and polyphonic view.

The issue discussed in this article is *what follows after the reactive mobilization*, for example, in the case of the aforementioned movements of flat organization. This allows for different options, two

of them being either to elect leaders following the classical model of democracy after the mobilization, or deliberately aim at new kinds of democratic working models (Levinson, 2011).

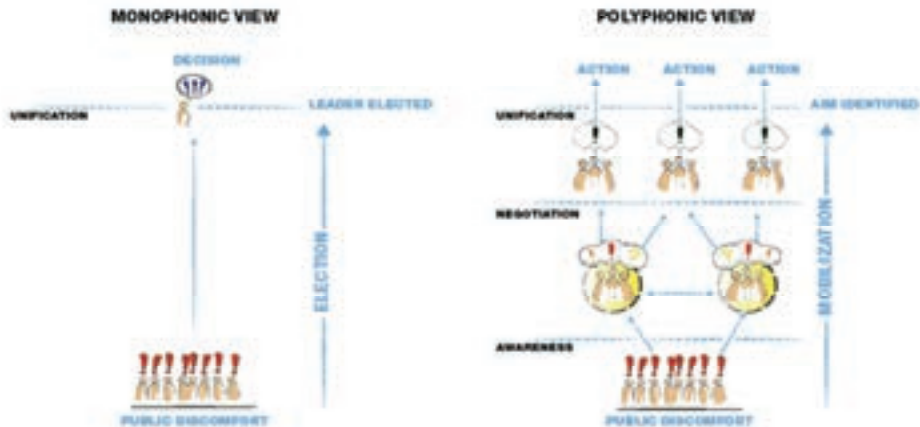


Figure 1: In the monophonic view (left), public discomfort is articulated by one selected voice (leadership) through an elective process whereas the polyphonic view (right), takes into account the different opinions inherent to a mass mobilization and aims towards a set of initiatives, agendas, or plans arising from the same public discomfort.

However, we find that the prevailing discussion related to the bottom-up influence in society does not provide satisfactory means to position mass mobilization and collaboration of people within the context of democratic engagement. This leads us to look into people's everyday activities that relate to consensus-seeking or decision-making in different ways and argue that such should be regarded as manifestations of what we call *micro-democracies*. This view allows us to focus the design of technologies for mediating participatory processes on an abstraction level that is valid in democratic processes taking place on various levels of societal involvement. The development of such technologies assumes that it is beneficial for society to encourage and facilitate the bottom-up oriented practices of individuals. We will propose a design concept for a medium aiming at consensus-seeking and co-creation among mobilized crowds. As we see it, this is possible by means of integrating and adapting aspects of existing social media and online collaborative applications for broad-scale democratic processes.

1. Aim and Research Questions

Based on the aforementioned, the overarching research question is how to integrate the technological elements mentioned in order to answer the demand identified above. The aim of the current article is to propose and outline a design concept for active bottom-up oriented participation that allows not only mobilization to form communities of shared interest but also collaboration to facilitate democratically framed consensus-seeking and co-creation within such

communities. This approach aims to conceptualize a medium with scalability from everyday democratic practices to massive political movements without fundamentally new technological development but rather redesign and adaptation of existing social media and online collaborative applications. In the following, we structure the section on e-participation with the polarization of top-down versus bottom-up approaches, of which the latter is adopted as our starting point. Then, we propose the concept of micro-democracies as the link that allows the conceptualization and design of a democratic medium for multiple purposes and scales, which will be drafted thereafter.

2. Literature Review

It is by definition in a democratic government's interest to encourage citizens to participate in democratic processes, such as elections, hearings and initiatives. Many governments have over the years experienced a decline in the trust and interest in politics of the citizens and have sought out ways to encourage political participation by means of network-based services (Kampen & Snijkers, 2003; Roy, 2005), allowing, for example, petitions and initiatives to be made online (e.g., European Citizens' Initiative), as well as hearings and ultimately the casting of votes online (e.g., Estonian e-voting system). The demand for such services has been expressed increasingly often by individuals, non-governmental organizations, as well as interest groups who wish to bring forward their interests and views on public issues (Bekkers, 2004; Rose, 2007; Smith & Nell, 1997).

In the present discussion, even empowering measures of governments are conceived of as being oriented *top-down* because they assume an authorized agency that controls measures to be imposed on lower levels of the governmental hierarchy. In contrast, the *bottom-up* orientation is defined as the approach in which initiatives, agendas or plans emerge from interactions of a number of people working together without authority-control. Academic research has for a long time focused mainly on top-down empowerment of e-participation (Bingham, Nabatchi, & O'Leary, 2005; Kenski, 2005; Sanford & Rose, 2007). Over time the interest has arisen toward bottom-up oriented forms of democracy. There is an obvious need for further research into this area motivating the focus of the current article.

In our view, democracy is not only limited to government-driven channels and regulated means but can also manifest in various ways and levels, as well as be initiated and controlled by the people themselves. The Internet and, in particular, social media have broadened the range of means to exercise citizenship and collaboration in terms of *bottom-up e-participation*. We believe that technical and cultural prerequisites exist to go beyond reactive mobilization towards *proactive* and *co-creative* citizenship. In the following we will make a distinction between the two types of democratic processes, top-down versus bottom-up, by contrasting their characteristics in relation to e-participation. From the top-down perspective, the focus is on the legal relation of government and its *citizens*, while from the bottom-up point of view, the focus is rather on *the individual* and *the people* (regardless of citizenship). In the following we apply this distinction and these terms accordingly.

2.1. Top-down e-participation

The objectives of top-down government-provided e-participation are to (1) extend the range of the audience to enable a large-scale and more comprehensive participation; (2) aid participation through a vast range of technologies to capture the diversity of skills in citizens; (3) present information to the prospective audience in a clear and understandable way to facilitate input; and

finally (4) reach a wider audience to obtain deeper input and assist in the progress of reflective controversy (OECD, 2003). In order to understand the increased interest of governments in using e-participation we need to review a broader picture related to the current state of representative democracies. An increasingly emerging point at issue has been the idea of a weakness in representative politics in many democracies. Despite the fact that the idea of a crisis in representative democracy is not new, it has prompted an increasing urgency over the years. A major concern is the notion of a globally growing divide between citizens and decision-making bodies (Curtice & Jowell, 1997; Hibbing & Theiss-Morse, 2001; Klingemann, 1999; Pharr & Putnam, 2000). According to Rachel, Wainer, and Stephen (2008) this division is due to factors such as:

- A decrease of knowledge and interest in politics by citizens;
- A decrease of trust in decision-making bodies in society;
- A decrease of efficacy amongst citizens, i.e., those who do not believe that they can influence decision-making bodies;
- A decrease of public identification and engagement with representative institutions;
- An increase of participation divides, i.e., trust, knowledge, and engagement falling mostly among the poorest.

In addition, Dalton (2004) argue that citizens' support for public policy excessively decreased during the period 1960-2000 among the higher-educated and the young, rather than those who are at the margins of politics. In short, *"it is not so much that governments produce less, but that citizens expect more"* (p. 151). It appears that these increased expectations have formed new actors in society, such as interest groups, non-governmental organizations, and new social movements, to assume *"some of the interest aggregation / articulation functions that historically have been the province of political parties"* (p. 397). Gray and Caul (2000) demonstrated that the lack of group mobilization has been a contributing factor to the decline of voter turnout. By comparing unionization with voter turnout, the authors conclude that when there is a decline of union density, there has also been a decline of voter turnout.

In sum, while governments have developed and provided various forms of e-participation, the fact that they are based on the ramifications of issues from the governments' points of view dictates that they do not often offer means to represent citizens' everyday concerns to the government, as they are. This has led to the adoption of various social media as means of mobilization. This has been demonstrated by the protests in Great Britain, the Indignados in Spain, Occupy Wall Street in New York and the subsequent global Occupy Together movements during 2011. In this sense, bottom-up citizen-driven e-participation has gained momentum in these protests by the facilitation of social media.

2.2. Bottom-up e-participation

Over time, the attention of many e-participation researchers has turned towards the potentials of technology, such as social media, to give rise to new forms of participation in different areas of society (Mumpower, 2003). There are indications that social media such as Facebook and Twitter could empower the otherwise inactive individuals to access and interact with other groups in society over issues that arise from their everyday life, as an alternative to the top-down approach

(Fisher & Boekkooi, 2010; Hampton, Goulet, Rainie, & Purcell, 2011). This is suggested by the aforementioned protests in which the common denominator appears to be the perception that governments have failed to implement democracy, and that they have distanced themselves from the citizens, particularly in relation to the division of economic responsibilities and resources. It is characteristic of representative democracy that the distance between citizens and decision-making bodies is often large and thus increases the risk of excluding citizens from decisions. When the experience of exclusion grows large, it tends to lead to dissatisfaction among people, as is suggested by the protests in Great Britain, the Indignados in Spain, Occupy Wall Street in New York, and the subsequent global Occupy Together movements during 2011. Because governmental approaches to e-participation (1) are not based on issues identified by the people; (2) do not assume the language, conceptualizations, and ontology of the people; and finally (3) are not based on technologies and practices of the people, they may not serve the purposes of spontaneous participation or activism. However, it has been proposed that communication and discussion between people and decision-making bodies contribute to a healthy and cohesive democracy (Parry, Moyser, & Day, 1992; Ranson & Stewart, 1994). According to Mikaelsson and Wihlborg (2011), confidence in democracy needs to be based on a strong relationship between people and decision-making bodies, not only in elections but constantly. Democracy often stagnates when you do not have an active and living dialogue between people and decision-making bodies.

In our view, participation in democracy is not to be solely limited to interaction with the government, but rather it is important to extend the view to also cover people's reactive and proactive participation in processes that grow from their own interests and initiatives. Reactive participation is illustrated by petition or awareness tools such as Avaaz (avaaz.org), where support is not only requested for or against an existing issue but the request is spread virally along social networks. This could, for instance, be a pending change of legislation or a situation that is perceived as unjust, e.g., against the Stop Online Piracy Act (SOPA) and the Anti-Counterfeiting Trade Agreement (ACTA) that were seen as Internet censorship bills. The support is gathered by means of name lists to represent signatures and presented to decision-makers as "the will of the people" with the aim to change or alter the said injustice.

Proactive participation concerns the perception of possible outcomes and being prepared to address or countermand, e.g., political, interest or lobbying organizations. In the proactive perspective, one of the first challenges an individual encounters when trying to create interest around a specific issue is to gather support. Being aware of an issue does not automatically give access to others sharing the same views, especially if the individual is not a "professional" initiative maker. In these cases, social media have come to play a vital part in connecting like-minded support for an issue (Lotan, et al., 2011).

The use of social media such as Facebook, Twitter or YouTube allows for a level of connectivity that would be hard to reach before the World Wide Web. Not only do they facilitate the connectivity with people but they also allow any consumer of information to be a producer, for example in terms of citizen journalism, e.g., Ushahidi, or send a short message on Twitter, i.e., a 'tweet', post a status update on Facebook, or upload a video on YouTube (Karlekar & Radsch, 2012). Integrating current information technology, such as social media and online collaborative applications within a democratic framing, could empower people to mobilize and engage themselves in proactive consensus-seeking and co-creation.

In sum, we have argued that (1) social media allow massive mobilization through online networks but there is not much to support the collaboration of the mobilized crowds in a consensus-seeking manner; (2) online collaborative applications, in turn, allow for collaboration but lack the means of massive mobilization; and finally, as we see it, (3) both social media and online collaborative applications generally lack features and functionalities for civic engagement in society, for instance the support for consensus-seeking among large crowds and voting mechanisms to resolve multiple competing initiatives. According to our inference, conditions 1 through 3 altogether constitute a need, or a potential market for a new kind of consensus-seeking medium.

2.3. Micro-democracies

The idea of democracy is commonly associated with citizens' involvement in high-level decision-making by means of elected representatives. However, we conceive of democracy in a broader sense, as something essentially more than that. If bottom-up oriented participation is taken seriously, democratic processes at the very grassroots level should not be overlooked since it is on this level that individuals form their networks, practices, and skills. These activities often occur within structured working environments, communities and processes that are of a democratic nature in the sense that they involve negotiation and consensus-seeking. One example of this is the participation in decision-making processes of housing cooperatives, sport clubs and interest organizations (e.g., Macintosh, 2004), but primitive democracy may be seen in even less structured networks or environments such as social media, in which informal consensus-seeking may take place. This entails sharing and evaluating ideas and content within virtual networks anchored to individuals' daily life, perhaps quite close to the very grassroots of democracy. An example of this is allowing citizens to make their voices heard and have their say about issues they find important and interesting enough to share with others, as witnessed in a study where school children were allowed to share their stories about their neighborhood through multimodal storytelling (Tollmar, Harling, & Ramberg, 2010). This can be further exemplified on even a very intimately individual level, by someone posting pictures of himself trying on different outfits and asking his Facebook friends to help him decide which one to choose. The alternatives can be "liked" and discussed, involving a reactive behavior, by the peers supporting the individual's decision.

These types of activities might seem trivial, but in our opinion they contain the essence of micro-democracy: *conditions that assume a group of people determining consensual action towards common interests and goals*. These actions can merge through viral distribution to large-scale mobilizations, which can result in radical changes in society. The micro-democratic level should not be overlooked because it also comprises a great number of competencies that establish a broad base for participation in communities and society. Furthermore, one might appreciate the micro-democratic level because it is on this level where the masses are engaged. In the same way as the masses constitute a market for various kinds of online applications, such as services, social media, entertainment and games, we believe that there would also be a demand for a new category of tools deliberately designed to facilitate micro-democratic tasks of everyday routines. In our view this would merge two categories of already existing applications, social media and online collaborative applications.

While social media can contribute to mass mobilization, freely accessible online collaborative applications such as Wikis (e.g., Wikispaces, EditMe, Wikidot), document creation (e.g., Google

Docs, Sync.in, Mindmeister, Docracy), and graphical visualization (e.g., Dabbleboard, CoSketch, Chartle), could empower the already mobilized masses toward consensus-seeking and co-creation of content that contribute to common agendas. It is also significant that such applications are commercially sustainable through their wide user base and broad visibility (Cook, 2008). This further allows free access and use, but also supports co-creativity that is independent of the government's steering. Examples of collective outcomes of such are Wikipedia (wikipedia.org), a collaboratively built online encyclopedia, GitHub (github.com), an online social and collaborative coding community, and WikiVote (wikivote.ru), an online Russian service aiming to crowdsource lawmaking.

3. A digital medium for consensus-seeking

In this section we propose a design concept for a medium that is in essence a combination of social media and collaborative applications applied within a democratic context. It aims to facilitate a sequence of activities that directs the efforts of the mobilized crowds to creative democratic processes. This is described as consisting of three different levels: (1) invitation; (2) community building; and finally (3) consensus-seeking. We suggest, according to Table 1, how these levels map regarding facilitating technologies, people's organization, respective activities, foci, and functions.

Table 1. Levels of the engagement using the proposed medium corresponding to the facilitating technology, engaged people, their activities, foci and the function within the suggested bottom-up democratic context.

Level	Technology	People	Activities	Focus	Function
Consensus-seeking	Social and collaborative media designed for civic engagement	Organizations	Agree	Goals	Negotiated articulation, co-creation, consensus seeking
Community building	Social and collaborative media	Communities	Define	Issues	Massive communication
Invitation	Social media	Crowds	Set goals	Concerns	Networking, social interaction, viral distribution

These three levels can be built in as components of the suggested medium as illustrated by Figure 2. For the purposes of description, they are depicted linearly in the following. However, the process does not necessarily have to go through all levels. In the following we offer a description of the characteristics of each level.

3.1. Invitation

When identifying an issue, be it societal, aesthetic, political, or economic by nature, an individual may choose to take an action with the support of others. The proposed medium offers a registered

member a means of mobilizing people behind such an issue. In the process envisioned, this would start by sending invitations, for example, by means of social media networks or e-mail, urging them to join the action. The invited people may also be given the option to register in the system, with the advantage of keeping their support anonymous, desirable in the case of sensitive issues. In addition to individual invitations, the system provides effective means of suggesting anonymized recipients based on metadata related to the interests they have previously reported that would render them likely to support the initiative. Metadata of members' interest profiles can accumulate, for example, by interpreting the acceptance of an invitation as support for the particular interest or by occasions of voting about issues. While securing the anonymity, the interest profiling is kept transparent to the members themselves.

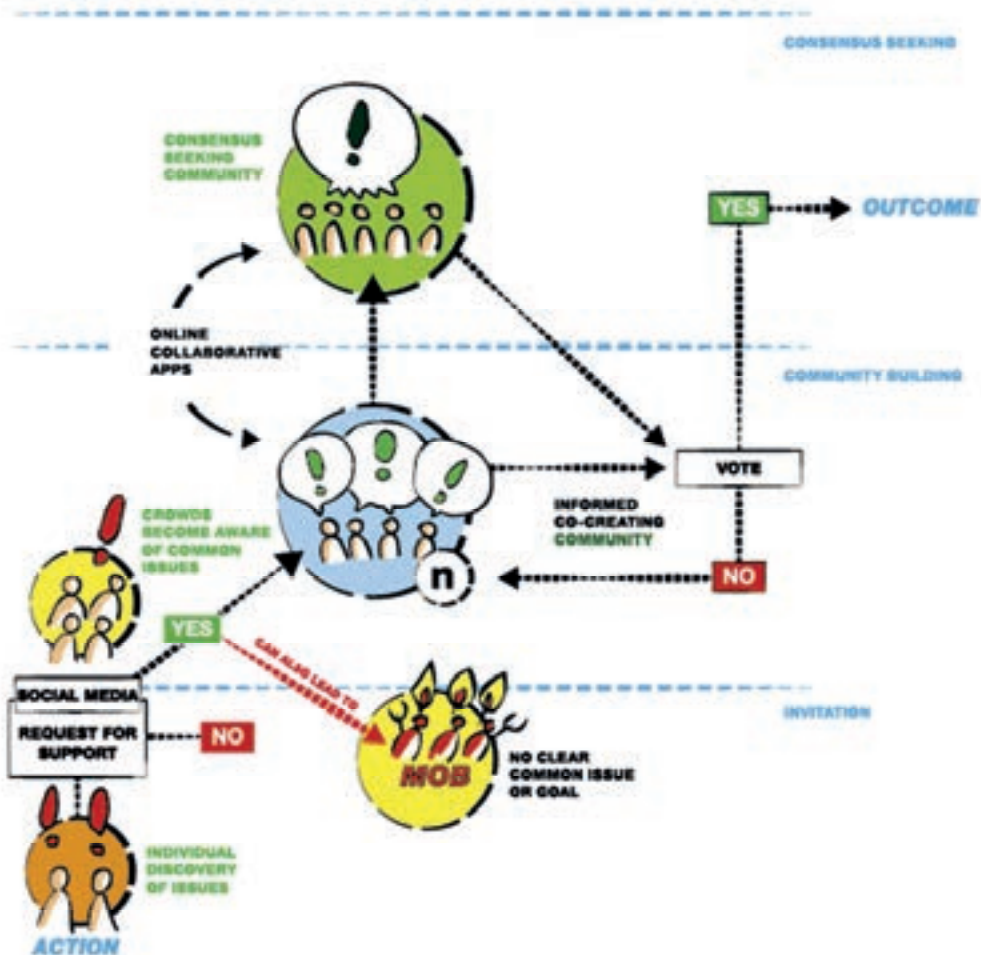


Figure 2. Abstract overview depicting the path of an individual discovering an issue towards becoming engaged and contributing to the process of creating a “solution” to the said issue reflecting the previously mentioned three levels: (1) invitation; (2) community building; and finally (3) consensus-seeking.

3.2. Community-building

A community supporting an issue consists primarily of individuals that have chosen to participate in the following process by accepting the invitation. One may generally assume that this phase corresponds roughly to a situation where only a common interest has been identified and from a sense of community having been established. This alone does not assume an elaborated agenda or a determined goal. As pointed out earlier, we consider the possibility that the generally accessible and usable online collaborative applications offer the option for such an already mobilized community to act towards meaningful, concrete and constructive outcomes, termed co-creation. In short, online co-creation may constitute means of defusing the frustrated crowd from turning into a mob, instead of a community, as illustrated in the case of the London riots in 2011. However, in order for such activities to yield useful outcomes, the multiplicity of disconcerting voices of the crowds needs to find a consensus.

3.3. Consensus-seeking

By online co-creation we refer to activities that aim to identify the previously inarticulate issues and to express them in terms of a joint artifact that consists of items such as text and images, for instance. The goal of the process may be an initiative, petition, manifesto, plan, design, visual demonstration, or even a budget that crystallizes the initially implicit idea. We assume that an iterative process can be abstracted by which consensus emerges within the community about the shared goal and has the support of a number of people. There is also a mechanism that allows, in case of disagreement, the community to split into two branches. This causes the joint artifact to duplicate into two copies that are initially identical, from which event they start diverging. This allows for parallel evolution of a co-creating process. Also, in case of a 50-50 deadlock vote, the medium will offer splitting as a default option. Such processes may in many cases use features of commonly accessible online collaborative applications, for example version tracking (i.e., history) to keep a record of supporters and branches. The significance of the co-created outcome is that it is a manifestation of a broad consensus and an intent, which addresses the initially implicit idea in a coordinated manner and is validated by the explicit unanimous support, as framed by the medium.

4. Discussion

The aim of the study was to propose and outline a design concept for active bottom-up oriented participation that allows not only the mobilization of communities of shared interest but also collaboration within such communities to facilitate consensus-seeking and co-creation. Top-down approaches to participation in society are based on the point of view of authorities and do not necessarily represent citizens' everyday concerns. Instead, popularly adopted social media have shown their usefulness as means of mobilization, as demonstrated by various *reactive* protests, such as the London riots in Great Britain and Occupy Wall Street in 2011. However, these media were never designed for democratic goals and purposes in particular, and therefore their usefulness for more *proactive* contributions to society is limited. To fill this gap, we propose a design concept for active bottom-up oriented participation that is based on the following reasoning: (1) social media allow massive mobilization through online networks but there is not much to support the collaboration of the mobilized crowds in a consensus-seeking manner; (2) online collaborative applications, in turn, allow for collaboration but lack the means of massive

mobilization; and finally, as we see it, (3) both social media and online collaborative applications generally lack features and functionalities for civic engagement in society, that would allow their utilization in the seeking of consensus among the mobilized community. In order to have an anchoring on the level of crowds and their activities, we infer that a medium aimed to serve bottom-up influences to society needs to follow the pattern of popular social media in that they have discovered previously dormant needs of the crowds. This has two important consequences that are worth aiming at, namely, the accumulation of a broad user-base and a market, as well as the creation of an enormous reserve of digital media competencies among people. The prior allows economically sustainable media without the steering of the government, while the latter allows the involvement of a broader range of people than any deliberate government-initiated participation platform.

Accordingly, we suggest that needs exist in the everyday practices of individuals that can be compared to those of social media in volume and significance. In our view, activities that occur within structured working environments, communities and everyday processes may constitute such needs. Many of these are of a democratic nature in the sense that they involve negotiation and consensus-seeking. We identify that these contain the essence of what we refer to as micro-democracies, i.e., conditions that assume a group of people determining consensual action towards common interests and goals. The concept of micro-democracies is instrumental in determining design constraints of the suggested medium, including its purposes, target groups, and flow of processes. It facilitates the design for democracy in a general manner that covers a range of activities between the micro and the macro levels. While it is quite obvious what democracy means on the macro level, it is not as clear what it means on the scaled-down level.

As to practical implications, the proposed medium could empower people to influence on multiple levels ranging from their daily tasks and routines to issues that concern society as a whole. The discussion of citizen's direct impact on decision-making in institutional and legal terms, e.g., citizen initiatives, is outside the focus of the current article. It suffices to assume that the sheer visibility of collaboratively-built mass consensus in social and journalistically-edited media, particularly when boosted by viral distribution, is significant enough to have democratic and constructive impacts on society, and goes beyond the state of the art. Finally, it is up to future discussions to consider the relevance of the proposed concept for offline contexts.

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About the Authors

Montathar Faraon

Montathar Faraon is a doctoral candidate of media technology at Södertörn University in Sweden. He earned a master degree in education with focus on computer science and psychology from Växjö University, Sweden in 2008. In addition, he has completed a master degree in psychology from University of Wisconsin - La Crosse, USA and University of North Carolina - Greensboro, USA in 2010. His research interests include social media, participatory processes, and public opinion.

Victor Villavicencio

Victor Villavicencio is a graduate of media technology and earning his masters in media technology in his limited spare time. He was the Swedish work package leader in the INTERREG IVA Central Baltic project IleP (Immigrants Inclusion by eParticipation, 2009-2012). He is a researcher, an experienced graphical designer as well as Art Director with keen insight and knowledge of social media and digital collaboration tools.

Robert Ramberg

Robert Ramberg studied cognitive science and psychology and got his PhD in cognitive psychology at the department of psychology, Stockholm University and now holds a position as professor at the department of computer- and systems sciences at Stockholm University. His research has a focus on how artifacts of various kinds (information technology and other tools) mediate human action, collaboration and learning.

Mauri Kaipainen

Mauri Kaipainen is professor of media technology at Södertörn University in Sweden. He studied education, musicology and cognitive science at the University of Helsinki and earned his PhD in 1994. His current research agenda focuses on participatory applications of social media and the concept of multi-perspective media

Net technologies, net gain: An institutional and micro-structural approach to understanding technology use for collective action

Carol Soon*

* Institute of Policy Studies, 1C Cluny Road, House 5, Singapore 259599, carol.soon@nus.edu.sg

Abstract: *Traditionally, macro-level and micro-level approaches have been used in silos to explain and determine the threshold where one crosses from non-participation to participation in social movements. Technological advancements have enriched and complicated the process of collective action. This qualitative study is based on the premise that a confluence between political economy approaches, micro-structural analysis and Internet studies is needed to dissect the dynamics behind technology use in collective action. Through in-depth interviews with 26 activist bloggers in Singapore, this study sheds light on how Internet technologies are used by activists to overcome issues of collective incentives, structural proximity and structural availability, and negotiate the institutional terrain in an authoritarian regime.*

Keywords: Political blogs, collective action, collective incentives, structural proximity, structural availability

Contentious politics comprise “episodic, public, collective interaction among makers of claims and their objects when (a) at least one government is a claimant, an object of claims, or a party to the claims and (b) the claims would, if realized, affect the interests of at least one of the claimants” (McAdam, Tarrow & Tilly, 2001, p. 5). Social movements - alternative, redemptive, reformatory or revolutionary - involve groups of people organized into a coherent collective to engender political or social change (Locher, 2002). Macro-level and micro-level approaches have been used to dissect the conditions which influence collective action participation and mobilization, and to identify the threshold or tipping point when one crosses from non-participation to participation.

On the macro level, political economy approaches explain how social movement actors maximize opportunities and negotiate constraints present in their environment (Coston, 1998; Della Porta, 1995; Della Porta & Diani, 2006). While severe repression and tough policing techniques tend to drive movements underground and discourage peaceful mass protest, an extension of civil liberties by the state fosters the development of formal organizations (Della Porta, 1995). Current work in this discipline suggests an inverse relationship between the degrees of state repression and civility of movement modality, between the centralization of governance and collaboration between state and civil society (Coston, 1998). On the micro level, one’s participation or non-participation in social movements is shaped by one’s structural availability, collective and selective incentives (Klandermans, 1984, 1993; Klandermans & Oegema, 1987; Olson,

1965, 1968), and one's structural proximity (or lack thereof) to other social movement actors (Buechler, 1995; McAdam & Paulsen, 1993; Snow, Zurcher & Ekland-Olson, 1980).

Technological advancements have both enriched and complicated the process of collective action. The growing proliferation of blogs, personal, organization and party websites have opened up spaces for contention and transformed the repertoire of collective action (Diani, 2000; Tilly, 2004; Van Laer & Van Aelst, 2010). However, the ease of participation on these platforms has also given rise to what is commonly known as "slacktivism", threatening to displace sustained and committed involvement in collective action.

Social movement development never occurs in a socio-political vacuum. A common approach adopted in the field of social movement studies is to adopt separate strands of analyses, examining macro and micro factors which determine social movement participation in silos. In political communication and Internet studies, a prolific body of work addresses the mobilization effects of new technologies and how technologies change the forms of movement organizations, but do not theoretically and empirically address how technology use mediate institutional effects on micro-structural dynamics. There is thus a gap where these two fields of studies overlap. In addition, although there are promising lines of work pertaining to how blogs, social networking sites and micro-blogs are used for mobilization and organization (e.g., Fiore-Silfvast, 2009; Garrido & Halavais, 2009; Sessions, 2010), most of these studies remain in the Western context and are situated in libertarian regimes. There is thus a paucity of research on technology use in authoritarian regimes where the culture of political communication follows a top-down pattern.

To address this gap, this study adopts a political economy approach in examining the institutional conditions embedded in activists' environment, and how technology enables movement actors to overcome constraints in their institutional environment. Singapore is chosen for the case study due to the paradoxical relationship between democratization and technology adoption.

The objectives of this paper are two-fold. First, it identifies conditions in Singapore's institutional context which influence movement participation. Second, it explains how Internet technologies enable movement actors to overcome constraints posed by micro-structural factors such as collective incentives, structural availability and structural proximity. The next few sections review key themes in existing literature pertaining to micro-structural factors, technology use in movement mobilization, and an analysis of the institutional context in Singapore. Following which, the methodology and findings will be presented. The paper concludes with a discussion of the implications of this study for Internet and collective action research.

1. Micro-Structural Considerations in Collective Action Analyses

The earliest perspective of social movements was the traditional collective behavior perspective developed in the 1950s in which "*movements were treated as anomalies, symptoms of a system malfunction and strain*" (Hannigan, 1985, p.437). Spontaneity and the lack of structure typified early social movements. However, beginning in the 1960s, the coarse assumptions of collective actions as founded on people's irrationality and the lack of organization were challenged as scholars recognized the increasingly coordinated ways in which collective action was organized. According to the resource mobilization tradition, rationality, incentives and social networks underscore the success of movements (Buechler, 1993).

Individual cognitive processes have helped answer the question of why one participates in collective action even in the presence of free-ridership. One's decision to participate or not was often based on calculations and the weighing of costs and incentives (Klandermans & Oegema, 1987). This school of thought stemmed from Olson's theory of collective action, rooted in rationality, in which one's actions are primarily driven by self-interest (1965, 1968). Defined as one's expectation of the movement's success (if many people participate) and one's expectations about one's contribution to the probability of success, collective incentives also motivate participation (Klandermans, 1984, 1993).

Second, studies have shown that one's structural proximity to other activists influences one's participation in social movements. Relationships formed among social entities (i.e., individuals and organizations) pose as channels for the transfer of material and non-material resources (Wasserman & Faust, 1994). In the context of collective action studies, formal and informal ties in social networks serve as conduits for the spread of social movements (McAdam & Paulsen, 1993; Snow, Zurcher & Eklund-Olson, 1980; Zhao, 1998). One's structural proximity to movement members enhances the mobilizing potential of a group due to prior solidarities and moral commitment (Jenkins, 1983). McAdam's (1986) study of the Mississippi Freedom Summer project found that participants had the greatest number of organizational affiliations and ties to other participants compared to non-participants and withdrawals. Structural proximity to movement actors through informal and formal ties encourages and sustains participation in collective action as ties cultivate trust, build solidarity and facilitate information-exchange.

The third micro-structural factor which affects movement participation is one's structural availability. Structural availability explains why some individuals rather than others join a movement after they have been introduced to the movement (Snow, Zurcher & Eklund-Olson, 1980). One will participate in a social movement if one knows of opportunities to participate. However, one must also be capable of using these opportunities and be willing to do so (Klandermans, 1984). In Snow, Zurcher and Eklund-Olson's analysis of member recruitment for Nichiren Shoshu (a religious movement) in the U.S., they found that one's participation or non-participation is largely contingent on the extent to which they are subject to extra-movement networks that demand time, energy and emotional attachment function. Therefore, some individuals will be more available for movement participation because they possess "*unscheduled or discretionary time and because of minimal countervailing risks or sanctions*" (Snow, Zurcher & Eklund-Olson, 1980, p.793).

2. Technology Use in Collective Action

The increasing usage of new media technologies by political parties and non-governmental organizations is attributed to their effectiveness and cost-efficiency in promoting political and social causes, reaching out to target constituencies, mobilizing online action and organizing offline activities (Bosch, 2010; Langlois, Elmer, McKelvey & Devereaux, 2009; Stein, 2007). By facilitating new modalities for engagement and contentious politics, new media technologies are contributing to the social movement repertoire.

The earliest academic foray in the study of Internet use for political communication addressed how political parties and marginalized organizations used Internet technologies such as email, websites and discussion groups. Other than disseminating information and publicizing a cause, the Internet's non-hierarchical networked structure facilitates movement organization and

participation. Kreimer's (2001) reference to Internet technologies as "*technologies of protest*" best encapsulates the role of new media in mobilizing action among fringe groups or civil society organizations (e.g., neo-Nazism, disability rights, environmentalists and anti-corporate enthusiasts). A new repertoire of collective actions facilitated by the Internet provides movement actors with many more options in terms of participation and commitment (Van Laer & Van Aelst, 2010).

Another area of research which has received much attention from media scholars addresses the networking effects of Internet technologies and the establishment of online communities. The instantaneity, reach and interactivity of computer-mediated communication make it possible for people who share similar ideology or grievances to converge online with ease and speed, hence leading to quick formation of collectives driven by shared goals (Ayers, 2003; McCaughey & Ayers, 2003; Vegh, 2003).

Recent scholarship on contemporary movement organizations indicate that technology is shaping the way in which movement actors connect with one another.

"Formal, centralized organizations with identified leaders, prescribed roles, and quantifiable resources that are fundamental to collective action theory are no longer the only, nor even the primary, means of contemporary organizing" (Flanagin, Stohl & Bimber, 2006, p.47). A coterie of work indicate that the structures of movement groups are becoming increasingly less well-defined and nebulous (Diani, 2000; Langman, 2005).

Social media such as Facebook and Twitter are providing new venues for like-minded individuals to gather in cyberspace, becoming "new types of technocultural spaces" which provide material, communicational and social means for issue publics to exist (Langlois, Elmer, McKelvey & Devereaux, 2009, p.429).

This section has established how and why Internet technologies are fast becoming an indispensable part of the repertoire of contemporary collective action. However, these studies do not sufficiently address how the same technologies enable movement actors to overcome micro-structural constraints present in their institutional environment. The next section first provides a macro-analysis of the movement environment in Singapore and traces the gradual transformations in media landscape which have created a new political opportunity structure for movement actors to further their activist goals.

3. Institutional Constraints and Opportunities in an Authoritarian Regime

Up until 1959 when Singapore achieved self-rule from its British colonial masters, a high degree of civil autonomy was accorded to individuals and groups to pursue their own political and social agenda by the British colonists (Gillis, 2005). However, the landslide victory of the People's Action Party (PAP) in the 1959 Legislative Assembly marked a new era in the governance of Singapore. The conditions in post-colonial Singapore posed many challenges for the new government (Chew & Chew, 1995; Silcock, 1962) but the delivery of economic affluence by the state soon affirmed the polity's belief that such a mode of governance was effective and cultivated "*co-option and political discipline*" among the citizenry (Rodan, 1998, p.67).

A significant spill-over effect of PAP's pragmatic governance lies in how it culled dissension that is perceived as threats to nation-building efforts. The regulation of mainstream media was justified on the grounds of building a national identity and social cohesion among

Singapore's richly diverse polity and was implemented through a complex set of laws (Banerjee, 2002; Kuo, 1995). Furthermore, the growth of civil society was in part stymied by the PAP-led government's success in supplanting many of the social and economic functions that were traditionally performed by private individuals and organizations during colonial times (Tan, 2007). Any potential development of a vibrant civil society was further constrained through the Societies Act which granted the state having the discretionary power to deny permit to groups that are *"likely to be used for unlawful purposes or purposes that may be prejudicial to public peace, welfare, and good order or against national interest"* (Koh & Ooi, 2004, p.181).

A turning point came in the 1990s when the Singapore economy underwent a major shift when the government embarked on transforming the economy into one that is driven by innovation rather than manufacturing. Within several years, Singapore was ranked among the top 10 economies in the world for active-mobile broadband subscriptions (International Telecommunication Union, The World in 2011, ICT Facts and Figures). However, a complex set of rules and regulations including the Internet Code of Practice and the Class License Scheme were used to govern discourse on the Internet, with past incidents demonstrating the state's resolve in curbing threats to political and social stability. However, the government's attempt to strike a balance between *"illiberal political interventions with market-oriented strategies for economic growth"*, coupled with the architecture of the Internet soon created loopholes that are exploited by marginalized groups and individuals (George, 2003). Recent developments suggest that the Internet has opened up spaces for marginalized individuals and groups to connect with like-minded others, organize meetings and engage in online discussions. It thus appears that there are indeed more possibilities for the public to overcome regulatory constraints and contest hegemonic discourse (George, 2003; Ho, Baber & Khondker, 2002; Ibrahim, 2009).

4. Method

The target population comprised political bloggers in Singapore. In the U.S. context, Gil de Zuniga, Veenstra, Vraga and Shah (2010) defined political blogs as *"those that have mostly political content"* (p.40). This paper sharpens this operationalization and defines political blogs as those that discuss primarily issues pertaining to Singapore politics and governance (e.g. the Singapore government, ruling party PAP, opposition political parties, censorship issues, and marginalized communities' rights).

Keywords searches ("Singapore bloggers" and "Singapore political blogs") were conducted on Google and Yahoo! in 2010 to identify seed pages. Ineligible units such as personal or social blogs which did not meet the criteria for selection were excluded. Blog samples were collected through two major blog aggregators on a daily basis to reach sample saturation. The third stage of sample collection involved "snowballing" through navigating hyperlinks from the blogroll of each seed page and identifying new political blogs. A total of 224 political blogs emerged from this process. The bloggers were then contacted via email and or comment pages on their blogs. The sample for this study comprised 26 political bloggers (four females and 22 males) who participated in in-depth interviews.

A semi-structured interview was used to elicit bloggers' perceptions and opinions regarding their activism participation (e.g. "What does 'activism' mean to you?", "Can you describe your involvement?"), and how they used Internet technologies for their activism work (e.g. "Why do you use the Internet in your activism work?", "Can you describe some of the ways

in which you use the Internet to achieve your objectives?"). All 26 transcripts were transcribed verbatim and coded line by line. Condensation of meaning where bodies of interview text were compressed into brief statements, representing various themes raised during the interviews, preceded the categorization and clustering of themes (Kvale, 1996). Meta-codes were then allocated to clusters of themes which facilitated data analysis.

5. Findings & Discussion

The interviews indicated that activist bloggers took part in a wide spectrum of activism work. Defined by Locher (2002) as alternative movements, most of these campaigns aimed to change people's attitudes and opinions regarding specific issues, such as the rights of marginalized sexual communities and migrant workers. Other campaigns and activism initiatives were reformist in nature (*ibid*) as they attempted to effect changes at the policy level that would lead to constitutional changes. These reformative movements included political campaigning by opposition political parties such as Workers' Party and Singapore Democratic Party, Repeal 377A and Bloggers 13 campaign.

5.1. Increased collective incentives through blogging

Activist bloggers ascribed a clear sense of vision and value their blogging practices, taking pride in challenging dominant discourse, advancing human rights and freedom of speech in an authoritarian regime. They used their blogs to cultivate a vibrant public sphere by disseminating information and writing commentaries on issues that were omitted or downplayed in mainstream media. Stan attested to the effectiveness of his blog in "getting the word" out on the LGBT (lesbian, gay, bisexual and transgender) movement. Activist bloggers felt that they were part of a larger collective working towards a common goal. There was a clear acknowledgement of others' presence and participation in a blogging community towards a common good. Chong made specific references to being part of "*the same blogging community*" and Andy explained how he and other activist bloggers were bound by a common ideology - to challenge hegemonic discourse and engender political and social change. There was an acknowledgment of a group membership and explicit references to the self and other political bloggers as part of the same "community." Instead of operating in silos, blogging heightened the feeling of working with others towards a common agenda in promoting democratic discourse and social justice.

The findings also indicated that activist bloggers used their blogs to encourage members of the public to take charge of their own lives and play an active role in a specific issue. The ease in transmitting information which they may otherwise not be able to publish in traditional media outlets helped to garner support from their target constituencies. Blogging provided these activists with the opportunity and means to contribute to a public good and the positive outcomes which stem from their blogging reaffirmed their sense of contribution. George described the change he witnessed and Madcow (a prominent actor in the opposition politics scene) spoke about how he was able to increase awareness of local issues through his blog and, in the process, influenced policy-making on issues pertaining to public transportation.

"I see myself as part of a collective socio-political blogging community that is collectively informing Singaporeans of what's going on. I've seen the level of discourse going up since I've started."
(George, male, early 30s, technology consultant and opposition party member)

"My blog also has certain influences on my political opponents' [the ruling party] directions. Recently, I blogged about the inadequacies of public transport, and yesterday they reacted and made some amendments to the policies they have, such as adding 150 trips to the MRT [Mass Rapid Transit] system.." (Madcow, male, late 30s, member of opposition political party and self-employed businessman)

There was a tacit acknowledgment among activist bloggers that on their own, they did not have the answers or solutions to what they perceived were political, social and economic conundrums that existed in the Singapore society, and the sharing and testing of ideas with one another in the cyberspace constituted a form of collective intelligence and collective action.

5.2. Increased structural proximity to other activists

The Internet's other key contribution is bringing activist bloggers together. Being able to connect to other like-minded individuals through the Internet was, in many cases, an unintended positive consequence of blogging. Prior to the proliferation of the blogging technology, most activists established connections with one another through Internet forums and discussion boards. For example, Evan spoke about how participating in online forums enabled him to meet up with others with similar interest which led to the founding of the organization as well as taking part in activities organized by an opposition political party, Singapore Democratic Party.

"We met up through Internet forums like the Sammyboy coffee shop. We met face-to-face and then some time later, we decided to get involved in the Singapore Democratic Party's activities because we found that their views and ours were very similar actually." (Evan, male, early 30s, founder of SG Human Rights and member of an opposition party)

Such incidental and unintended bonding was also experienced by Rachel whose first foray into activism was sparked by other activists establishing contact via her blog. The effectiveness of the Internet in cultivating new connections and forming alliances was reiterated by Vienna, one of the founders of Singapore Angle, a group blog. The group blog was created out of interaction among Singaporeans who lived in different countries and got to know one another when they commented on one another's blogs. Subsequently, a face-to-face meeting when they returned home led to the formation of the Singapore Angle.

"My blog used to be hosted on Multiply. What happened was I wrote something and on that night, The Online Citizen (a citizen journalism blog) contacted me to ask me to write for them. In the same week, V5 messaged me on Multiply telling me about an event and said that I may be interested to join." (Rachel, female, late 20s, a preschool teacher and human rights activist)

Internet technologies such as blogs, discussion forums and social networking sites provided an effective way for activists to seek out others who shared a common political ideology and beliefs. Singapore activist bloggers connected with those whom they perceived shared the same goal of advancing human rights issues and political pluralism in a one-party governing system. Cyberspace became a verdant meeting ground for activists such as Hercules to know people whom they otherwise may not have had a chance to meet offline.

An activist's blog also served as an effective vehicle to inform others about his or her cause, hence encouraging fellow Internet users involved in similar campaigns to come forward and connect with the activist. The unanticipated reach garnered by the blog was surprising even to activists themselves. Zazzi, a LGBT activist, spoke about the unexpected opportunities generated

by his blogging, which allowed him to further his goal of advancing issues pertaining to human rights and gay equality. His blog created awareness for his activism work and led to networking opportunities. He was invited to speak at conferences, deliver talks in schools and give interviews with foreign media Radio Australia and Al Jazeera.

5.3. Overcoming issues of structural availability

The findings from this study confirm that Internet technologies play an important part in helping activist bloggers overcome the lack of structural availability. Internet technologies are used to organize and distribute work among activists, enabling them to circumvent real world constraints posed by their individual commitments. The ease of connection and relatively low cost increased the ease and speed with which activists could converge, pool their resources and work as a team to realize their activist goals.

In the case of Bloggers 13, activist bloggers were adept at deploying various technologies as organization tools to facilitate their teamwork in Bloggers 13. Bloggers 13's proposal for less Internet regulation was put together via email and Google Docs after an initial meeting. George described how the Internet made it possible for members with different professional and academic commitments to collaborate. Given their different backgrounds and commitments (e.g. university lecturer, technology consultant, businessman, law student and film producer), Internet technologies reduced the barriers to participation and facilitated teamwork among activists.

"I think we just had one meeting before we came up with our paper, just that one face-to-face meeting, and after that everything was done over emails." (George, male, early 30s, technology consultant and opposition party member)

Besides providing an efficient means to activists to coordinate and organize online work, Internet technologies also provided a convenient way to engage in activism work that would otherwise be very time-consuming. During the 1997 Singapore General Election, the Internet made it possible for Madcow (then a university student) and several other activists to work as a team in gathering and disseminating information that was not published in the mainstream media through Soc Culture Singapore (a discussion bulletin board which has ceased operations). Other than facilitating cooperation among a group of people who have not met one another, the Internet also helped them to schedule and coordinate their reporting activities effectively and produce daily updates on political rallies on days leading up to the general election.

Such convenience and ease of participation significantly lowered barriers to participation for activist bloggers. Chong admitted candidly the ease of communication and information-sharing through emails made it more difficult to reject overtures for help and easier to agree to lending one's expertise and knowledge, especially when compared to times prior to the advent of Internet technologies.

"For example, a typical thing I might be asked to help with would be to take a look at press release or brochures on ways to write things better for any groups that need advice. Without the Internet, if someone were to call me and say, 'I have this one-page document which I would like you to go over,' I would have to stand by a fax machine. If they don't trust the fax and you have to have a physical meeting, there would be a very high chance that you would say 'No' because you are busy. Now the automatic response would be to say 'Yes.' They just email it to you and you can look at it at midnight after you have done everything else." (Chong, male, mid 40s, professor in journalism studies)

6. Conclusion

As presented earlier, social movement theories play an integral role in explaining why one participates in collective action. However, a problem with most social movement theories is their exclusive concern with either structural or individual factors, resulting in a lack of clarity pertaining to *"the mediating process between them"* (Langman, 2005, p.49). Furthermore, the majority of social movement studies have by and large, excluded the role of technology in helping collective action actors to overcome limitations and challenges embedded in their institutional structure. This study thus provides a timely response to the existing lacuna in collective action research. It combines approaches in political economy studies, micro-structural analysis and Internet studies to engender deeper insights into technology use for collective action. The practices and meanings behind technology use have to be understood in the light of institutional contexts which in turn shape micro-structural variables of participation.

In Singapore, myriad laws and measures implemented since the early days of Singapore's independence have weakened civil society and discouraged civic engagement on the part of the citizens. Laws that prohibit "illegal" public assemblies and speech that oversteps the boundaries of what is deemed as acceptable discourse are two main impediments for civic engagement and political participation. The marginalization of the opposition, coupled with the public's perception of traditional media as the mouthpiece of the ruling party, resulted in the migration of anti-establishment voices to the cyberspace.

By adopting an institutional and micro-structural approach, this study has shed light on how activist bloggers use Internet technologies such as blogs and social media to overcome limitations posed by a lack of collective incentives, structural proximity and structural availability. Internet technologies enable activists to communicate and work with like-minded activists in bringing about social change. Collective incentives are increased and they affirm activist bloggers' conviction pertaining to the importance of blogging about their activism work. Although a common reason provided by all political bloggers for blogging was to contribute to civic discourse, what unite activist bloggers are their common objects of opposition – the government and mainstream media. This study also confirms that Internet technologies play a critical role in increasing activist bloggers' structural proximity to other like-minded activists whom they had not met in the offline context. In an authoritarian state like Singapore where the regulation of offline and online discourse diminish individuals' willingness to engage in political talk and meetings, Internet technologies such as discussion forums, social media and blogs assume an integral role in enabling activist bloggers to "meet" other activists, thereby igniting their activism involvement. The World Wide Web becomes the meeting place for activists who were not aware of one another's interest or existence. In addition to increasing their structural proximity to others, activist bloggers overcome limitations of structural availability as Internet technologies provide time saving and cost-effective means for the coordination of activism work.

Preliminary observations of the Singapore blogosphere, substantiated by interview data in this study, suggest that the blogosphere in Singapore is characterized by bloggers assuming the role of alternative media, critics who provide commentary and analyses of Singapore politics and government policies. This is in stark contrast to the U.S. context where studies have shown the blogosphere to be a largely partisan one, split between the liberals and conservatives (Adamic & Glance, 2005; Hargittai, Gallo & Kane, 2008). The differences in political culture, regulatory regime and media system have also led to bloggers assuming different roles in both countries. Although

this study examines how technology is used to negotiate the institutional terrain in an authoritarian regime, it nevertheless reflects a critical extension in a literature that is typically North American centric and calls for comparative analyses of how new media technologies interact with collective action in authoritarian and democratic regimes.

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About the Author

Carol Soon

Dr. Carol Soon is Research Fellow at the Institute of Policy Studies. She is at the National University of Singapore and her research interests include digital activism. How individuals and organizations leverage new media to engender political and social change. Her work has been published in peer-reviewed journals and her recent paper on political bloggers and collective identity has been accepted by the *Journal of Computer-Mediated Communication* for publication. From August to December 2012, Dr. Soon was Visiting Research Fellow at the Asia Research Centre, Murdoch University, with support from the Australian Endeavour Award.

Open Data, Transparency and Open Innovation (peer-reviewed)

Re-Designing Open Data 2.0

Alon Peled

Department of Political Science, The Hebrew University of Jerusalem, Israel
(Alon.Peled@post.harvard.edu)

Abstract: Since 2009, eighty-one countries have subscribed to President Obama's Open Government program including its dominant Open Data (OD) component. Does Open Data 2.0 plan to address the problems detected during the first generation of this program (2010-2012)? If not, how can these plans be improved? This paper is the first-ever review of the main lines of criticism of the original OD program based on lessons learnt worldwide. OD1.0 suffered from bad design, flawed execution, and adverse consequences. Open Data 2.0 plans fail to address the critical flaws of the first Open Data program. The analysis of OD1.0 reveals two primary lessons for converting OD2.0 into a more focused and effective openness program: OD2.0 architects must consider agencies' data release strategies, and avoid creating a transparency "policy bubble". Numerous countries followed the path of the original American Open Data program; therefore, the future of this program will have an impact on bureaucracies worldwide.

Keywords: Open Data, Open Government, Information Technology, Transparency, Bureaucratic Politics

A "decidedly different" President Obama completely ignored the transparency issue during his 2nd inauguration; this issue defined the beginning of his first term (Rosenberg 2013, 1). Nine months earlier, in April 2012, twenty-two American federal departments and agencies published plans for "Open Government 2.0" as required by the Open Government Directive (OGD) of December 2009. Since 2009, eighty-one countries subscribed to the President Obama's Open Government program including its dominant Open Data (OD) component. However, many OD programs did not deliver on openness expectations. What were the main problems of the OD program worldwide? Do OD 2.0 plans address the problems detected during the first generation of this program (2010-2012)? If not, how can these plans be improved?

This paper argues that OD 2.0 plans fail to address critical flaws of the OD 1.0 program. For the first time, the paper identifies and categorizes the main lines of criticism of the OD 1.0 program based on lessons learned worldwide. It is found that OD1.0 suffered from bad design, flawed execution, and adverse consequences. Based on lessons learned from the OD1.0 analysis regarding agencies' data release strategies and the danger of a transparency "policy bubble", the paper proposes concrete ideas for re-designing OD 2.0 to create a more focused and effective program.

President Obama launched the Open Data campaign in 2009. Since then, eighty-one countries subscribed to the Open Government program including its dominant OD component. Therefore,

the future of the American OD program is important for efforts to improve transparency worldwide.

The task of assembling, sorting, and categorizing hundreds of globally published OD 1.0 sources was a key research challenge. OD commentators publish important insights in non-traditional forums including blogs, web pages, and newspaper stories as well as in more traditional sources such as scholarly books and journal articles. The painstaking methodological effort paid off. The paper presents concrete lessons that American OD 2.0 designers can learn from the OD 1.0 experience.

1. Transparency, Open Government and Open Data Defined

Transparency is openness to public scrutiny as defined by the rights and abilities of organizations and individuals to access government information and information about government. OD is the requirement that governments release authoritative, high quality, complete, and timely data on the Web in a downloadable, non-propriety, and license-free format. OD programs are intended to revitalize the economy and empower citizens to engage government (Bannister and Connolly 2011; Halonen 2012; Harper 2011; Van Den Broek et al. 2011).

2. President Obama's Open Government Blitzkrieg Campaign

While campaigning in 2008, Obama promised to reverse the post 9/11 "retreat from openness." Between election-day and inauguration-day, the Obama-Biden Transition crew commissioned a team to prepare the Open Government campaign. This team identified organizations that were willing to support a transparency agenda. President-elect Obama aimed to establish an "unprecedented level of openness in Government" and allies were "called to arms" (Millar 2011).

President Obama then unleashed a blitzkrieg openness campaign. On his first full day in office (January 21 2009), at the height of the worst economic crisis America had experienced since the Great Depression, Obama signed three memorandums and two executive orders. Four of these five documents promoted open government (White House 2009). Washington's bureaucrats were invited to provide the administration with direct input (instead of commenting via their agencies). Within months of the new administration Vivek Kundra was appointed the first-ever federal Chief Information Officer (CIO), and an array of Open Government sites were launched: www.recovery.gov (to track taxpayer funds), [eRulemaking](http://eRulemaking.gov) (to encourage agencies to use Information Technology (IT) in rulemaking processes), and the IT Dashboard site (to track federal spending of IT dollars). The administration continually showcased Open Government innovation stories (Millar 2011).

On May 21 2009, a team headed by the CIOs of both the Department of the Interior and the Environment Protection Agency (EPA) launched www.data.gov (OMB 2009), as the premier web publishing location for the most important federal datasets. On December 8 2009 the Office of Management and Budget (OMB) published the Open Government Directive (OGD). Agencies were instructed to publish at least three high-value datasets (datasets not previously made available or published in a downloadable and open format) (OMB 2009), to continually make new datasets available to the public (McDermott 2010, 402), and to show concrete progress every fifteen to thirty days. On June 1st, a White House report announced the success of the new OD initiative (Schuman 2009; Trudeau 2009; Wonderlich 2011).

Governments worldwide quickly adopted OD principles. Brown, the British Prime Minister launched his “Making Public Data Public” campaign in March 2010, shortly after the British OD site became operational. In April 2010, the World Bank launched an OD portal. Germany launched its OD project at the end of 2010. Denmark unleashed its own “Basic Data” campaign in October 2012. The European Commission launched an OD portal at the end of December 2012 (Jalote 2012). The American OD site displays the flags of forty-two countries and four institutions (the UN, the World Bank, the OECD, and the EU) that subscribe to the OD movement. Scholars explained how OD lowered the cost of internal governmental operations. The media highlighted how OD fought corruption and helped the economy. Police crime maps and comparative school performance tables attracted tens of millions of visits. OD supporters claimed that the cost of releasing data is negligible and the benefits are limitless (Bertot 2010; Davies 2010a; Davies 2013; Eaves 2010; Noveck 2012; Tinati et al. 2012).

3. OD 1.0: Bad Design, Flawed Execution, and Adverse Consequences

In practice, the OD program suffered from bad design, flawed execution, and adverse consequences as presented in figure 1.0 below and explained in the following three sections:

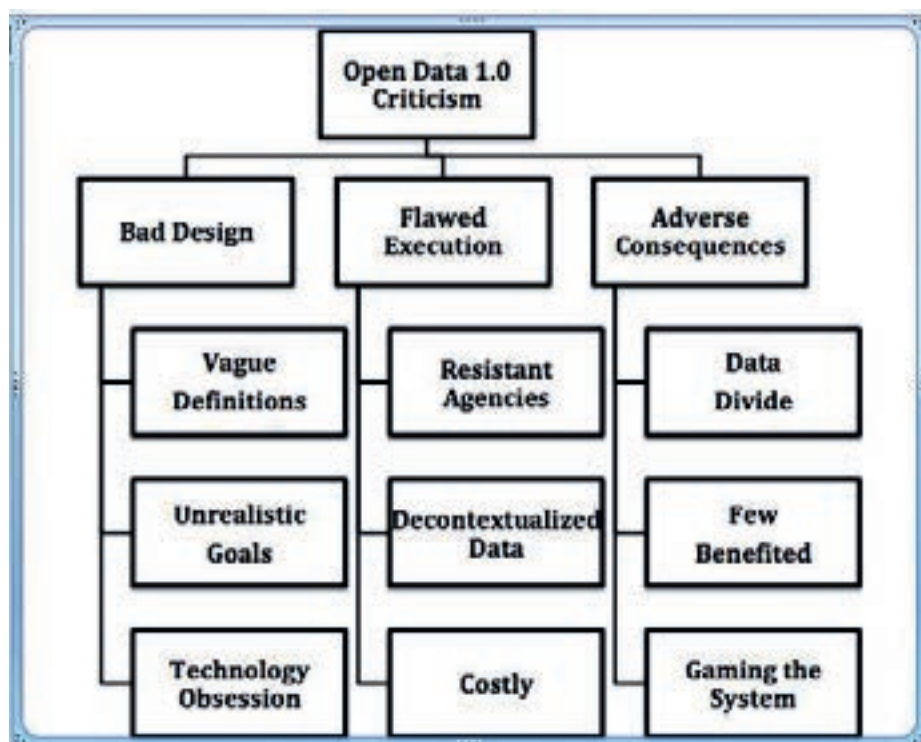


Figure 1: Open Data 1.0 Criticism

3.1. Bad Design

Lack of a clear definition of OD led to it becoming a vogue but vague concept; a catch-all phrase with amorphous meaning (Yu and Robinson 2012). To some people, the OD concept meant the release of downloadable data. Others interpreted OD to imply the release of data to boost the economy. Still, others considered OD to be a program designed to release information about the government. This vague definition fragmented the OD community (Hall et al. 2012; Schellong 2011; Yu and Robinson 2012).

The Obama Administration used this vague definition to feature its catch-all OD project, and deflect attention from other faltering electoral openness programs. International organizations similarly used the vague OD label to highlight government openness. The OGP accepts any country based on a vague pledge to become more open (Yu and Robinson 2012). OGP members include countries defined as non-free or as partially-free by the Freedom House. The American OD web site also lists non-free and partially-free countries as OD countries. Country offerings are often sparse, for example Hong Kong “qualifies” as an OD country based on 32 datasets that eight agencies released (<http://www.gov.hk/en/theme/psi/datasets>).

OD1.0 design was hindered by an unrealistic goal of maximizing transparency. Compelled to live in glass houses, bureaucratic behavior is affected by the culture of surveillance. Bureaucrats cease to dissent, refer all decisions upwards, and adopt defensive thinking and blame avoidance strategies. Rather than speaking openly to those in power, bureaucrats learn to cover-up and to self censor their advice (Bannister and Connolly 2011; Coglianese 2009; Prat 2006). The unrealistic and limitless goals of the OD 1.0 program alarmed bureaucrats who were wary of such absolute transparency.

A third design flaw was the focus on technology as an indicator of transparency (Bass et al. 2010; Gurstein 2011b). OD architects constructed glitzy websites but agencies could not keep up with the fast advent of web technology. Agencies often recreated a complex, inefficient organizational structure on the Web. A survey of seventy-five European local government web sites revealed that these sites reflected present service delivery patterns rather than transforming them. American agencies struggled with tough legal obstacles; the average federal web designer must comply with twenty-four different regulatory regimes (Pina, Torres, and Royo 2007; Pina, Torres, and Royo 2010; Robinson et al. 2009).

3.2. Flawed Execution

In the US, the OGD gave agencies discretion to decide what data to publish and to evaluate their own performance; this allowed agencies to passively resist the OD program. Many agencies did not set openness deadlines for themselves or publish performance data; others refused to share data release plans; or did not live up to the goals that they themselves created. Not surprisingly, most agencies that assessed their own performance awarded themselves the highest compliance ranking (The White House 2010; Wonderlich 2011).

Most agencies reluctantly joined the OD program. In mid 2011, 172 American agencies participated in the program; yet, only three agencies (The CENSUS, the US Geological Survey (USGS), and the National Oceanic and Atmospheric Administration (NOAA) uploaded about 99% of the content. The average participating agency has not returned to www.data.gov for 222 days since its last data.gov transaction (Peled 2011). European agencies too reluctantly participated in OD programs and dumped volumes of purposeless raw data into cyberspace (Public Accounts

Committee 2012; Van Den Broek et al. 2011). In Britain, Estonia and Denmark certain agencies refused to free data because their income was partially dependent on data sales (Public Accounts Committee 2012, Van Den Broek et al. 2011).

Scholars explained that agencies refused to cooperate with the OD program because they derived income from data sales. Other scholars suggested that agencies refused to free datasets because they are 'bargaining chips' in inter-agency relationships. A third group of scholars argued that agencies manipulate their closely held datasets to convince legislatures to grant them budgets. So, the OD program offered agencies a 'bad deal.' Politicians received public approval for 'freeing data' while agencies were given the thankless job of preparing data for release. Agencies therefore minimized their OD involvement (Harper 2012b; Peled 2011; Van Den Broek et al. 2011).

Another execution problem was the de-contextualization of data. Data wrapped in context and traceable to its sources is a record. Records are the blood cells of governmental work. The OD program divorced datasets from their source records, resulting in agencies converting useful records into useless datasets (Bass et al. 2010; Thurston 2012). The EPA maintains context-rich Toxic Release Inventory (TRI) records on its web site, which were sliced and diced into numerous, context-free datasets and uploaded to www.data.gov. In addition, the OGD did not prioritize what data to release first (Harper 2011), and did not establish mechanisms for citizens to verify data's accuracy, completeness, and authenticity (Cole 2012; Davies and Bawa 2012; Thurston 2012). Agencies released voluminous and meaningless datasets; repackaged data goods previously published elsewhere; and did not indicate if released datasets were previously available. The data lacked descriptions and, sometimes, datasets could not be downloaded or opened. Agencies did not offer mechanisms to report about data problems; nor did agencies provide explanation for the removal of released datasets (Bass et al. 2010).

Finally, OD architects did not consider the cost of 'freeing' data. Agencies hired staff to understand new legislation, adjust data to new standards, train employees, and improve data quality. Agencies also converted hand written and verbal data into digital records and integrated non-compatible data streams to prepare data for release. These activities were costly and not included in the agencies' budgets (Bannister and Connolly 2011; Cole 2012; Schellong 2011; UK Comptroller and Auditor General 2012).

3.3. Adverse Consequences

The OD program did not decrease the information divide between developed and developing countries. Developed states have good data collection mechanisms operated by skilled bureaucrats. Developing countries lack such bureaucrats and their public data is often incomplete or misleading. In developing bureaucracies citizens usually neither contribute nor participate in efforts to use data. Data seekers must navigate a bureaucratic maze after data is released. OD helped developed countries to use their public data better while offering little to developing countries (Davies 2010a; Davies 2013; Gurstein 2012; Raman 2012a; Raman 2012b; Thurston 2012).

The OD program benefited limited stakeholders; it empowered the already empowered few such as corporations and software developers who jointly possess the funds and expertise to integrate data (Cole 2012; Gurstein 2011b; Janssen 2012; Mayer-Schönberger and Zappia 2011). Life science corporations hired software developers to link and analyze datasets related to medical information that they could not previously access. Wealthy landowners hired software developers to exploit released data. In effect, OD provided a tax-free subsidy to wealthy corporations that no

longer needed to pay for data (Bates 2012; Davies 2011, 2013; Feldman 2011; Gurstein 2011c). Neoliberal politicians manipulated OD to mobilize public pressure to expand the outsourcing and marketization of governmental services (Bates 2012; Davies 2013; Dunleavy et al. 2006; Halonen 2012; Longo 2011).

The OD program did not empower citizens and bureaucrats. Sometimes, bureaucrats had to purchase back their own data from private corporations (Bates 2012). Citizens' mistrust of government grew as the media published OD evidence regarding alleged waste in government. Only 1% of all www.data.gov visitors have downloaded a dataset. Likewise, the UK Comptroller discovered that 80% of all visitors to www.data.gov.uk left the site without downloading data (Bannister and Connolly 2011; Davies 2010b, 2011; Fioretti 2012; Janssen 2012; McClean 2011; Peled 2011; The White House 2012).

Finally, individuals and institutions learned how to "game the [OD] system." Real estate agents used crime maps to lock urban neighborhoods plagued by crime into their current difficult state. Schools learned how to manipulate performance tables to attract the 'right students.' Life-science corporations gamed the system to get access to unidentifiable but sensitive medical records. The media manipulated data to enhance corruption allegations (Bannister and Connolly 2011; Davies 2010a; Davies 2011; Fioretti 2012; McGinnes and Elandy 2012).

4. OD 2.0 Plans: More of the Same

At the beginning of 2011, the US OD architects left office. In February, Noveck departed her post as the Deputy Chief Technology Officer of the White House. Kundra resigned as CIO in June (Wadhwa 2011). Still, the White House claimed that the OD program contributed substantial and measurable transparency gains (The White House 2012). Kundra claimed that the OD program saved \$3 billion before the economic crisis forced the Government to cut the OD budget. Noveck claimed that OD created a "community of innovators across the executive branch" (Millar 2011). However, OD 1.0 problems surfaced long before the program's budget was slashed.

Politicians' enthusiasm for OD began to wane. President Obama did not address the transparency issue during his 2nd inauguration (Rosenberg 2013). In Britain, David Cameron instructed agencies to release some datasets for public consumption but refrained from adopting all-or-nothing demands of his predecessor (Brown) of "Making Public Data Public." Mr. Clarke, the Australian Secretary of the Department of Resources, Energy and Tourism formally rejected a recommendation to license at zero price geo-spatial data to the entire public sector (Lawrence 2011, Office of Spatial Policy 2012).

In designing OD2.0, agencies had no reason to change their behavior. In April 2012, agencies published OD 2.0 plans congratulating themselves for creating a "culture of openness." Similar to OD1.0, OD 2.0 plans are technology-focused, and agencies proposed to set their own openness goals and self-measure their compliance (Bingham and Foxworthy 2012).

5. Lessons from OD 1.0

5.1. Agencies Data-Release Strategies

The analysis of OD1.0 reveals two primary lessons for converting OD2.0 into a more focused and effective openness program: OD2.0 architects must consider agencies' data release strategies, and

avoid creating a transparency “policy bubble”. The disappointing performance of the global OD movement demonstrates that agencies are reluctant to release datasets for free. A closer analysis reveals that agencies strategize to either “hug” datasets that they can trade with other agencies, or “brand” datasets to secure public funding. British, American and European agencies that trade datasets with other agencies or sell them to the public, appeared to cooperate with OD programs whilst in fact “hugging” their valuable datasets by releasing very little data (UK Comptroller and Auditor General 2012) (Van Den Broek et al. 2011). Both British and American agencies believe that they have ownership of their valuable datasets (Halonen 2012).

In contrast to data “hugging” practices, other agencies adopted an information branding strategy of publishing large quantities of valuable datasets on OD web sites, to secure continued access to public funding. For example, when Google Earth appeared in 2005, NOAA began providing valuable spatial datasets free of charge to Google. NOAA’s information branding strategy paid off; Google lost its appetite to develop competing datasets and the American Congress continues to fund the NOAA programs that generate these datasets.

OD2.0 architects must accept that data is valuable to agencies and be aware of agencies’ data release strategies in designing a more realistic OD program. Rather than threaten bureaucratic data ownership and treat bureaucrats as an incompetent threat, an OD program can rally an existing cadre of reform-oriented bureaucrats and ensure that data-release concerns are addressed (Kelman 2004). Legislatures must provide a legal framework such as an OD Commons to determine who owns public data after its release. Legislatures must also direct the OD program to pursue activities that only the government can provide such as the construction of a Trusted Digital Repository (TDR). Norway successfully introduced legislation, technical standards, and architecture to expose public data that is complete, accurate, timely, and trustworthy (Robinson et al. 2009, Thurston 2012).

In an OD program that acknowledges the value of data, ‘open’ can no longer imply ‘free.’ Agencies will lose motivation to develop raw data into information if coerced to “free” the information. One solution is to reduce the cost of OD rather than ‘free’ it. An American state, Georgia, has already done so. Similarly, the Finish National Mapping and Cadastral Agency (NMCA) sells data to public entities for a minimal cost. The Swiss NMCA introduced a ‘freemium’ program that supports the release of some data cheaply to mobile users while collecting higher prices from those who want higher-resolution maps. These policies have provided more openness than the “everything-for-free” OD 1.0 promise (Economist 2012, EuroGeographics 2009, 2010).

5.2. The Danger of a Transparency “Policy Bubble”

The global OD 1.0 program mimicked the behavior of a policy bubble. A “policy bubble” is created when a euphoric atmosphere, and over confidence characterize a new policy. A policy bubble is focused on a simplistic and self-enforcing set of ideas, and is fueled by media frenzy. Policy bubbles are ubiquitous and, when they burst, they wreak havoc on an entire policy system. Historical examples of policy bubbles include investment-mania in the British railway during the 1840s and the American Apollo Space Program. The OD program was accompanied by just such over-confidence and media hype. The bursting of the OD policy bubble would impact negatively the willingness of politicians, bureaucrats, and the public to invest in future transparency programs (Gisler and Sornette 2010, Jones 2012, Jones and Baumgartner 2005, Jones et al. 2013, Levitin and Wachter 2011, Maor 2012, Raafat et al. 2009, Shiller 2005, 2012).

To avoid this fate, OD 2.0 must become a component of a wider transparency program. More modest OD architects will adopt minimal but realistic goals for the OD component of a larger transparency program focused on improving governmental services to citizens or improving information on regulated entities (Shkabatur 2012). We can identify domains appropriate for OD and domains more suited to alternate transparency channels. For example, an OD program would effectively support the release of historical and infrastructure information but less effectively the release of planning and operational data. A FOI-type program might do better than OD to help citizens unravel sensitive information (Cameron 2012, Clarke 2010, Eaves 2011, Halonen 2012). OD may also work better at the local rather than the national level (Davies and Edwards 2012, Fioretti 2012, Rath 2012, Tolbert and Mossberger 2006).

A broader transparency program would tap into the range of existing OD innovations, and accept that genuine transparency is groomed over many years. Scientific, professional, and local communities have been nurturing OD channels years before the OD movement emerged. American agencies have initiated valuable OD channels: since October 1999, the SSA has been sending annual statements of benefits to eligible Americans; in 2002, 25 USA agencies jointly created an online grants application web portal that provides information on over 1,000 grant programs (Cook 2010) (GAO 2011). Introducing transparency is a process that takes many years. The American National Archives and Records Administration (NARA)'s new declassification portal (2012), owes its success to a breakthrough made sixteen years earlier (OMB Watch 2012a). Likewise, online sites such as www.foia.gov owe their existence to legislative battles to create the FOIA in 1967 and the Electronic FOIA in 1996 (Braman 2006).

A transparency program that avoids a policy bubble must place the issues of data quality and context at the center. Citizens and bureaucrats must collaborate to identify errors in the data. Officials must retrieve published data using the same infrastructure made available to the public. Crowdsourcing techniques can add context to released data; with improved context, the threshold for using the data would be lowered (Fioretti 2012, Halonen 2012, Robinson et al. 2009). Releasing high quality, context-rich data is expensive. Therefore, an effective OD program must search for the sweet spot: high quality information that can be released for a low data-integration cost and have a lasting impact on citizens' lives (Feldman 2011, GAO 2010, Kuk and Davies 2011, Public Accounts Committee 2012, UK Comptroller and Auditor General 2012). To control cost, an OD program must curb the appetite of IT vendors to pursue technological experimentation for its own sake (Heald 2006, Hendler 2010, Henry 2009, OMB Watch 2012b). Such a program must also adopt measures to ensure that it does not increase the gap between the "data haves" and the "data have-nots." Some OD expenditures could be invested in activities that reduce data gaps including training civic activists to convert raw data into useful information and increasing digital literacy (Davies and Edwards 2012, 2013, Gurstein 2011a).

6. Open Data: Too Much of a Good Thing?

OD is a good thing but, as one scholar suggested, "it is possible to have too much of a good thing" (Coglianese 2009, 530). In some domains, OD can be an effective means to improve decision making and services to citizens; in other domains, OD does not help and could even do harm (such as having a chilling impact on the behavior of bureaucrats). Reformers must take into account that data is valuable to agencies, and that transparency is a big task that requires the creation of

multiple openness channels. A well-designed transparency program must cut to size the aspirations and goals of its OD component.

An effective OD program requires time and patience to grow. Politicians promoted the OD 1.0 program aggressively, hoping to extract PR benefits from its fast implementation. The results of this program were therefore mediocre. The key question is: will politicians agree to invest time and energy to promote a more modest and more effective OD 2.0 that is likely to yield less public relations gains but more high-value transparency?

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About the Author

Alon Peled studies information flows within the public sectors of countries worldwide. He develops models to commoditize knowledge as a contested commodity to improve knowledge sharing in the public sector.

Towards an e-infrastructure to support the provision and use of open data

Anneke Zuiderwijk*, Marijn Janssen**, Keith Jeffery***

* Anneke Zuiderwijk, Delft University of Technology, Faculty of Technology, Policy and Management, The Netherlands, a.m.g.zuiderwijk-vaneijk@tudelft.nl

**Marijn Janssen, Delft University of Technology, Faculty of Technology, Policy and Management, The Netherlands, m.f.w.h.a.janssen@tudelft.nl

*** Keith Jeffery, euroCRIS, United Kingdom, keith.jeffery@keithgjefferyconsultants.co.uk

Abstract: Public and private organizations are increasingly publishing their data on the internet, as open data have considerable potential to stimulate transparency, economic growth, innovation, citizen participation and numerous other advantages. These data publishing organizations pay little attention to the way that open data can be reused, whereas this should enable the realization of the advantages of open data. Because of this lack of attention for the reuse of open data, there is no supporting e-infrastructure and users are not able to exploit the potential of open data. In this paper, we derive requirements for an open data e-infrastructure from literature, interviews, a questionnaire and workshops and develop an e-infrastructure focussed on meeting a part of these requirements. The resulting ENGAGE e-infrastructure supports the provision and reuse of open data by functionalities in five categories, namely 1) data provision, 2) data retrieval and use, 3) data linking, 4) user rating and 5) user cooperation.

Keywords: Open data, infrastructure, open data e-infrastructure, reuse, requirements, service, design science, design science research methodology

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Public and private organizations are increasingly publishing their data on the internet (McDermott, 2010; Meijer & Thaens, 2009). These published data are referred to as open data and can be reused by researchers, citizens, journalists, civil servants and other stakeholders.

The main reason for opening public and private data is the finding that reusing open data has considerable potential to realize numerous advantages, including the stimulation of transparency, accountability, economic growth, innovation and citizen participation (Blakemore & Craglia, 2006; European_Commission, 2003, 2011; McDermott, 2010; Zhang, Dawes, & Sarkis, 2005).

Many public and private organizations that are releasing their data are simply putting their data on the internet without providing contextual information or linkage to other data. Many data providing organizations do not consider the way that their open data can be reused or how they

can get feedback on the data that they published, as shown by the absence of advanced service e-infrastructures for the reuse of open data, that include tools that enable cleaning, analyzing, visualizing and linking datasets (Charalabidis, Ntanos, & Lampathaki, 2011).

Reuse of open data should enable the realization of the advantages of open data while merely publishing data does not. Due to the lack of attention for the reuse of open data, users are not able to exploit the potential of open data to the fullest. For example, services for the use of open data towards the end-user are often lacking (Papadakis & Kyprianos, 2012). Although the reuse of open data can be stimulated in different ways, e-infrastructures (i.e. infrastructures based on Information and Communication Technologies (The European Union (2010)) are expected to play an important role in this (Charalabidis, et al., 2011; European_Union, 2010), directly helping with using data, in this way immediately showing the value of using open data to users and motivating them to use open data again in the future.

According to the European Union, e-infrastructures are “an essential foundation of all research and innovation” (p. 2). Nevertheless, current information infrastructures pay little attention to applications and services (Shin, Kim, & Lee, 2006). Linked Data, which refers to “a collection of interrelated datasets on the Web” (World_Wide_Web_Consortium, 2011, <http://www.w3.org/standards/semanticweb/data>), provide a part of an infrastructure that can support the provision of open data. Linking and relating datasets on the web is not enough to enable reuse. Infrastructures for open data should provide tools and mechanisms that allow sharing, exchanging and reusing data in common harmonized formats to incorporate different types of open data resources as well as data curation, semantic annotation and visualisation tools(Charalabidis, et al., 2011). E-infrastructures for open data should be targeted at end-users, as services for open data targeted toward the end-user are currently lacking (Papadakis & Kyprianos, 2012).

In this paper, we use a design science approach to 1) derive requirements for an open data e-infrastructure and 2) present such an e-infrastructure that meets a part of these requirements, in this way stimulating the realization of advantages of open data. In the following sections, the methodology for deriving requirements for an open data e-infrastructure will be described, and an overview of the requirements, linked to the elements of open data e-infrastructures will be presented. An example of the implementation of the requirements and elements is shown by describing the ENGAGE open data platform, illustrating the realization of the advantages of the open data e-infrastructure.

1. Research Approach

Design science is used to achieve the aim of presenting a service providing e-infrastructure to stimulate the realization of the advantages of open data, because “design [...] is concerned with how things ought to be, with devising artefacts to attain goals” (Simon, 1996, p. 114). Peffers et al. (2008) proposed the Design Science Research Methodology (DSRM) for conducting design science research in the discipline of Information Systems (IS). The DSRM process consist of the six following steps. First, the problem should be identified and motivated. In the introduction of this paper it was postulated that because of the lack of attention for the reuse of open data, users are not able to exploit the potential of open data to the fullest, while open data are expected to result in considerable advantages (Blakemore & Craglia, 2006; European_Commission, 2003, 2011; McDermott, 2010; Zhang, et al., 2005).

Second, the objective of a solution should be defined. The main objective is an e-infrastructure aimed at meeting the requirements of potential users, stimulating the realization of advantages of open data by providing services for data provision and data reuse. To define more specifically how this objective could be realized, requirements for an open data infrastructure were gathered from the following sources.

- Literature overview. An overview of literature about requirements for open data e-infrastructures was researched by searching for journal papers, conference papers, books, governmental and non-governmental reports and other information.
- Interviews. Six semi-structured expert interviews were conducted to obtain more in-depth information about requirements for open data e-infrastructures in December 2011 and January 2012.
- Questionnaire. The questionnaire aimed at obtaining information about the state of the art of using open public sector data in general. The questions concerned the extent to which a number of purposes was important for the respondents' use of open public sector data, to which extent the respondent was able to perform a large number of actions when using open data and to which extent the respondent found these actions useful. Approximately 300 people filled out a part of the questionnaire and about 50 per cent of them filled out all questions.
- Workshops. Four workshops were conducted at international events. The workshops aimed at engaging a diverse composition of open data users, as different users are expected to mention different requirements. Furthermore, the workshops were performed in different countries, in this way reaching a large number of people with different nationalities. The following workshops were conducted between May 2012 and September 2012.
 - International Conference for E-Democracy and Open Government (CeDEM12), "Open Linked governmental data for citizen engagement - A workshop about the benefits and restrictions of open linked governmental data and the role of metadata in citizen engagement" (90 minutes, n=17).
 - Annual International Conference on Digital Government Research (DG.O2012), "Linking open data - Challenges and Solutions" (half day, n=22)
 - Samos 2012 Summit on Open Data for Governance, Industry and Society (Samos Summit), "Open Data Requirements" (90 minutes, n=16)
 - IFIP - Electronic Government Conference (IFIP EGOV 2012), "A workshop about using open public sector data: The ENGAGE project" (half day, n=10)

Third, the artefact should be designed and developed. The open data e-infrastructure was developed on the basis of the requirements identified in step 2 and project requirements (for example, technical requirements that enable the realisation of the user requirements of step 2).

Fourth, the artefact needs to be demonstrated. The e-infrastructure, entitled ENGAGE, is publically available via www.engagedata.eu. Anyone can access this website and use the e-infrastructure. The e-infrastructure is presented to open data users at several events (e.g. conference workshops and presentations) and via Twitter, LinkedIn, Facebook and newsletters.

Fifth, the artefact needs to be evaluated. The ENGAGE 1.0 open data e-infrastructure was evaluated by conducting an online user questionnaire, an internal experts SWOT analysis, a

usability test with students and a qualitative discussion. On the basis of these evaluation activities, the e-infrastructure was further improved, which led to the development of ENGAGE 2.0 and 2.5.

Sixth, the artefacts should be communicated. The ENGAGE e-infrastructures were communicated to users of open data by giving presentations at conferences, organizing workshops, writing publications (for instance, Janssen, Charalabidis, & Zuiderwijk, 2012; Zuiderwijk, Jeffery, & Janssen, 2012), giving lectures to students at Delft University of Technology in the Netherlands and at the University of AEGEAN in Greece, sending newsletters to a large network of open data users and using social media, including Twitter, LinkedIn and Facebook. In the future, hackathons and other activities will be organized.

2. Requirements for and Elements of the Open Data E-Infrastructure

Table 1 shows the list of requirements for and elements of the ENGAGE 2.5 open data e-infrastructure. Some requirements were added by the project members, indicated in the table between brackets. The infrastructure will be implemented mid-2013. The requirements are ordered by category and not by priority, because it is difficult to prioritize requirements, as one requirement may be important for one way of using data, while it is less important for another way of data use. Nevertheless, for many way of using open data a good metadata model seems to be important, as it could fulfill many important requirements.

Table 1: Requirements for and elements of an open data e-infrastructure, organized by category.

Category	Requirements for e-infrastructure	Elements of ENGAGE 2.5 e-infrastructure (not implemented yet)
Access	<ol style="list-style-type: none"> 1. Provide a good overview of which data are available for reuse and make them accessible. 2. Preferably provide data free of charge. 3. Support the use of different languages for the same dataset. 4. Provide easy access on a daily basis (e.g. be reliable in terms of accessibility of the website, response times, make sure that the webpages are loaded quickly) 5. Provide recent, less recent, old and historic data. 6. Provide datasets on different government levels, such as the local, national and international level. 7. Pay attention to interoperability of the infrastructure with other systems. 8. Provide real-time data. 9. Provide data that are interesting for building applications. 10. Provide a sustainable platform, so that users get the confidence that they 	<p>In ENGAGE 2.0 hundreds of datasets are provided from various organizations from different countries, including data that are interesting for building applications are provided, such as datasets about tourism, transport, crime and community safety and elections. All data are free of charge. Real-time data will not be provided in this phase of ENGAGE.</p> <p>Data can be searched through a catalog-driven portal, that integrates open data from several other open data websites which are now fragmented. Data can be searched by using 1) the simple search functionality, 2) the advanced search functionality (including spatial and temporal facets), 3) by searching on category and 4) by searching on country.</p> <p>ENGAGE will have a rich metadata model based on the Common European Research Information Format (CERIF) (see EuroCRIS, 2010; Zuiderwijk, et al., 2012), that enables multilinguality of the metadata of datasets and that uses a relational database for persistence and that supports interoperability to a large extent (see Zuiderwijk, et al., 2012). Sustainability is achieved by providing a CERIF-based metadata architecture that adapts to future changes and is usable on the long term by being flexible and changeable.</p> <p>Development of transformation libraries for importing and exporting the metadata to or from CERIF in the Resource Description Framework (RDF) and the Comprehensive</p>

	<p>can use the platform for a long time.</p> <p>11. Provide a large number of datasets.</p>	<p>Knowledge Archive Network (CKAN) (Open_Knowledge_Foundation, 2007) JavaScript Object Notation (JSON) schema (Wikipedia, 2012a) and in the e-Government Metadata Standard (e-GMS) (ESD_Standards, 2004) and the commonly used DC (Dublin Core) metadata formats (Dublin_Core_Metadata_Initiative, 2010).</p> <p>There will be an import and export functionality enables using common metadata formats from/to appropriate open data websites (e.g. data.gov.uk and thedatahub.org).</p> <p>Easy access is stimulated by enabling different ways of user authentication (e.g. via other existing Facebook or LinkedIn accounts of users)</p> <p>Pagination will be included through Asynchronous JavaScript and XML (AJAX) calls, to reduce load time.</p> <p>Because of the relative youth of Information and Communication Technologies (ICT), most datasets are historically recent and in general from the last decade. Increasingly ENGAGE will access sources providing data of historic value (e.g. census data). Datasets are provided on all three levels, although in general national level datasets are of higher quality as they support government decision-making.</p> <p>A wrapper will be developed (i.e. middleware) that translates CERIF entities to business objects that correlate with the several metadata schemas commonly used in the Linked Open Data (LOD) domain.</p> <p>A Wiki engine is integrated (XWiki).</p> <p>The ENGAGE e-infrastructure is supported by the European Commission and nine partners from different countries.</p>
Search- ing	<p>12. Make sure that ENGAGE can be found easily via Google and other websites is referred to on websites of governmental organisations.</p> <p>13. Provide a good search functionality with advanced search fields.</p> <p>14. Make it possible to search for/through metadata.</p> <p>15. Provide tags that make search easier.</p>	<p>The ENGAGE e-infrastructure can be found via the Google search machine and it is referred to on various websites, such as http://t-government.blogspot.com, www.linkedin.com, http://epsiplatform.eu and www.opendataforum.be.</p> <p>An advanced search functionality is provided and tags are provided. Finding results that the user is looking for is made easier by providing many types of metadata, derived from and based on CERIF (EuroCRIS, 2010; Zuiderwijk, et al., 2012). The import and export of metadata is provided for CKAN, eGMS and DC and this list can be extended as requirements develop.</p>
Navi- gation	<p>16. Make sure that the features for the user interface are very clear and provide clear navigation.</p> <p>17. Show process directions already on the home page.</p> <p>18. Make it possible to click on target groups or target group features on the home page, that direct people to parts of the website where they get the support that they need.</p>	<p>Breadcrumbs are added to all pages, in order to assist navigation. Clear buttons are provided for the main functionalities of the website, such as 'sign in' and 'search' buttons. The appropriate user interfaces in the website are created using Spring model-view-controller (MVC).</p> <p>Enabling user authentication and allow users to create user groups. Each user can register and login and each group can add and own datasets. User profiles are created, stored in a relational database. The user authentication is integrated in the Wiki, so that users have the same credentials there as in</p>

	<p>19. Use different interfaces/models for different target groups. Within those target groups, make different interfaces/models for different communities.</p> <p>20. Create a personal website, to enable user authentication via different ways (e.g. social media). (added by project members)</p>	<p>the rest of the ENGAGE infrastructure. Functionalities are created aimed at the various profiles (e.g. provide tools for statistical analysis for researchers).</p> <p>Search facets covering particular user groups as well as geographic and temporal ranges are being developed.</p> <p>Data source information is provided to ensure appropriate rights management and provenance information.</p>
Up-loading	<p>21. Allow for uploading data in different formats. <i>(added by project members)</i></p> <p>22. Allow for uploading derived datasets (i.e. reused datasets are uploaded again, related to the original dataset) <i>(added by project members)</i></p> <p>23. Provide very clear instructions for uploading datasets.</p> <p>24. Provide clear tutorials/videos about the risks and benefits of uploading datasets (e.g. what are the responsibilities of the data provider and user).</p> <p>25. Governmental employees are very risk-averse, so pay much attention to data security.</p> <p>26. Provide information about which datasets can be published and which cannot be published (e.g., provide a framework that helps identifying privacy sensitivity).</p>	<p>Requirements 21 and 22 are being evaluated because of the resource implications on the ENGAGE platform. It is likely that only temporary, not permanent, dataset storage will be available and that the user will subsequently need to store the dataset at some other location – but with the metadata stored in ENGAGE.</p> <p>An extension is written for Open Refine that automatically uploads the user's file as a CSV or Excel file in ENGAGE (export function)</p> <p>Addition of an import function to the Open Refine extension, which allows users to create a new Open Refine project based on the contents of a resource available in the infrastructure.</p> <p>Implementation of a Representational State Transfer (REST) server-side endpoint that facilitates importing and exporting resources.</p> <p>Requirement 24 to 26 could be fulfilled but this requires resources.</p>
Down-loading	<p>27. Enable downloading data as well as downloading metadata.</p> <p>28. Enable downloading data in different formats.</p>	<p>Development of backend based on the CERIF metadata model (EuroCRIS, 2010; Zuiderwijk, et al., 2012), that uses a relational database for persistence.</p> <p>Development of a wrapper (i.e. middleware) that translates CERIF entities to business objects that correlate with various metadata schemas.</p> <p>Development of transformation libraries for importing and exporting the metadata to or from CERIF in RDF, the CKAN JSON schema and in eGMS and the commonly used DC metadata formats.</p> <p>Data source information is provided to ensure appropriate rights management and provenance information.</p> <p>Requirement 28 requires a suite of converters for different data formats. ENGAGE may develop this as requirements evolve.</p>
Data quality	<p>29. Make clear to users what the quality of the data is and provide good quality data as much as possible. However, the definition of quality data depends on a person's background. Certain open data can be of good quality for one purpose, but</p>	<p>The rich metadata (CERIF) provides as much information as possible on provenance and data quality, in this way allowing the end-user to make an appropriate selection of datasets of relevance.</p> <p>Open Refine (a third party tool, see http://code.google.com/p/google-refine/) is implemented</p>

	<p>not for another. For those data that are not of good quality, make it possible to work with messy data.</p> <p>30. Develop a good rating system for the data, using literature about information quality.</p> <p>31. Make sure that different types of people rate the quality of the dataset (e.g. both providers and users).</p> <p>32. Make sure that users can see the distribution of opinions about the quality of the dataset, not just a general average. If data are not suitable for one purpose, they may still be suitable for another purpose, so rate different types of datasets.</p> <p>33. Provide considerable metadata, as this should help to assess the quality of the data (e.g. provide information about the project that generated the dataset(s) and how it was funded, provide information about related publications which may assist in understanding the dataset(s) and provide information about the facilities and/or equipment used to produce the dataset)</p>	<p>to scrutinize datasets, so that the user obtains information about its quality. Open Refine can also be used to improve the quality of the data, for instance by cleansing the dataset.</p> <p>A user rating system of datasets is being developed with a distribution of opinions about the quality of the dataset.</p> <p>Development of backend based on the metadata model Common European Research Information Format (CERIF) (EuroCRIS, 2010; Zuiderwijk, et al., 2012), that uses a relational database for persistence.</p> <p>Development of a wrapper (i.e. middleware) that translates CERIF entities to business objects that correlate with the metadata schema.</p> <p>Development of transformation libraries for importing and exporting the metadata to or from CERIF in RDF and CKAN JSON schema (Wikipedia, 2012a) and in e-GMS and the commonly used DC metadata formats.</p> <p>Data source information is provided to ensure appropriate rights management and provenance information.</p> <p>Requirement 31 cannot be mandated but will be encouraged. The user group of the rater will be associated with the rating.</p>
Analy- zing	<p>34. Provide tools to analyse the data.</p> <p>35. Provide tools to clean messy datasets.</p> <p>36. Provide information about which analyses are relevant for the kind of dataset offered (type of data, attributes recorded, accuracy, precision, privacy issues, security).</p> <p>37. Provide help and recommendations for the evaluation of policies and policy developments (e.g. an evaluation framework).</p> <p>38. Make it possible to easily obtain information out of statistical analysis (e.g. download in a PDF).</p> <p>39. Make it possible to convert unstructured data to structured data. <i>(added by project members)</i></p> <p>40. Make it possible to generate automatic reports (e.g. reports of statistical analysis and visualisations).</p> <p>41. Make it possible to forecast future developments based on historical developments.</p> <p>42. Assist in analysing policies across boundaries (by linking)</p>	<p>Write an extension for Open Refine that automatically uploads the user's file as a CSV or Excel file in ENGAGE (export function). Add an import function to the Open Refine extension, which would allow users to create a new Open Refine project based on the contents of a resource available in the e-infrastructure.</p> <p>Implementation of a Representational State Transfer (REST) server-side endpoint that facilitates importing and exporting resources.</p> <p>Integrate a Wiki engine (XWiki).</p> <p>On user request, retrieve data from Scraperwiki and publish them as an Excel Binary File Format (XLS) or Comma Separated Values (CSV) resource for a dataset.</p> <p>Requirement 40 and 41 require development of linkages between datasets described by metadata and available processes. This is being evaluated. Requirement 43 is achieved by identification of the source of the dataset from where the policies may be obtained.</p> <p>An evaluation framework for policies in open data is outside the scope of the present phase of ENGAGE. Conversion to PDF from other data formats is being evaluated.</p>

	43. Provide information about national, ministerial and local open data policies related to this dataset (e.g. provide a link for each dataset about possibly relevant policies).	
Visualizing	<p>44. Enable visualising data in tables. Make sure that they can be copied, so that they can be used in research (e.g. academic publications). Visualisation helps to understand data and to bring it into context.</p> <p>45. Enable visualising data in maps.</p> <p>46. Enable visualising data in charts.</p> <p>47. Provide geo referencing in combination with visualisation tools.</p> <p>48. Provide the possibility to visualize metadata, not just to visualize the data.</p>	<p>Visualisation of structured tabular datasets, geospatial data in maps and numeric data in charts is being provided.</p> <p>Geospatial coordinates exist in the data and can be deduced from the visualisation tools.</p> <p>Requirement 48 is not clear; the geospatial distribution of datasets (described by their metadata) could be visualised as could the temporal distribution (when created) of datasets.</p>
Linking/ combining data	<p>49. Support data integration.</p> <p>50. Provide the possibility to link metadata.</p> <p>51. Recommend/advise to link with certain other datasets.</p> <p>52. Warn if linking two datasets does not make sense.</p> <p>53. Use a good URI strategy.</p> <p>54. Use identifiers.</p> <p>55. Use well-accepted vocabularies.</p> <p>56. Use well-accepted thesauri.</p> <p>57. Warn about linking when datasets have temporal aspects. Provide advice.</p> <p>58. Provide a link with laws for specific law related datasets.</p> <p>59. Monitor links between data and make sure that they are still up to date.</p> <p>60. Make sure that linking is not just spatial, link to other domains as well.</p>	<p>On user request, retrieve data from Scraperwiki and publish them as an Excel Binary File Format (XLS) or Comma Separated Values (CSV) resource for a dataset.</p> <p>Add a scheduler to retrieve snapshots of the data in regular intervals (interval set by the user or imported from scraper's metadata).</p> <p>Write an extension for Open Refine that automatically uploads the user's file as a CSV or Excel file in ENGAGE (export function). Add an import function to the Open Refine extension, which would allow users to create a new Open Refine project based on the contents of a resource available in the e-infrastructure.</p> <p>Implementation of a Representational State Transfer (REST) server-side endpoint that facilitates importing and exporting resources.</p> <p>Integrate a Wiki engine (XWiki).</p> <p>Write an importer to transform the old JSON-style data to relational data.</p> <p>Development of backend based on the metadata model CERIF (EuroCRIS, 2010; Zuiderwijk, et al., 2012), that uses a relational database for persistence.</p> <p>Development of a wrapper (i.e. middleware) that translates CERIF entities to business objects that correlate with the metadata schema.</p> <p>Development of transformation libraries for importing and exporting the metadata to or from CERIF in RDF and the CKAN JSON schema, e-GMS and the commonly used DC metadata formats.</p> <p>For automation requirements 51, 52 and 58 require both syntactic and semantic (including multilingual) matching – a leading edge research topic. It could be done manually – CERIF provides for such linkage, but it is not the main focus of ENGAGE 2.0.</p>

		<p>The URI strategy of the World Wide Web Consortium (W3C) is followed (see http://www.w3.org/Addressing/).</p> <p>ENGAGE adopts several existing and well-used vocabularies such as those of the Data Catalog Vocabulary (DCAT) (World_Wide_Web_Consortium, 2012) as well as the FOAF vocabulary specification (Brickley & Miller, 2007). CERIF provides facilities for vocabulary interconversion. ENGAGE adopts well-accepted thesauri (and ontologies).</p> <p>Add a scheduler to retrieve snapshots of the data in regular intervals (interval set by the user or imported from scraper's metadata).</p> <p>Other domains for linking include temporal but also domains of knowledge – this requires a canonical classification scheme and inter conversion from other well-used schemes. CERIF provides facilities for this.</p>
Colla- bora- ting	<p>61. Develop a (market) place where researchers can collaborate with other people interested in open data, such as other researchers and public servants.</p> <p>62. Make it possible to send personal messages to individual other users. <i>(added by project members)</i></p> <p>63. Provide discussion environments for each dataset/ organisation.</p> <p>64. Make it possible to write down which data or type of data users need and from which organisation in which country (data requests). Send these needs to public agencies that can provide those data.</p> <p>65. Public servants should be linked to the platform, so that users are able to ask them questions about the datasets and get other types of help. Support interaction with data providers.</p> <p>66. Enable researchers to find other researchers via the ENGAGE platform, so that the platform can serve as a place for finding research partners.</p> <p>67. Enable commercial stakeholders to find other commercial stakeholders via the platform, so that the platform can serve as a place for finding project/business/sales partners.</p> <p>68. People who can provide help with processing the data should be linked to the platform.</p> <p>69. Support interaction for getting help.</p> <p>70. Make use of social media. Provide links with Facebook and Twitter and</p>	<p>Allow users to create user groups that are able to add and own datasets.</p> <p>Implement a backend supported by a relational database to store the required information. Java Persistence API (JPA) will be used for object-relational mapping.</p> <p>Integrate a Wiki engine (XWiki).</p> <p>Provide an interface with cooperative working and social networking facilities.</p> <p>Provide a log of requests; select by agency and dataset type and send to the government agency involved.</p> <p>Public servants participating in ENGAGE as users will be recorded in the user directory and can be linked to the metadata on datasets for which they are responsible.</p> <p>Add a page in each user profile from which others can use to contact them. The contents of the form are submitted as an e-mail to the user.</p> <p>Connect the website to the Simple Mail Transfer Protocol (SMTP) server.</p> <p>User authentication in different ways (e.g. from Facebook).</p> <p>The metadata scheme of ENGAGE allows for representing services. Representation of needs is more difficult since usually it is unstructured.</p> <p>Implement a backend supported by a relational database to store the required information. Java Persistence API (JPA) will be used for object-relational mapping.</p>

	<p>make it possible to extract data from social media.</p> <p>71. Provide a market place where different stakeholders can find each other to work on new projects, applications (for profit).</p> <p>72. Provide a market place where stakeholders can offer services (e.g. developers offer making an application) and other stakeholders mention needs (e.g. businesses want an application being made).</p>	
Sup-port and help	<p>73. Provide tutorials and show for each target group how they can use the data.</p> <p>74. Make videos showing how the platform can be used for a real scenario for a specific community.</p> <p>75. Provide information about licenses for the use of each specific dataset and explain what those licenses mean in practice.</p> <p>76. Make version management very clear and understandable. Show who has done what and when to datasets.</p> <p>77. Provide updates of datasets and inform users about when updates are published.</p> <p>78. Provide the possibility to subscribe to e-mail or other messages when a new/curated version of a dataset has been uploaded.</p> <p>79. Refer to other places where publications or other reports based on a certain dataset can be found.</p> <p>80. Provide considerable metadata, as this should help to find and interpret the data.</p> <p>81. Link the raw data to publications or analysis reports of these raw data.</p> <p>82. Provide tutorials, videos and other help about statistical analysis.</p> <p>83. Provide help with policy research. E.g. provide a general framework with effect indicators.</p> <p>84. Provide help for reporting on / performing statistical analysis about policy effects.</p> <p>85. Provide a good judicial framework and legal regulation for the reuse of datasets.</p>	<p>Requirement 73 could be fulfilled but requires resources.</p> <p>Requirements 74-81 are supported by the rich metadata (CERIF).</p> <p>Version management and update information is provided by the rich CERIF metadata and associated automated feeds, for instance the Rich Site Summary (RSS) (Wikipedia, 2012b).</p> <p>Development of a wrapper (i.e. middleware) that translates CERIF entities to business objects that correlate with the metadata schema.</p> <p>Development of transformation libraries for importing and exporting the metadata to or from CERIF in RDF and the CKAN JSON schema, e-GMS and the commonly used DC metadata formats.</p> <p>Requirements 82-85 and 87 could be fulfilled but they require resources.</p> <p>An overview of examples for different organizations showing what the benefits of providing data should be collectable from the use of ENGAGE.</p> <p>Requirement 88 and 89 should be collectable from the use of ENGAGE.</p> <p>This is provided by the rich metadata. Further detailed user comments could be captured by Integrating a Wiki engine (XWiki).</p> <p>On user request, retrieve data from Scraperwiki and publish them as an Excel Binary File Format (XLS) or Comma Separated Values (CSV) resource for a dataset. Other dataset interconversions require resources and depend on evolving requirements.</p>

	86. Provide an overview of examples of benefits of publishing data for different organizations. 87. Provide a tutorial stating for which purpose each dataset can be reused. 88. Provide examples of use cases for datasets. 89. Provide examples of business cases for datasets. 90. Provide a clear governance model: show who does what with the data. 91. Provide tools to change the format of a dataset.	
Feed-back	92. Provide tools to analyse what users do with open data. This analysis can be based on people that are logged in and give permission to follow their actions (quantitative feedback). 93. Make it possible to contact users of the data of the provider and/or receive users' opinion on the data (qualitative feedback). 94. Provide a good rating system for datasets and provide civil servants with the service to get regular updates about the ratings of their datasets. 95. Monitor who are the reusers of specific government data (link to provider).	Tools to analyse what users do with open data can be generated from the rich CERIF metadata. Provide user authentication. Create user profiles, stored in a relational database. Utilise the user profile information to make contact. A rating system will be developed and rating information can be provided to persons responsible for datasets, using the user profile information. This should be collectable from the use of ENGAGE utilising the rich CERIF metadata.

Although several open data e-infrastructures exist, there is no single e-infrastructure that meets all requirements. The table shows that ENGAGE 2.5 will not meet all of the requirements either. The most important functionalities of ENGAGE 2.5 will be explained in the following section.

3. The ENGAGE open data e-infrastructure

3.1. The ENGAGE development plan

The ENGAGE open data infrastructure is developed to provide a better and more structured metadata model than other infrastructures. The ENGAGE infrastructure embraces the Linked Data Paradigm while ensuring quality and responsiveness. ENGAGE – using CERIF – enables integrating these datasets and analysing, visualizing and curating them and linking them to other datasets. ENGAGE makes use of crowdsourcing and allows for interaction with and between (different types of) users of the platform. ENGAGE focuses specifically on researchers and citizens, but also on journalists, civil servants, developers, businesses and archivists and librarians.

ENGAGE 1.0 (mid 2012) was essentially a CKAN implementation compatible with existing governmental open data websites. ENGAGE 1.0 demonstrated similar advantages as other open

data e-infrastructures, although it allows research on utilisation of tools for data acquisition and clean-up (Scraperwiki and Open Refine) and associated visualisation. ENGAGE 2.0 (April 2013) utilises a richer metadata model, referred to as the ENGAGE metadata model. ENGAGE 2.0 provides the advantage over other open data e-infrastructures in particular providing better search capabilities and better information on quality, provenance and rights.

Mid 2013 ENGAGE 2.5 will be released, using CERIF as the metadata standard. The CERIF metadata standard generates the ENGAGE metadata format for the portal for general user interface requirements. Additionally, it allows 'drill-down' to the detailed metadata available in CERIF for more specialised requirements including multilinguality and multiple semantics. ENGAGE 3.0 (mid 2014) will use CERIF metadata and allow dynamic generation of different metadata formats for the user interface (and for interfaces to other governmental open data websites) depending on the user (group) requirements. Through the enhanced CERIF metadata it will also allow a rich overview of existing other open data websites and allow linkages between them, in this way becoming the portal of choice for linked open data. Evaluations take place between all releases of new versions of the platform. The evaluations lead to more specific and maybe changing requirements.

3.2. Functionalities of the ENGAGE e-infrastructure

Figure 1 shows how the functionalities of the ENGAGE open data e-infrastructure relate to the requirements that were presented in section 4.

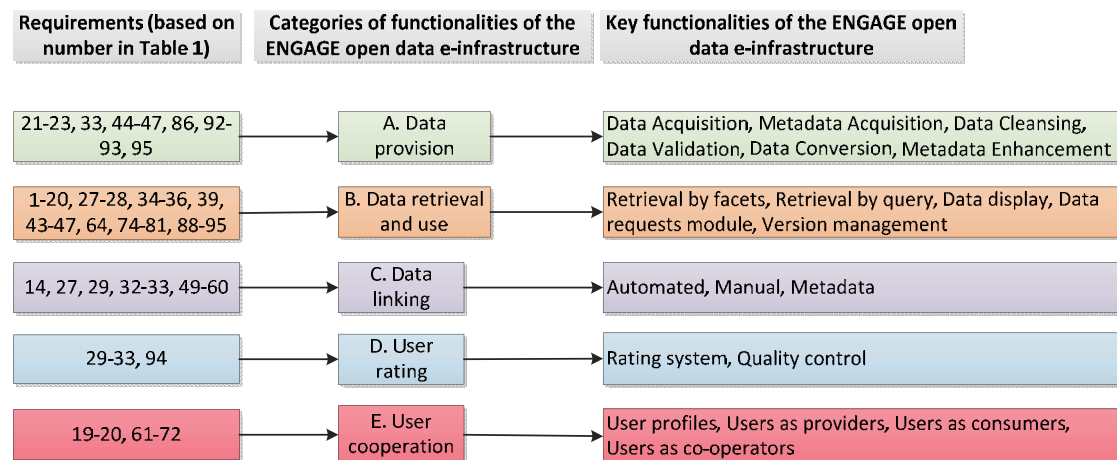


Figure 1: Requirements for open data e-infrastructures related to the key functionalities of the ENGAGE open data e-infrastructure.

Most requirements are met with the ENGAGE 2.5 infrastructure. Fifteen requirements (24-26, 37-38, 40-42, 48, 73, 82-85 and 87) are not met because there are no resources, they are still under evaluation or need further research or they are outside the scope of the project.

The ENGAGE infrastructure uses a three-layer structure for metadata, which was previously described by Zuiderwijk, Jeffery and Janssen (2012). This structure includes discovery (flat) metadata, contextual metadata and detailed metadata. *"Discovery (flat) metadata enables the discovery*

of relevant open data by browsing or query. Contextual metadata allows a) rich information on persons, organisations, projects, publications and many other aspects associated with the dataset, b) interoperability among common metadata formats used in PSI and from the contextual metadata we generate the discovery metadata to ensure congruence. Detailed metadata is usually specific to a domain or even to a dataset" (p. 241).

The Common European Research Information Format (CERIF) was used for the implementation of the middle, contextual, layer of the three-layer metadata structure because it is the only model that offers temporally defined role-based relationships between instances of entities. In addition, CERIF is a recommendation of the EU to member states. Moreover, CERIF is adopted by several governments, and maintained by an independent organization, in this way ensuring continuity and adaption to changing needs. The formalised CERIF metadata generates RDF, as *"this combined architecture provides most benefits for both the end-user via a portal access and running software via a service API access. It provides convenient and easy LOD/semantic web browsing, but based on formalised metadata with data. It is easy to 'pass through' the semantic web/LOD view and utilise full-scale data processing operations at the inner environment level (p. 241)"* (for more information see Zuiderwijk, et al., 2012). The semantic web / LOD view follows the W3C Groups: Government Linked Data Group (http://www.w3.org/2011/gld/wiki/Main_Page) (which has to a large extent taken over the work of the LOD (Linked Open Data) Group and the new Linked Data Platform group: http://www.w3.org/2012/ldp/wiki/Main_Page). One of the authors is involved with these groups.

We elaborate more specifically on the functionalities of the ENGAGE infrastructure below.

A) Data provision

1. Data acquisition. Users will be able to upload metadata about datasets. Temporary dataset upload will be provided to allow data validation, cleansing and to assist in metadata enhancement. In addition, data provision and processing will be rewarded with so-called engagement points. The ENGAGE catalog can harvest metadata from other open data websites.
2. Metadata acquisition. Users will be able to upload metadata about datasets. The ENGAGE catalog can harvest metadata from other governmental open data websites.
3. Data cleansing. Data temporarily uploaded can use the ENGAGE facilities for data cleansing. This relies on the metadata supplied or acquired.
4. Data validation. The uploaded dataset may be validated against the supplied metadata. Potentially, validation can also be provided by comparison with similar datasets.
5. Data conversion. Depending on user requirements, data conversion facilities will be provided to enable different file formats. Unit conversion and language translation will also be considered.
6. Metadata enhancement. Enhanced metadata provides a huge advantage for ENGAGE over other open data infrastructure. Users will be encouraged to supply as much metadata as possible; similarly when harvesting metadata additional information will be gleaned including by examination of the dataset itself. Reference to comparable datasets can also be used to enhance metadata.

B) Data retrieval and use

1. Retrieval by facets. A simple classification scheme for subjects, and for geospatial and temporal coordinates will be provided to allow faceted search.
2. Retrieval by query. Query facilities include SPARQL Protocol and RDF Query Language (SPARQL) (World_Wide_Web_Consortium, 2008) endpoints for RDF (including CKAN) metadata and the Structured Query Language (SQL) (Wikipedia, 2011) for 'drill-down' querying of the richer CERIF metadata.
3. Data display. ENGAGE has already demonstrated data display using selected datasets. Reporting and visualisation capabilities will be enhanced matching available processing services to dataset type using enhanced metadata.
4. Data requests module. Users can post requests for certain datasets. The requests could be linked to specific data providers.
5. Version management. Users can see hierarchically how a derived datasets related to an original dataset and how the original dataset was reused by other users.

C) Data Linking

1. Automated. Automated data linking relies on syntactic and semantic matching and mapping using enhanced metadata. This is a leading edge research area and ENGAGE will attempt to demonstrate its utilisation.
2. Manual. Users may assert that there is a linkage between two datasets (or instances of objects within those datasets). The assertion (including the user information) is recorded in the linking metadata of CERIF.
3. Metadata. Data linking relies on metadata and generates linking metadata. The richness of the linking metadata determines its potential utilisation by others so the linking process must provide as much metadata as possible to enhance reuse of datasets.

D) User rating

1. Rating system. A simple rating system is in place which rates the datasets based on user qualitative perception but also rates users based on their participation in ENGAGE (so called ENGAGE User karma rating).
2. Quality control. Rating quality is important for a successive user. Quality is provided by contextual metadata about the dataset, the link (if one exists) and the person allowing the successive user to evaluate her own confidence in the rating provided.

E) User Cooperation

1. User profiles. Metadata describing users (as persons with various roles) is a feature of CERIF and will be utilised in ENGAGE. This records user preferences, responsibilities, authorities and usage history.
2. Users as providers. Users providing dataset information (metadata) interact with ENGAGE via their user profile in this role. The services available to them are described above.
3. Users as consumers. Users utilising ENGAGE as consumers interact through their user profile for the appropriate role. The services available are described above.
4. Users as co-operators. Users will wish to cooperate at least some of the time when it is to their advantage. ENGAGE provides historical information on cooperations and

associated user profiles (subject to trust, security and privacy) and will also interface with commonly used cooperative working environment and social networking tools.

4. Conclusions

At this moment, potential users of open public and private data are often not able to exploit the potential of open data to the fullest. Although the reuse of open data can be stimulated in different ways, e-infrastructures play an important role. A design science approach was used to derive requirements for an open data e-infrastructure from literature, interviews, a questionnaire and workshops. In total, 95 requirements were gathered in the categories of data access, searching, navigation, uploading, downloading, data quality, analyse datasets, visualise datasets, link/combine data, collaboration, support and help and feedback.

There is no single e-infrastructure that meets all requirements. We developed an open data e-infrastructure that meets many of these requirements. ENGAGE provides a platform for the provision, access, utilisation, linking and user interaction around linked open data. The requirements for the ENGAGE open data e-infrastructure led to five categories of key functionalities, including 1) data provision, 2) data retrieval and use, 3) data linking, 4) user rating and 5) user cooperation. Each category consisted of various functionalities. The ENGAGE e-infrastructure supports the provision and reuse of open data by providing enhanced metadata (CERIF). The contribution of ENGAGE over existing infrastructures includes the provision of 1) a service for researchers and citizens, 2) metadata specification and content organisation (embracement of the Linked Data Paradigm while ensuring the quality and responsiveness of highly structured information models), 3) automation in data entry and curation, 4) crowdsourcing and interaction with and between users of the platform, 5) data curation tools and services, 6) dataset visualisation possibilities including geo-spatial categorisation and presentation, 7) multilinguality and 8) user help and training.

ENGAGE is designed to interoperate within the general e-infrastructure framework of the European Commission and fulfils many of the requirements for open data e-infrastructures of potential and actual open data users. Future research should show how the requirements for open data e-infrastructures could be further refined.

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About the Authors

Anneke Zuiderwijk

Anneke Zuiderwijk MSc is a researcher in the ICT section of the Faculty of Technology, Policy, and Management at Delft University of Technology, the Netherlands. Her research focuses on the development of a socio-technical infrastructure that improves coordination in the open data process (i.e. the process in which public and private organizations open their data and different types of users reuse and discuss these data). Anneke can be contacted via a.m.g.zuiderwijk-vaneijk@tudelft.nl.

Marijn Janssen

Marijn Janssen is a professor in ICT and Governance in the Information and Communication Technology section of the Faculty of Technology, Policy, and Management at Delft University of Technology, the Netherlands. His research is focused on open data, shared services and information infrastructures. Specifically, his research concerns the design and governance of public-private service networks. He is also the director of both the interdisciplinary SEPAM and the Compliance Design & Management Master programmes. He serves on several editorial boards and published over 280 refereed publications. More information: www.tbm.tudelft.nl/marijn, or contact him via m.f.w.h.a.janssen@tudelft.nl.

Keith Jeffery

Keith Jeffery is now retired from the Civil Service and working as a consultant. Previously he was Director IT and International Strategy at STFC (Science and Technology Facilities Council). Keith previously had operational responsibility for IT with 360,000 users, 1100 servers and 140 staff. Keith holds 3 honorary visiting professorships, is a Fellow of the Geological Society of London and the British Computer Society, is a Chartered Engineer and Chartered IT Professional and an Honorary Fellow of the Irish Computer Society. Keith is currently president of ERCIM and was president of euroCRIS, and serves on international expert groups, conference boards and assessment panels.

Licence management for Public Sector Information

Analysis and modelling of PSI re-use regulation

Vasily Bunakov*, Keith Jeffery**

* Science and Technology Facilities Council, United Kingdom, vasily.bunakov@stfc.ac.uk

** Science and Technology Facilities Council, United Kingdom, keith.jeffery@stfc.ac.uk

Abstract: *The volumes of PSI (Public Sector Information) published on the Internet by national and local governments, international organizations and other public bodies have grown dramatically in recent years. Terms and conditions for this information re-use may differ among suppliers hence need to be analysed and modelled, especially in view of machine assisted or automated processing employed by e-infrastructure and data management projects. The paper presents results of analysis of PSI re-use terms and conditions across several categories of PSI data sources, as well as outlines directions for regulation modelling and its further implementation in software platforms of an infrastructure scale.*

Keywords: PSI (Public Sector Information), license, regulation, analysis, modelling, e-infrastructure

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Digital agenda for Europe (ec.europa.eu/digital-agenda/) considers sharing Public Sector Information with citizens and business an important source of sustainable economic growth and knowledge-driven development. PSI is typically thought of as documents issued by State, regional or local authorities, international organizations, other bodies as a result of performing their public duties. This may include economic and demographic indicators, information about environment, healthcare, education and other aspects of a modern society. The proposed revisions of the EC Directive on re-use of public sector information (PSI Directive, 2011) suggest alignment of specific information domains such as scientific information or cultural heritage with PSI domain so it is likely that regulation for all information that is produced or preserved using public funds and under public law will bear more and more similarity as the legislation process progresses.

We discuss challenges for the modelling and implementation of PSI regulation in e-infrastructure platforms based on analysis of national and regional Open Data portals across Europe, with the addition of a few international bodies and remarkable examples from beyond Europe. We then consider modelling techniques and possible design solutions for e-infrastructure platforms in respect to managing PSI regulation, and emphasize the need of a cross-national PSI regulation framework with a technology component in it.

1. Challenges for PSI regulation modelling and implementation

The historical focus on information understood as Documents rather than Data that is noticeable in the European PSI Directive and other legislation may hinder to a certain extent the development of modern regulation for PSI e-infrastructure but we want to concentrate on other major challenges identified.

1.1. Amount and structure of regulation

The amount of PSI regulation relevant to the e-infrastructure design and implementation may seem modest if we consider only legal statements published on PSI open data sources (PSI portals) as these statements should ideally encapsulate all other regulation so that e-infrastructure could just consider a single regulation artifact in each case.

The legal statements, however, may refer to underpinning licenses or other regulation, as well as to the exclusions from common terms and conditions; the actual structure of regulation hence adds up to the amount of documentation to be considered. The diagram on Figure 1 shows the structure of the World Bank legal notes with some details omitted, to keep the whole thing readable.

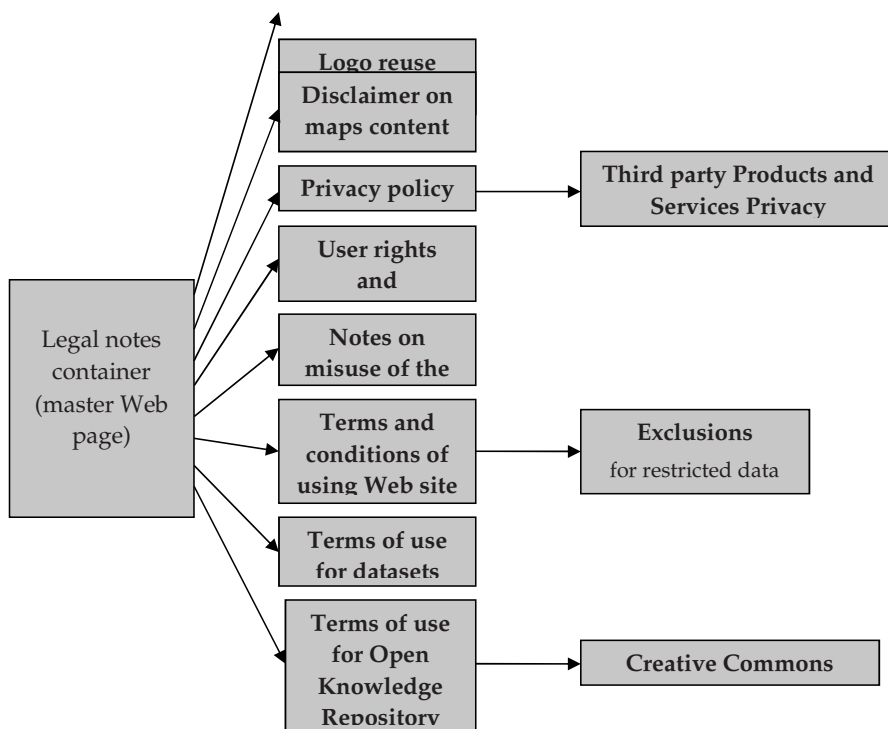


Figure 1: High-level structure of the World Bank legal notes. Each rectangle represents a separate document (Web page).

Despite that the World Bank does not belong to the public sector which is the main focus of our work, any reasonable e-infrastructure for PSI data should incorporate or make linkable the rich

data assets of such international bodies so considering their practice of Open Data regulation, and modelling it should be a part of PSI e-infrastructure projects focused on data re-use. Also the structure of the World Bank Open Data regulation has matured through decades hence can be a sort of a “role model” for relatively recent attempts to formulate the pieces of regulation for PSI portals; it indicates how PSI portals regulation may evolve in years to come.

A particular user of a PSI e-infrastructure platform may not be interested in all categories of legal notes, e.g. her primary concern may be terms of use for datasets but not those for a logo. However, it is in nature of infrastructure projects with e-infrastructure not being an exclusion that one cannot predict the exact modes of infrastructure use, especially in the medium- and long-term; that is why it is important to model the entire structure of regulation associated with data sources that are prominent candidates for data acquisition and data re-use in e-infrastructure.

Another problem is that the metaphor of Document behind a piece of regulation that may well suit human consumers (ideally having a juridical background) may not be adequate for software components of e-infrastructure that need more detailed and interpretable guidance. Hence if we measure the amount of regulation not as the number of different documents encountered but as the number of granular regulation statements in them, it will add up to the volume of regulation to be modeled and processed. The diagram on Figure 2 shows a structure of the information re-use license for the French governmental portal data.gouv.fr. The list of components/features may be incomplete and depend on a particular regulation description framework chosen for the granular regulation description; we use Creative Commons categories in this case accompanied by other features worth mentioning for this license.

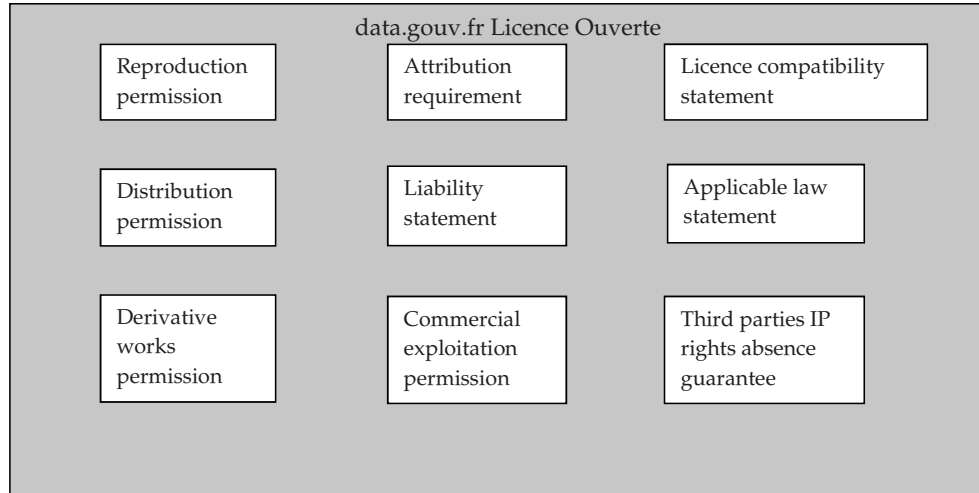


Figure 2: Regulation components of data.gouv.fr open licence. Each white rectangle represents a granular regulation component within the text of the licence (represented by the grey rectangle).

Yet another factor of scale for managing regulation is the granularity of its application: it may be applied to particular data collections within a data source (PSI portal), or to a single dataset. We did not conduct this analysis for PSI data sources but detailed research on data re-use in controlled data collections (many of them being good candidates for linking with PSI data or for ingest in PSI

e-infrastructure data stores) shows that up to a half of them offer dataset-level terms of use, and about a third of them – click-through terms of use when one cannot actually reach a dataset via the Web link without having agreed to the terms and conditions (Eschenfelder and Johnson, 2011): these latter ones of course can be generic although nothing prevents them from being specific as the mechanism for the granular publishing of regulation is already there.

1.2. Regulation diversity

Figure 1 gives an idea of typical subjects of regulation in Open Data portals but even for the same subject, regulation may be diverse across data sources of a similar nature like national .gov portals. Our observations on national PSI portals of eight countries show that each of them introduced its own regulation for data re-use:

Table 1: Licences of European governmental data portals

Country	Portal	Licence
France	Data.gouv.fr	Licence Ouverte
United Kingdom	Data.gov.uk	Open Government Licence
Italy	Dati.gov.it	Creative Commons Attribuzione - Non commerciale 2.5 Italia (CC BY-NC 2.5)
Germany	Govdata.de	Datenlizenz Deutschland – Namensnennung – Version 1.0 (recommended for common use) Datenlizenz Deutschland – Namensnennung – nicht kommerziell – Version 1.0 (for exceptions)
Norway	Data.norge.no	Norsk lisens for offentlige data (NLOD)
Netherlands	Data.overheid.nl	No specific common licence but a recommendation for the agencies publishing data through the portal to use the framework of the Open Government Act, and to apply Creative Commons Zero of Public Domain if any licence is desired at all
Spain	Datos.gob.es	No specific licence but two parts in extensive legal notes that cover data re-use and are based on different pieces of Spanish national legislation
Belgium	Data.gov.be	No specific common licence. Each public service or government institution determines the terms and conditions governing access to and use of its data published through portal.

This shows that governments take different approaches to licensing their PSI: some of them (France, United Kingdom, Italy, Norway) offer a common licence that covers the portal content by default; Germany offers more than one licence for different modes of data re-use so that the governmental agencies may choose what is more appropriate in a particular case of data

publishing; Netherlands provide a certain framework and recommendations but no common licence; some countries (Spain, Belgium) just offer a common data publishing platform where different governmental agencies may apply their own licences.

What is also remarkable is that PSI portals offering a common licence, despite their claims that it is based on open data principles with popular references to Creative Commons, still decided to produce their own flavour of an open licence.

1.3. Regulation updates

Open data licences and other information re-use regulation are possibly not the most frequently updated items yet they are subject to change that has to be managed. We have encountered only one case so far where this issue is taken into account, and only from one specific perspective of how to refer to the newer versions of the licence in case it is changed: this is a French Licence Ouverte that explicitly states that users may keep referencing to the current version of Licence well after its updates.

Specific issues related to the updates may arise because of the chains of regulation where one “child” piece of it is based upon another one, and that basic “parent” item is updated or superseded by a newer legislation. Then the “child” regulation item should be updated after the “parent” was renewed but this is not always the case. An example of this is the European Environment Agency data re-use policy (EEAcopyright, 2012) that states it is based on two particular pieces of legislation with one of them, as our checks showed, having been superseded by a newer act, yet the published policy still bears the reference to an obsolete one. This is the very case when automated or machine-assisted update might help to keep the legal notice current but the unstructured character of it (just a Web page) does not allow any reasonable automation.

1.4. Specific regulation content or structure

Some PSI and open data portals apply specific requirements for their information re-use that may affect the effort required for e-infrastructure platforms to adopt these information sources.

The Basque country open data portal (opendata.euskadi.net) requires granular attribution including the date of the last dataset update. This may add effort required for e-infrastructure implementers to actually satisfy this requirement as it seems to be introduced in view of humans referring to the original source with no specific means for bulk information re-use that should be reasonably automated in order to be efficient.

The Singapore open data portal (data.gov.sg) requires a clear attribution with the suggested exact wording of it. This does not seem to take into account possible updates of this exact wording so someone re-publishing Singapore data may unintentionally breach the licence if the current formula for the reference that is correct at the moment of data citation gets obsolete afterwards; there is no mechanism that would allow re-publisher to stay tuned with the current data citation requirement. Another specific requirement of Singapore open data portal is the necessity for application developers to get registered with the portal; the commercial re-use of the information also requires registration; these two requirements set certain limits to data acquisition and to the e-infrastructure sustainability models that may require a certain level of commercialization.

The OECD portal (www.oecd.org) imposes some specific requirements that can make its data unhandy for mashing them up with PSI data. Upon re-use, one should cite the title of the material,

OECD copyright, publication year (if available) and page number or URL as applicable. Again, this seems to be required with only human consumers in mind but e-infrastructures are likely to employ various software agents for data management; there is currently little or nothing in OECD regulation that appeals to this type of information re-use. Also OECD regulation sets certain limitations for the linking technology that e-infrastructure platform may want to employ, e.g. referencing via Web frames or other visual altering tools is not allowed.

2. Common patterns of PSI regulation

Our analysis suggests not only differences in PSI regulation but some common patterns, too, that provide a valuable input for machine-oriented regulation modelling. We discern between patterns of the regulation content (which means finding commonalities among structural schemas similar to Figure 2) and patterns of its representation, i.e. commonalities for the form in which pieces of regulation are shared.

The important pattern of PSI regulation content is that the information published is typically free for commercial re-use; it is also free of royalties or other charges. This is no surprise as Digital Agenda for Europe and national directives of a similar kind do mean the re-use of PSI to be one of the major drivers behind its publication.

The next important pattern is a requirement of PSI attribution (credits to publisher) when someone re-uses it. The exact formulation of this requirement differs among PSI portals: some of them formulate it in general form, others are more specific up to the requirement of the exact wording that should be placed in any material that refers to the PSI source.

Another common pattern of PSI regulation is that publisher claims no responsibility for the consequences of the information re-use. Some of them specify the very moment when their responsibility becomes void: at the moment when the information leaves their portal, i.e. as soon as someone has it retrieved.

Transformations of the PSI artefacts acquired are typically also allowed, as well as re-dissemination of PSI artefacts unchanged.

A common structural characteristic of many PSI regulation artefacts is referring to national legislation that underpins them. In case of pan-European Open Data sources the role of underpinning regulation is commonly played by EC Directives and Decisions. When modelling this characteristic, it may be worth to introduce a common abstraction that will be instantiated either by national or international legislation.

The remarkable pattern of PSI regulation representation is that published items of it: licences, terms and conditions, legal notes – are always underpinned by the metaphor of Document. The metadata about data shared through PSI portal is often available in a well-structured format but there is no structured metadata for regulation items which are just texts.

Another pattern of representation can be thought of as a placeholder or “a pattern of absence”: not only a piece of regulation is a Document, it also does not bear a unique identifier for referencing it. The PSI regulation Documents published can now be referenced only through their Web addresses which are sometimes remote from being “cool URIs” (CoolURIs, 2008). This is not a merely technical issue as in the absence of permanent identifiers, the information attribution requirement does not have a sustainable model to implement it: someone may supply a reference to the regulation item that tomorrow becomes invalid as the licence issuer has it moved (or even

removed), e.g. because the URI naming schema has changed owing to the transition of the entire portal onto a new Web server.

For convenience of their further consideration, we compiled the patterns observed into the table:

Table 2: Common patterns of PSI regulation

Patterns of regulation content and structure	Permission for commercial re-use Permission for information transformation Permission for information re-distribution Requirement of attribution (due credits) Taking no responsibility for information re-use Referring to national legislation
Patterns of regulation representation	Metaphor of Document Absence of unique licence identifier

These patterns and new ones that may emerge later on as a result of systematic monitoring will contribute to the metadata models or profiles of the existing rights management frameworks that will enable machine-assisted semantic sharing of PSI regulation. Some of these models or profiles may be specific for a particular e-infrastructure platform that is targeted at certain user communities; a wider PSI regulation framework that we discuss in the end of this paper will also benefit from further collection and systematization of common regulation patterns.

3. Solutions for PSI regulation modelling and design

The large volumes of text documents encapsulating regulation, their interdependencies, and the need for update consistency all demand the use of ICT (Information and Communication Technologies). We described the aspects of a PSI regulation landscape that appeal to business analysts for application of their techniques to the adequate incorporation of various PSI regulation into emerging e-infrastructures. We now suggest a few particular techniques and approaches that we deem valuable to explore and discuss with information technologists.

3.1. Modelling techniques

In a best case scenario, the human end-user or intelligent software needs to process the regulation as well structured statements with formal syntax and declared semantics. A human can do this from free text (although commonly with misunderstandings); technology is not so smart. Ideally, the regulations would be encoded as first-order-logic rules: IF x THEN y ELSE z, as an example:

IF licence is Creative Commons CC-BY
THEN use the document freely as a human or ICT system with attribution
ELSE next rule

The rules will require persistent identifiers for a piece of regulation as a whole, and for the granular statements in it, e.g. what is “Creative Commons CC-BY” or what is “attribution” should be unambiguously defined. A conventional technique for this is the use of an ontology encoded in

description logic and stored either in an extended relational form or as statements in OWL, RDFS, or other knowledge representation language.

Publishing the rules should be ideally combined with publishing a manifest with a reference to a particular metadata model chosen, as well as a reasonable description in terms of this model. There are a few candidate metadata models to choose from: Creative Commons Rights Expression Language (ccREL, 2008), Open Digital Rights Language (ODRL, 2012), an appropriate part of the Asset Description Metadata Schema (ADMS, 2012), eXtensible Rights Markup Language (XrML, 1998), or the rights management extension for METS metadata framework (METSRights, 2005).

The metadata manifest may also incorporate universal metadata frameworks not specifically devoted to the description of rights but essential for semantic interpretation or for effective data sharing. An example of the former is CERIF (Common European Research Information Format)¹ that is very strong in description of organizations and their divisions, as well as the relations of organizations with their outputs (regulation being one of them); an example of the latter is Dublin Core (DC, 2012) supported by popular metadata distribution frameworks such as OAI Protocol for Metadata Harvesting (OAI-PMH, 2012).

This is to show we have a good choice of modelling and design frameworks available; we further discuss some of them in the rest of this paper.

3.2. Possible design solutions

Since the legalistic documents are not – at least now – coded as first order logic we are faced with three possibilities for pre-existing documents:

- (1) Just supply the document and let the user determine the usage conditions;
- (2) Try to interpret the legalistic document using intelligent software to extract the first order logic;
- (3) Consciously design or re-engineer pieces of regulation – licences, terms and conditions – in a structured manner, and supply them with API.

The first option (1) is already useful if the licensing and other legalistic information is (a) attached unambiguously to the document or dataset including linkage to the organisation or person who is the license owner/authorizer and (b) the links have temporal information indicating the period of time during which the link is valid (i.e. the period of time when the organization or person that is the authorizer provides access under the named license).

The second option (2) requires more research although there are projects indicating some success.² Within the ENGAGE project the scope is such that we follow the first option.

For new legalistic documents or for the existing ones reengineered there is a third option (3): to encode the regulation and make it available as metadata. The Dublin Core metadata set (DC, 2012) has some limited rights information, also the eXtensible Rights Markup Language (XrML, 1998) is a language designed for such a solution and is standardized as REL (Rights Expression Language) for use with MPEG-21; however this limits its applicability more widely. Creative Commons Rights Expression Language (ccREL, 2008) is associated with Creative Commons and is more applicable; it links properties of the work (document) with properties of the license.

¹ See under www.eurocris.org

² <http://docs.marklogic.com/5.0/guide/search-dev/binary-document-metadata>

However the metadata associated with each is rather limited and while the linkage has some semantics (especially concerning the permitted usage) it lacks the temporal information. An advantage of ccREL is that it is W3C compliant and can be implemented in HTML, XML or RDF.

Asset Description Metadata Schema (ADMS, 2012) is a recently proposed mechanism for describing digital assets and includes the repository holding the asset; the asset, contact information, licence, period of time, publisher, documentation, item, asset type, publisher type, status, license type, representation technique, interoperability, language, theme taxonomy, theme, file format and geographic coverage. However the representation is limited to RDF and less rich expressions.

The third approach (3) of a structured regulation modelling is taken by Linked Content Coalition³ that is endorsed by the European Commission and some national governments for promotion in media business. This is a good example of a collaborative work by big players in a certain information domain, also an indication of a potential for the machine-oriented modelling and processing in other fields including PSI regulation.

Within ENGAGE we take the first option but leaving open the door to others. In particular we use CERIF (Common European Research Information Format) which has formal syntax and declared semantics and links instances of entities such as persons, organisations, publications (including licenses), products (including datasets) via links with both a role (e.g. permissions) and a temporal interval of validity. Furthermore any entity or attribute may be classified using one or more classification schemes giving great flexibility in cross walking from one scheme to another for interoperability. From CERIF one can generate RDF, XML or HTML and since it provides a richer syntax and semantics than the derivatives it can act as a superset representation.

4. Conclusion: the need of a PSI regulation framework

Our analysis of the actual PSI regulation and its application in data portals shows a diversity of approaches taken, and proves the need of having a common framework that should eventually reconcile the differences; otherwise the regulation may become a barrier to building and exploiting scalable e-infrastructures of a cross-national scale. We consider a few interlinked areas of activity that in our opinion should constitute a PSI regulation framework with a potential to address the issues identified:

Monitoring and update of national and international legislation: laws, directives, decisions

Monitoring and update of granular regulation on data re-use: licences, terms and conditions

Machine-oriented regulation modelling and other information technology

Standardization and structured communication

All the types of activities in the framework should be interrelated. As an example, the experience of applying a particular licence or terms and conditions may drive the need of a top level legislation update, or technology update. Modelling and IT get input from, and provide feedback to other activities. Standardization and communication through national and international bodies, professional consortiums and alliances allow to share and promote best practices.

³ www.linkedcontentcoalition.org

This paper has focussed on two components of the PSI regulation framework: analysis of granular regulation on data portal level and the discussion of IT design choices available. A certain emphasis on technology is specifically important because of the co-existence of human users and software agents in any modern e-infrastructure: that is why PSI regulation items associated with data should be well structured, and shared having in view machine or machine-assisted information processing.

Publishing data through public sector portals according to specific practices and tailored regulation well serves the need of public bodies to fulfil their legal obligations and prove their openness in modern ways. This may not be enough, however, for exploiting economic, social, and environmental benefits of data re-use. Further elaboration of the suggested PSI regulation framework should facilitate the effective and efficient data re-use to the benefit of various stakeholders of PSI lifecycle.

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About the Authors

Vasily Bunakov

Vasily Bunakov is a researcher in the Scientific Computing Department of STFC (Science and Technology Facilities Council). He earlier worked in the IT and research departments of High Energy Physics laboratories in Russia and Switzerland, and for the London branch of Deutsche Bank. His current research interests are focused on digital preservation and linked open data.

Keith Jeffery

Keith Jeffery is currently Director International IT Strategy at STFC (Science and Technology Facilities Council). Keith previously had operational responsibility for IT with 360,000 users, 1100 servers and 140 staff. Keith holds 3 honorary visiting professorships, is a Fellow of the Geological Society of London and the British Computer Society, is a Chartered Engineer and Chartered IT Professional and an Honorary Fellow of the Irish Computer Society. Keith is currently President of ERCIM and past president of euroCRIS, and serves on international expert groups, conference boards and assessment panels.

Money for nothing - data for free

Hard facts about the economic power of Open Government Data

Gregor Eibl*, Brigitte Lutz**

* Mag. Dr Gregor Eibl, E-Government- Legal, Organisational and International Issues, Federal Chancellery of Austria, www.bka.gv.at, gregor.eibl@bka.gv.at

** Ing.ⁱⁿ Brigitte Lutz, Office of the CIO, City of Vienna, wien.gv.at, data.wien.gv.at, brigitte.lutz@wien.gv.at

Abstract: *The economic benefit of Open Government Data is explained by providing theoretical implications and case studies of existing numeric facts from 12 regions of the world. The authors would like to answer the question, what theoretical possibilities for economic effects of OGD can be expected and which measurements of economic effects of OGD were already conducted.*

Keywords: Open Government Data, Economic benefit

Acknowledgement: “*Money for nothin' and chicks for free*” is a line from the Dire Straits song “Money for Nothing” from their album Brothers in Arms (1985). It was one of Dire Straits’ most successful singles, peaking at number one for three weeks in the United States. It also won a Grammy in 1986 for Best Rock Vocal Performance by a Duo or Group. The innovative video was one of the first to feature computer generated animation and was the first video played on MTV Europe.¹

Various information about the potential economic benefits of Open Government Data (OGD) is mainly based on a study from the European Union (EU). To awake the interest of the various stakeholders in OGD, it is necessary to quantify the actual economic benefits and the potential for a special region. At the moment, standard measurements to estimate the real effects of OGD are still missing. Therefore the authors explore which measurements of OGD effects were already conducted with the aim of giving a dense collection of already existing hard facts, which can found in various available studies.

The authors divided the findings in two main chapters, the first dealing with the theoretical economic implications of opening data sets, the second collects available findings in case studies from around the world. The focus here was not on potential economic benefits, but on real numbers, which have been measured on a case to case basis.

¹Songfacts

1. Theoretical economic implications of OGD

In this chapter the authors give examples where economic effects of OGD can be expected. The given framework helps to order the expectations, the next two subchapters discuss OGD effects in a value network and within value chains, and the last subchapter shows OGD simply as a further input for management decisions.

1.1. Framework for theoretical implications of OGD

A theoretical framework for economic impacts can be found from Kaltenböck². He distinguished between direct and indirect impacts, which are ordered here in a slightly modified version:

Direct economic impacts:

- applications (APPS)
 - license fees
 - tax income
 - turnover from new products and services
- data integration within the economy
 - example industry plants: market intelligence solutions
 - example media & publishing: access to new content
 - example property search: better display of object and more data
 - example publishing industry: less recherché expenses
 - example transport: better capacity utilization
- reduced transaction costs
 - less effort for answering data requests from the public and media

Indirect economic impacts:

- accessibility: finding problems & better route planning
- transport and traffic information: increase safety
- health: screening & transparency
- better data quality (crowd sourcing)

1.2. Free data as a source in a value network

In the ISPRAT Whitepaper “From Open Government to the Digital Agora” the authors speak about network economics and business models for Open Data.³

The collection, processing, provisioning and usage of open data are executed in a value network by the members of the public administration, the economy, science and the civil society.

² Kaltenböck M., 2010, p.26f

³ Graudenz D., Krug B. et al., 2010, p.36ff.

In a cost-free model, the government completely eliminates the pricing for data. In this case, compared with a fee-based business model, for cost reasons, the administration itself lowers treatment of data. However, since the entry threshold for value-added processes is very low, it is expected in return that the overall market for the treatment and provision of data and in particular the development and dissemination of apps is growing fast. There would be three significant reasons for free provision:⁴

innovations by start-up companies

economic growth through innovation

additional tax revenues through economic growth

1.3. Value chains of OGD

The Open Government Data Business Day 2012 in Vienna⁵ set focus on a closer look to the value of open data for business, business models around data provision and re-use (IT infrastructure, mobile apps, data refinement and distribution, data analysis and visualization, BI).

Blumauer explains the further development from Open Data 1.0 to Open Data 2.0. as shown in figure 3⁶ and the core competencies of Media/Data brokers and Enterprises, e.g. enrichment of raw data with additional meta data, data visualisation or interaction or linking and distributing data.

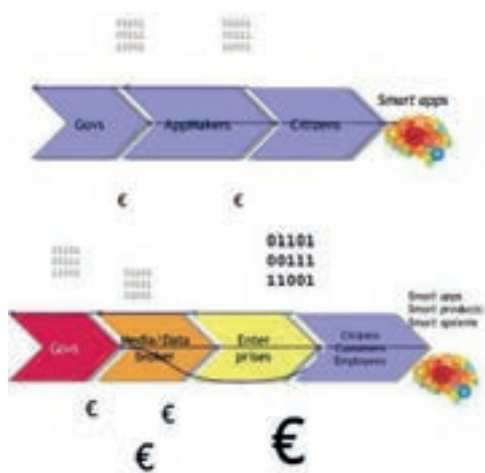


Figure 9: Open Data 1.0 and Open Data 2.0

⁴ Ibid., p.40.

⁵ <http://epsiplatform.eu/content/ogd-business-day-2012-report>

⁶ Blumauer, A., 2012, p.5.ff

1.4. OGD - input to management decisions

Mustafa argued in his master thesis that OGD could be seen as an input to management decisions. Data enrichment, business intelligence, forecasting demand and market research are all strategic decisions within a company. OGD is a free resource for these decisions and even more.⁷

2. Collection of available facts and numbers from case studies

This chapter lists the collected case studies by geographic regions with the focus to distill real numeric facts. All numbers in the summary table are taken from subsections of this chapter.

Table 1: summary of numeric facts from case studies

Region	Fact	Amount or %	Period
World	taxes amount for Google API	+ % of profit	
EU27	gains from PSI apps	€ 140 bill	p.a.
EU	potential value of OGD	€ 30 - 40 bill	p.a.
Austria	growth in sale since OGD observed by a company	+ 5%	
Austria	saving of development costs	€ 5.488	per app
Austria - Vienna	saving of development costs	€ 455.504	2 years
Austria	economic gains derived from EU numbers by GDP and inhabitants	€ 0.5 - 1.1 bill	p.a.
Austria	economic gains derived from EU numbers by GDP	€ 2.8 mio	p.a.
Austria / Vienna	potential value of OGD	€ 3.7 / € 44.4 mio	p.a.
Denmark	worth of re-use of public data	€ 80 mio	p.a.
Germany	market for geo-information	€ 1,4 bill	p.a.(2007)
Netherlands	arising taxes amount from meteorological data	+ 750%	
Spain	Reuse of PSI by the infomediary business sector	€ 550 mio.	p.a. (2009)
United Kingdom (UK)	value of public sector information	£16 bn	p.a. (2011)
United Kingdom (UK)	additional economic value	£ 1.6 - 6.0 bill	p.a.
UK- Greater Manchester	additional economic value	£ 6 mio	p.a.
Canada - Vancouver	revenue opening public transport data	CAN\$ 2.6 mio	5 years
United States	Apps for Democracy – market value	US\$ 2.3 mio	30 days
Unites States	global weather risk market	US\$ 11,8 bill	p.a. (2011)

2.1. World

As capabilities for linking and combining data increase, there will be new business opportunities.

Google's Translate tool for examples uses large volumes of already translated text from PSI sources like the United Nations, the European Union and country websites to train its algorithms.

⁷ Mustafa M., 2012, p.59.

In 2011, Google introduced a paid version of the Google Translate API, therefore creating turnover, eventually profit and income for the state through paid taxes.⁸

2.2. European Union (EU)

Data is a 21st century commodity: it's the new oil. There's almost no limit to the economic and social wonders it can generate: new applications and new tools appear every day.

That's why the Commission has an ambitious Open Data Strategy. A high economic potential of OGD is proposed in a study for the EU commission.

"... All this takes a big culture change – but I'm confident that the countries of the EU can look ahead to the huge opportunity, and support our proposal. After all, opening up public sector data could generate economic gains around € 40 billion a year, and that's not something anyone can ignore right now." (European Commissioner Neelie Kroes)⁹

A recent study¹⁰ estimates the total market for public sector information in 2008 at € 28 billion across the EU. The same study indicates that the overall economic gains from further opening up public sector information by allowing easy access are around € 40 billion a year for the EU27. The total direct and indirect economic gains from PSI applications and use across the whole EU27 economy would be in the order of € 140 billion annually.¹¹

Another study by the Open Knowledge Foundation (OKFN) estimated the potential value of OGD in Europe slightly less positive at around € 30 to 40 billion per anno.¹²

2.3. Austria

Focused on the business sector OKFO initiated a survey with futurezone.at in 2012.¹³ A glance at the results in figure 2 shows that there are already quite specific ideas for OGD-business.

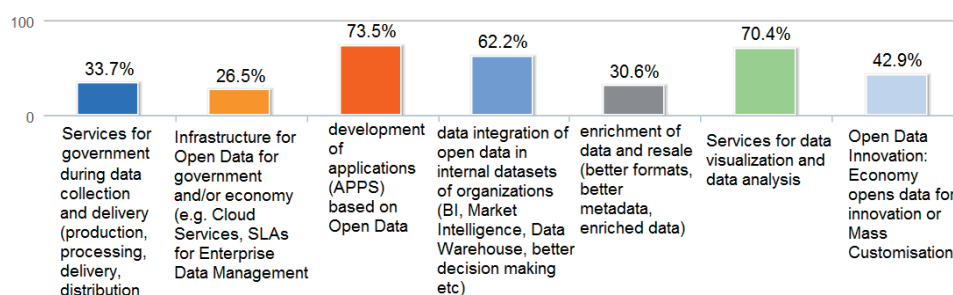


Figure 2: results to the question

⁸ IBM, 2011, p.12.

⁹ Open Knowledge Festival, Helsinki, 2012.

¹⁰ Vickery G., 2011, p.3.

¹¹ European Commission, 2011a, p.3.

¹² Pirker, 2012, p.38.

¹³ OKFO, 2012.

“In which of the following areas do you see the most potential for the economy in the context of OGD?”

2.3.1. Value of apps

Open Government Data (OGD) launched in Austria in 2011 with data.wien.gv.at - the OGD portal of the City of Vienna and is thus in a relatively young stage of development. On the national OGD portal data.gv.at in April 2013 there are 698 datasets from 18 organizations available — a limited number of datasets for users.

Currently almost exclusively "hobby developers" use the datasets; the resulting applications hardly drag financial benefit.

In economic terms, new business models are expected in the field of data analysis, processing, visualization and integration. One respondent reported 5% growth in sales since the availability of Open Government Data in Austria.¹⁴

The Danube University Krems evaluated the open data initiative of the City of Vienna in 2012. At time of the study 38 applications with OGD Vienna were available. The application developers were interviewed for the creation effort of applications, which on average spent 68.6 hours per application.¹⁵

At 38 applications that access OGD Vienna, the opportunity expenses correspond to more than € 208.000 development costs that could be saved. In April 2013 the 83 apps listed in data.wien.gv.at/apps are worth more than € 450.000.

Table2: Value of applications based on OGD Vienna

	creation effort	Effort * developers hour	opportunity expenses
Average application	68,6 hours	68,6 * € 80	€ 5.488.-
38 apps (1 st Sep. 2012)	2.606,8 hours	2.606,8 * € 80	€ 208.544.-
83 apps (15 th Apr 2013)	5.693,8 hours	5.693,8 * € 80	€ 455.504.-

Would the city have ordered the development of the applications, expenses of at least € 455.504 would have been incurred. Considering the fact that in the case of a public appointment penalties and risk of liability will mostly be covered by contractors and the quality requirements in the area of reliability are higher, the actual cost would still be considerably higher. On the other hand there would be no parallel development of functionally similar applications because of a central strategy. Certainly not all applications would be developed when the administration would have to pay for the development, thus reducing the overall added value.

2.3.2. Potential for Austria

To deduce the potential for OGD in Austria you can compare the GDP of Austria to the overall EU budget, which is around 2,5% and assume that the economic potential of OGD in Austria will be around 2,5% of the overall EU OGD potential. Converting the overall € 140 billion would mean an economic potential of € 3,5 billion for Austria.

¹⁴ Danube University Krems, 2013, p.13.

¹⁵ Ibid., p.10.

The Vienna University of Economics and Business transferred the *economic gains around € 40 billion a year* for the EU on the basis of the Austrian *Gross domestic product (GDP)* 2011 (€ 300,2 bill. Euro) and population results for Austria in a calculated potential by about € 0.5 - 1.1 billion annually.¹⁶

It should be noted, however, that this estimates should be used cautiously because the assumptions of the original study are based on estimates and averages.

2.3.3. Calculation of the economic benefit

The Vienna University of Economics and Business developed in order of the City of Vienna a calculation for the economic benefit of OGD.

Based in the studies of Rufus Pollock¹⁷ an estimate for the gains by provisioning Public Sector Information (PSI) is given by following formula:

$$\text{Gains} = \frac{2}{5} F \lambda \epsilon$$

where F is the revenue under average costs, λ is the “multiplier” and ϵ is the elasticity of demand.

The formula was slightly adapted by adding a second multiplier. Thus it now takes the following form:

$$\text{Gains} = F \lambda_1 \lambda_2 \epsilon$$

Basis is the costs for OGD, which are multiplied by a cost-, benefit- and elasticity-factor.

The variables are:

F = revenue under average costs for publishing the data = basis benefit of OGD

λ_1 = multiplier for costs for extensive survey

λ_2 = multiplier for gains

ϵ = elasticity of demand

F: Table 2 shows the formula for the revenue under average costs

Table 3: formula for F

	City of Vienna
C1 Costs/year	€ 50.000.-
C2 Costs / dataset	€ 858.-
ND Number of datasets	156
NY Number of years	2
$F = (C1 \times NY) + (C2 \times ND)$	€231.274.-
F per year	€ 115.637.-

The full sets of outcomes as a function of the 3 categories (low, medium, high) for the elasticity and the multipliers are shown in Table 3 and 4, which are calculated by Rufus Pollock.¹⁸ The underlying assumptions for the values in the tables can be found in the study.

¹⁶ Fuchs, S. et al., 2013, p.13.

¹⁷ Pollock R., 2011, p.1.

¹⁸ Pollock R., 2009, p.41.

Table 4: elasticity

€		Range	Average	City of Vienna
	low	0.0-0.5	0,25	
	middle	0,5-1,5	1	
	high	1,5-2,5	2	2

Table 5: multipliers

λ_1, λ_2		Range	Average	City of Vienna
	Low (no effect)	1		
	middle	1 - 3	2	1,5
	high	3 - 9	6	8

$$\text{Gains} = F \lambda_1 \lambda_2 \epsilon$$

$$\text{Gains} = 115.637 \times 1,5 \times 8 \times 2$$

$$\text{Gains} = \text{€ } 2.775.288$$

For the City of Vienna, this results in an economic benefit of approximately 2.8 million euros per years. By apportionment of this value based on GDP and population gives for quite Austria the societal benefit of approximately 12.2 million euros.

2.3.4. Another approach for the determination of the economic benefit

There was another idea to set the percentage ratio between the number of existing published data sets in January 2013 and the number of possible future data sets. This percentage then is broken down from the EU potential to Austria and Vienna and is shown in table 5.

Table 6: economic benefit for Vienna and Austria

	Austria	City of Vienna
Datasets today	556	160
Potential datasets	132.500	750
percent exploitation	0,42%	21,33%
Apportionment to EU potential	€ 3.7 mio	€ 44.4 mio

2.4. Denmark

An estimate for Denmark assumes that the Re-use of public data by companies is worth at least DKK 600 million (more than € 80 million) per year.¹⁹

2.5. Iceland

An example of a data tuner is the Icelandic company Datamarket.com that offers in subscription access to a variety of administrative and corporate data. The use case is the presentation and visualization of data in a standardized consistent manner.²⁰

¹⁹ Radauer, A., Good, B. 2012, p.50.

2.6. Germany

The example of the geographic information sector is also quite impressive.

The German market for geo-information in 2007 was estimated at € 1.4 billion, a 50 % increase since 2003. Other areas such as meteorological data, legal information and business information also form the basis of steadily growing markets.²¹

2.7. Netherlands

A sufficiently high growth is to be expected, so that the additional tax revenues by entering the market exceed the company fees for data with a fee-based model. The example of the Netherlands Meteorological Institute KNMI shows how the decision for the free publication of government data may affect. When the data were sold, there were 10 buyers, which generated the revenue from € 4 million. Meanwhile, the data are published free, and the number of users has increased by 90. Government revenues through taxes amount about 30 million euros or rose by 750 %.²²

2.8. Spain

Much of the data used for economic development is non-sensitive. Spain commissioned a study, which estimated the economic activity associated with the reuse of Spain's PSI by the infomediary business sector was more than € 550 million in 2009 alone.²³

2.9. United Kingdom

2.9.1. Open data project

In April 2012, the National Audit Office published a report on the impacts of implementing transparency within the UK, which offered interesting new figures on the UK government's open data project:²⁴

- £16bn is the Government's estimate of the value of public sector information to the UK economy in 2011
- 7,865 data sets were linked to the www.data.gov.uk website in December 2011
- 47 million estimated number of visits made to the police crime map website between February and December 2011

Data known to have economic value include those already traded. Data held by the Ordnance Survey, Met Office, Land Registry and Companies House trading funds in the UK accounted for 60 per cent of all income received for public data in 2006.²⁵

A recent academic paper, based on the 2006 Office of Fair Trading survey of income earned from public data, estimates potential gains from moving from charged-for to an open data regime in the

²⁰ OKFN, 2010.

²¹ European Commission, 2011b, p.3.

²² Zijlstra, T. Community Steward ePSIplatform.eu, Opendata.ch 2012-Konferenz

²³ IBM, 2011, p.12

²⁴ National Audit Office, 2012, p.4

²⁵ Ibid., 2012, p.31.

UK of between £1.6 billion and £6.0 billion a year. ²⁶Particularly economically valuable data includes maps, address databases, land records and weather data.

2.9.2. Greater Manchester

In the metropolitan county of Greater Manchester, open data could generate 6 billion pounds of added value to the UK economy. The annual cost to public bodies in Greater Manchester for Freedom of Information requests are over 4 million pounds plus over 8,5 million pounds associated with the inability to find or use data required for their jobs by over 600 public officials.

This presents the opportunity to avoid costs on the one hand and foster the economy by potential 6 billion of additional economic value boosting the revenue of the public balance sheet.²⁷

2.10. Canada

The city of Vancouver was faced with the decision to disclose the data of public transportation or selling the existing payment system to some that offered a closed business on the basis of these data. Opening such traffic data would increase the revenue, and bring more than 2.6 million Canadian dollars over five years to the city council, without taking into account the indirect effects such as less congested roads, less smog and a lower carbon footprint for the region.²⁸

2.11. United States of America

2.11.1. Apps for Democracy

The first edition of Apps for Democracy yielded 47 web, iPhone and Facebook apps in 30 days — a US\$ 2,300,000 value to the city at a cost of US\$ 50,000.²⁹

2.11.2. Demand on cigarettes

The following example shows how OGD can help estimating the demand on cigarettes for the US. In practice, the demand on cigarettes follows the general production equation: $Q = f(P, Y, P_c, P_s)$. In the demand equation above: P is the cigarette price, Y is the consumer income, P_c and P_s are respectively the prices of complementary and substitute commodities.

The company has to take as much data it can get to determine the parameters for this equation. OGD datasets can be an important data input: The consumer price index, which can be downloaded from data.gov, provides the firm with raw data on cigarette prices for a long period of time. Studying the consumer behavior by looking at the future demand of cigarettes can be estimated by looking at the Economics of Tobacco Control Toolkit found from the World Bank.³⁰

²⁶ Pollock, 2009, p.2.

²⁷ IBM, 2011, p.4.

²⁸ Eaves D., 2011.

²⁹ iStrategyLab, 2013

³⁰ Mustafa M., 2012, p.27f

2.11.3. Weather market

Another example of open government data use is one from the weather industry in the United States. Open government data from the National Weather Service has long been used by the private sector weather market for forecasting, media, meteorological instruments and weather graphics.

The American Meteorological Society commissioned a study in 2007, which estimated the commercial weather industry above US\$1.5 billion. In 2011, only the global weather risk market alone reached US\$ 11,8 billion per anno.³¹

3. Conclusion

After the first years of Open Government Data, the first hard facts can be observed. There is no consensus on how to measure the economic benefits of open government. The shown findings are taken from cases from certain regions and/or business sectors. At the same time, some models to calculate the potential of OGD appeared and are waiting to be verified in the near future. It is impossible to estimate now, which model calculation will be used for measuring the impact in the near future. Quite obviously most calculation approaches are focused on potential rather than real values. Clearly, the impact of OGD will always be more than the sum of some single observations and some observations will be hard to track by numbers. Thus, measuring Open Government Data implications, in particular economic effects, will only be developed along the global rise of Open Government Data.

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³¹ IBM, 2011, p.4.

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About the Authors

Brigitte Lutz

Ing.ⁱⁿ Brigitte Lutz works in the Office of the CIO, City of Vienna³². In her employment history she is ICT expert for various fields (payroll, office automation, records management, Open Government), Project manager, Senior Process Manager (SPcM) and E-Government expert. Professional Memberships: Cooperation OGD Österreich³³; ADV - Arbeitsgemeinschaft für Datenverarbeitung³⁴

Gregor Eibl

Mag. Dr. Eibl works in the eGovernment department of the Federal Chancellery in the field of open government data, usability and accessibility, mobile phone signature and eGovernment innovations. The department is managing the platform Digital Austria³⁵, the coordination and strategy committee of the Federal Government for eGovernment in Austria.

³² wien.gv.at

³³ <http://data.wien.gv.at/neuigkeiten/wege/cooperation.html>

³⁴ <http://www.adv.at/>

³⁵ <http://www.digitales.oesterreich.gv.at/site/6497/Default.aspx>

Does Privacy have to do with Open Data?

Some preliminary reflections - and answers

Francesco Molinari*, Jesse Marsh**

* Alfamicro - Sistemas de Computadores - Lda, mail@francescomolinari.it

** Alfamicro - Sistemas de Computadores - Lda & Atelier Studio Associato, jesse@atelier.it

Abstract: *This paper analyzes the prospective effect of the new EU Regulation on Privacy under discussion since January 2012 on the ‘value chain’ of Public Sector Information (PSI) reuse. The upcoming legislative changes, with all their good intentions, raise potential risks of over-protecting certain personal rights and excessively increasing the cost of publishing and maintaining open datasets by the EU public sector authorities. We briefly overview the ‘Privacy By Design’ and the ‘Privacy as a Service’ operational principles, which may act as a bridge towards the alternative introduction of concepts such as ‘Privacy Impact Assessment’ and ‘Privacy Enhancing Technologies’, in order to mitigate the conflict between privacy protection and transparency. In conclusion, Privacy and Open Data are only partly overlapping as domains of policy and legal intervention. With the increase of openness and transparency in the digital world, it will prove harder and harder to protect personal privacy and prevent involuntary disclosure of sensitive data. However, this should not become a motivation for slowing the process of opening up public and linked data.*

Keywords: Open Data, Social Data, Personal Data, Privacy, Public Sector Information

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With over 250 million Europeans online and a virtual ‘tsunami’ of data capturing mechanisms coming to market, data protection and privacy is an increasing concern for many citizens. According to a recent survey (Special Eurobarometer 359, 2011), over 70% of EU citizens are worried about the misuse of their personal data being disclosed online. In January 2012, the European Commission presented a proposal for a general reform of the whole legislation on privacy in EU27, aimed at strengthening the rights of individuals and improving the clarity and coherence of national rules for personal data protection. The upcoming regulation, with all its good intentions, raises potential risks of over-protecting certain personal rights and excessively increasing the cost of publishing and maintaining open datasets by the EU public sector authorities.

This paper analyzes the prospective effect of the new EU Regulation on the ‘value chain’ of Public Sector Information (PSI) reuse, based on our ongoing research (and action) in the context of the EU-funded “Citadel... On the Move” project (<http://www.citadelonthemove.eu>). The project

aims to develop and deploy a number of innovative application templates that make it easier for local governments to release data in usable, interoperable formats, and for citizens to co-create and share new mobile services that use and add to those open datasets anytime, anywhere, and with any device. In this perspective, a serious matter of concern has emerged early on in the project, namely the extent to which the risk of even involuntarily disclosing personal, and maybe sensitive data, while creating or adopting those application templates, may seriously undermine the chances of a wider take-up - and more generally dissolve the expected socio-economic benefits from PSI re-use and exploitation.

In what follows, we report about the current status of our reflections, regarding the potential sources of conflict between transparency and privacy. In particular, Section 1 outlines the current legislative setup in EU27 and internationally. Section 2 then tries to simulate the impact of the upcoming EU legal provisions on the Open Data value chain and presents the 'Privacy By Design' and the 'Privacy as a Service' operational principles, as a bridge towards the introduction of the 'Privacy Impact Assessment' and 'Privacy Enhancing Technologies' mitigating concepts. Section 3 draws some conclusions and recommendations on how to consider Privacy and Open Data as only partly overlapping domains of policy and legal intervention.

1. Legislative State of the Art

1.1. International

The right to privacy has developed relatively later than other freedoms pertaining to the individual sphere – e.g. travel or establishment – as an additional level of protection from the potential abuses or torts by an absolute monarch. As the following graph shows, only after WWII has the vast majority of worldwide countries added this specific protection to their Constitutional bill of rights:

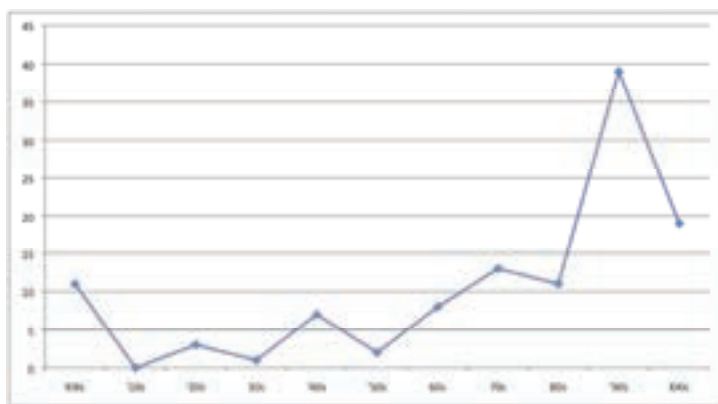


Figure 10: Number of Countries worldwide by decade of introduction of the right to privacy in Constitution (data source: Privacy International, 2013)

According to Privacy International (2013), varying aspects of the right to privacy are protected in different ways by different countries. Broad categories include:

- Protection against searches of the home
- Confidentiality of family life
- Self-determination of personal information
- Integrity of personal image, honor, and reputation
- Secrecy of personal communications and correspondence, etc.

With more specific reference to personal data, the right to have this protected from misuse sees many articulations, including:

- The right to see what data any register stores and request the rectification, actualization or even the destruction of the personal data held;
- Habeas data, i.e. the right to appeal against any violation of the above. Very important to note, the legal nature of the individual complaint is that of voluntary jurisdiction, meaning that the person whose privacy is being compromised can be the only one to present it. The Courts do not have any power to initiate the process by themselves.

Likewise, Art. 8 of the European Convention on Human Rights (drafted in 1950 by the Council of Europe, and entered into force in 1953) catered for a right to respect for one's 'private and family life, home and correspondence', subject to certain restrictions that are 'in accordance with law' and 'necessary in a democratic society'. However, the European Court of Human Rights has given this article a very broad interpretation in its jurisprudence so far. Likewise, the Charter of Fundamental Rights of the European Union (2000) states that everyone has the right to personal data protection in all aspects of life: at home, at work, whilst shopping, receiving medical treatment, at a police station or on the Internet.

In 1980, when the Internet revolution was not yet there, OECD issued a number of (non binding) Recommendations to Member States concerning the Protection of Privacy and Trans-Border Flows of Personal Data. The seven principles stated in this document (OECD, 1980) are:

1. Notice: data subjects should be given notice when their data is being collected;
2. Purpose: data should only be used for the purpose stated and not for any other purposes;
3. Consent: data should not be disclosed without the data subject's consent;
4. Security: collected data should be kept secure from any potential abuses;
5. Disclosure: data subjects should be informed as to who is collecting their data;
6. Access: data subjects should be allowed to access their data and make corrections to any inaccurate data; and
7. Accountability: data subjects should have a method available to them to hold data collectors accountable for following the above principles.

1.2. European

These principles have been fully incorporated into the 1995 EU Data Protection Directive (officially Directive 95/46/EC on the Protection of Individuals with regard to the Processing of Personal Data and on the Free Movement of such Data), which is still en force at the present date.

In 1981, with the Convention for the Protection of Individuals with regard to Automatic Processing of Personal Data, the Council of Europe extended the safeguards of the fundamental right to the respect for personal privacy, taking better account of the increasing flow of data undergoing automatic processing across the country borders (COE, 1981). This aspect is also an important component of the 1995 EU Directive, which regulates the processing of personal data within the European Union and additionally deals with the possibility of transfer outside of the EU. Basically, personal data may only be transferred to third countries if that country provides an adequate level of protection. Some exceptions to this rule are provided, for instance when the European entity that does the transfer can also guarantee that the non-European recipient will comply with the data protection rules.

In particular, the Directive's Article 29 created the 'Working party on the Protection of Individuals with regard to the Processing of Personal Data' - commonly known as the 'Article 29 Working Party' - giving advice about the level of protection in the European Union and third countries. The Working Party negotiated with U.S. representatives the 'Safe Harbor Principles' for a convergent protection of personal data, which include obligations for the controllers and allow the contractual waiving of certain rights.

Later on, the European Parliament and Council approved the 2002/58/EC ('ePrivacy') Directive, specifically concerning the electronic processing and protection of personal data. Article 5(3) of this Directive invited EU Member States to modify their laws to require that e.g. portal subscribers or users are provided with 'clear and comprehensive information' about the collection, use and disclosure of such information through their computers or other electronic devices. Prior consent must be given in order for one's own telephone numbers (landline or mobile), e-mail and postal addresses to appear in public directories – or before unsolicited commercial communications are delivered by SMS, email or other electronic means. Likewise, traffic and location data must be deleted or made anonymous when they are no longer required for conveying a communication or for billing, except if the subscriber has given their consent for another use. Limited exceptions are allowed for the interest of national security or defense, but even police investigations must adopt 'necessary, appropriate and proportionate' measures in order to ensure the availability or retention of this kind of communication related data.

Directive 2002/58/EC forms part of the so-called 'Telecoms Package', a legislative framework consisting of several Directives designed to regulate the electronic communications sector and to amend the existing legislation governing the telecommunications sector. The 'Telecoms Package' was integrated in December 2009 by two more Directives aimed at improving the law-making process and the EU consumer protection, as well as by the establishment of a body of European regulators for electronic communications (BEREC).

In particular, the so-called 'Citizen Rights' Directive (actually 2009/136/EC) amended Article 5(3) of the 'ePrivacy' Directive with the additional requirements to: (a) give to the portal users advanced written notice that a cookie is being placed on their devices and describe what the cookie is doing; and (b) obtain the user's consent to the placement of the cookie before placing it on the user's device. A forward-looking approach is taken in this Directive, in the sense that these provisions apply to all future technologies that allow tracking users' preferences – thus it is not just limited to cookies in fact.

1.3. National

Generally speaking, EU Directives are addressed to the Member States, and must be transposed into internal legislation in order to become legally binding for citizens and enterprises. There usually is a deadline for the Commission to be notified of such transposition – for instance, Directive 95/46/EC on the protection of personal data set it at the end of 1998, while the ‘ePrivacy’ Directive had to be transposed by October 2003, and for the Citizen’s Rights Directive the respective deadline was in May 2011.

As of June 2012, like the following picture shows, 23 out of 27 Member States had notified the Commission of the full transposition of the revised Telecoms Package – with the exceptions of Belgium, Poland, Portugal and Slovenia. Against these, the Commission has launched infringement proceedings in the form of a referral to the Court of Justice of the European Union, including a request for financial sanctions. In fact, swift implementation of the revised regulatory framework for electronic communications has been identified as a priority in the Digital Agenda for Europe (DAE), one of the flagship initiatives of the Europe 2020 Strategy aiming at growths and jobs in Europe. The DAE recognizes that a lack of trust in the online environment is seriously hampering the development of Europe’s online economy, and that privacy must also be effectively enforced online.



Figure 2.: EU Countries by year of transposition of the Telecoms Package (source: European Commission, 2012)

With the above exceptions, all Member States have enacted their own data protection legislation in full compliance with the EU guidelines. However, as these guidelines have left several margins for interpretation and localization, the result has been that data privacy laws still vary a lot across the EU27, which generates differences in enforcement that add elements of complication to the smooth development of cross-border and pan-European business activities. This outcome contrasts with the original purpose of the Data Protection Directive 95/46/EC, which was exactly to remove diversity in data protection legislation amongst EU Member States to facilitate the free flow of data within the EU and therefore improve the economic impacts of the Internal Market together with data liberalization.

1.4. The new Regulation

While the 'ePrivacy' Directive has further developed and complemented the provisions of Directive 95/46/EC in the area of electronic communications, the latter remains the cornerstone of EU legislation on personal data protection. Therefore, in line with the DAE objectives, the Commission presented in January 2012 a proposal for a general reform of the whole legislation on privacy in Europe. This proposal is now being debated at the Council and the European Parliament, before it becomes a Regulation. According to Article 189 of the Treaty of Rome, while a Directive allows Member States of the EU the chance to adjust the legal text to align with national requirements or to ensure that it fits the national legislation of that State, a Regulation is binding in its entirety and immediately after its approval in each Member State – thus having a much higher and more direct impact depending on their objectives.

The Commission proposal aims at strengthening the rights of individuals and improving the clarity and coherence of the EU rules for personal data protection. The DG Justice Fact Sheet (2012) insists on the following rationale to justify the new intervention:

- 250 million Europeans are using the Internet daily nowadays
- The previous legislation (still in force) dates back to 1995
- According to a recent survey (Special Eurobarometer 359, 2011), 72% of EU citizens are worried about the misuse of their personal data disclosed online
- European businesses offering high data protection standards enjoy competitive advantage on a global scale.

The key proposed changes include:

- Guaranteeing easy access to one's own data and the freedom to transfer personal data from one service provider to another
- Establishing the 'right to be forgotten'¹ to help people better manage data protection risks online
- Ensuring that whenever the consent of the individual is required for the processing of their personal data, it is always given explicitly
- Harmonizing applicable rules across the EU

¹ When individuals no longer want their data to be processed and there are no legitimate grounds for retaining it, the data has to be deleted.

- Clarifying the conditions under which the EU law applies to data controllers that are located outside the EU
- Adding special requirements for sensitive data or data concerning children under 18 years old.

The resulting legal framework basically confirms and clarifies the existing one, which in relation to Open Data can be summarized as follows:

A. Personal data may only be published (or communicated to third parties) if at least one of the following three conditions occurs:

- (a) The data subject has previously given her/his consent; this needs to be provided freely, in a way that is explicit, unambiguous and unequivocal, and specifically for the purposes of that publication, as stated and made clear to her/him before it actually starts taking place. Furthermore, this consent can be revoked at any time and without motivation;
- (b) Publication is necessary for the performance or the preparation of a contract to which the data subject is party, or to comply with a legal obligation to which the data controller is subject (including the cases where the vital interests of the data subject are protected or if a task is carried out in the public interest or in the exercise of official authority, e.g. for civil protection or police purposes);
- (c) Data is anonymized, meaning that any reference to the underlying data subjects has been removed before publication.

B. A distinction must be kept between personal data generated or maintained by a public authority and personal data generated by an application. This distinction is relevant, however, only to assign the privacy protection responsibilities according to the EU legislation, which has to be respected in any case, namely that:

- The juridical entity that stores and maintains personal datasets (data controller) is solely responsible for respecting the EU and national regulations on privacy;
- The juridical entity that builds an application (software developer) is solely responsible for both the personal datasets borrowed or acquired, with due permission, by any of its customers and those that are generated by the application itself. The latter may include the log files (where, when, how and by whom the app was used) and the content created by the users themselves, with or without a clear association to their personal identity.

Both entities (the data controller and the software developer) have to comply with strict security obligations concerning the platform where processing takes place, ask for explicit prior consent, use personal data for certain predefined purposes only, and not hold it longer than necessary (destroying the data after that period expires or if the data subject asks to do so).

C. Special care must be given when 'sensitive' personal datasets are involved. These include "racial or ethnic origin, political opinions, religious or philosophical beliefs, trade-union membership, and health or sex life". Dealing with them, or with personal datasets concerning people under the age of 18, is going to be under even stricter rules when the new EC Regulation comes into force.

D. Finally, Art. 33 of the proposed Regulation introduces the notion of Data Protection Impact Assessment. This has to be carried out preventively by the controller or the processor acting on the

controller's behalf, whenever “processing operations present specific risks to the rights and freedoms of data subjects by virtue of their nature, their scope or their purposes”. Besides “a general description of the envisaged processing operations”, the assessment should present “the measures envisaged to address the risks, safeguards, security measures and mechanisms to ensure the protection of personal data and to demonstrate compliance with this Regulation, taking into account the rights and legitimate interests of data subjects and other persons concerned”.

2. Impact on the Open Data Value Chain

Over the last decade, several authoritative studies (Pira International Ltd et al. 2000, Dekkers et al. 2006, OECD 2006) have dealt with the definition of a ‘value chain’ for the commercial and non-commercial exploitation of PSI, including Open Data as a specification thereof. These attempts were based on a number of assumptions (Vickery 2011, p. 12), namely that:

- Enabling technologies such as the Internet and open source software applications are now supporting and enhancing the main value-creating functions;
- Much of the currently expanding re-use activity only started once low-cost ICT applications and networks became available;
- A positive economic value is actually created out of Open Data / PSI reuse, according to a number of relevant business models (Ferro & Osella, 2011);
- Recent trends on collaborative data and service production between governments and citizens, such as those described by Szkuta et al. (2012), do not add significant feedback loops to the workflow schematized in the following Figure:



Figure 3.: The Open Data Value Chain (source: Citadel On The Move Project, 2012)

In the above representation, four main actors, or stakeholder categories, are identified, in close association with well specific tasks:

- Policy Makers, being in charge of the high-level direction and regulation of the whole process, and with specific respect to Data Providers;
- Data Providers, usually, though not always, public bodies or agencies (such as public utility companies, statistical offices, chambers of commerce etc.), being responsible for the creation (setup, organization, structuration) of the open datasets, and sometimes also of their adaptation and specialisation to the needs of the Application Developers;
- Application Developers, usually ICT companies, but also individual Citizens, sometimes lying under the control of public bodies, otherwise acting on the free market, with the mission of (or sometimes candidating to) transforming the datasets available into 'human readable' forms – either products, or services, or both;
- Business/Citizen Communities, including not-for-profit entities and NGOs as well as travellers and visitors, who are ultimately beneficiaries of the transformation, generation and utilization of public datasets according to their respective (business/non business) purposes.

Activities beyond raw data creation, collection and aggregation, which can be relevant to value creation include, for instance: data processing, editing and packaging, marketing and delivery. More recently, they also comprise the development of API's, mash-up's and other forms of user friendly – if not user generated – content.

2.1. Key Areas of Concern

In this scenario, the likely impact of the privacy protection issue can be assessed in at least three specific directions:

Relation between Policy Makers and Data Providers. Within the current regulatory framework, the Policy Makers are expected to act as 'prime movers' with respect to Data Providers, defining which datasets are to be made public (open), and how. In principle, getting rid of all the unjustified concerns about privacy would be very simple (Fioretti, 2011), if one only considered that:

- Most open datasets have nothing personal to be protected in them (e.g.: digital maps, public budgets, air pollution measurements etc.). However, there can be a conflict between political visions regarding what has to be considered as public, hence open, which could be easily or inadvertently misunderstood;
- Most private or public datasets containing personal information (e.g. names and addresses of people with specific diseases, or who were victims of crime) might seem to have no sound economic reason to be published, nor any actual demand by Open Data advocates. In the perspective, however, of favouring the creation of a broader market for applications that use datasets being made open in the interest of those they belongs to, privacy can become an additional issue impeding disclosure and distribution;
- Most exceptions to privacy protection for specific cases or categories of people (e.g. those who candidate to public offices, Government and Parliament members, etc) already exist in the law, including the important case of 'anonymization' – that is, techniques for protecting the privacy of individuals in large databases by deleting information like names and social security numbers. However, computer scientists have convincingly demonstrated that they can often 're-identify' or 'de-anonymize' individuals hidden in anonymized datasets with an astonishing ease (Ohm, 2009; Shapiro, 2012).

In this framework, and particularly in the perspective traced by the new EU regulation, a pre-emptive Privacy Impact Assessment should be carried out whenever the dilemma becomes whether and how to publish or not.

Relation between Data Providers and Application Developers. The following step after a given dataset has been made public is to promote wider use and industrial exploitation in the context of specific applications to be developed out of the datasets disclosed. For example, a database containing all the job assignments received in a given year by civil servants working for more than one single public administration can give life to interesting transparency trials and compliance exercises with existing norms. However, in case of a clear lack of consent or juridical rationale to disclosure, this virtuous process can hardly be activated – partly or in full.

A more refined analysis of this relation should also take into account the specific tasks of cleaning up and upgrading the published datasets – given this is not a ‘one-off’ event, but something related to the pragmatic evolution of things at both involved parties.

Relation between Application Developers and the Business/Citizen Communities. Proceeding top down along the value chain in Figure 3, another important limitation to industrial exploitation and reuse comes from the lack of trust in the relation between application providers and their own (citizen or business) customers. According to a UK survey published in 2012 by Deloitte LLP, the concrete risk of breaching personal privacy is not an issue that would make a customer consider opposing the use of personal data by service providing organizations (only 2% would do that), compared to the uncertainty on what would happen to the data itself (that affected 51% of the interviewed sample). Likewise, 70% of respondents expressed their deepest concern about the risk of seeing their personal data lost or insecure and 56% particularly disapproved even anonymized datasets being ‘sold off’ to other companies.

This evidence shifts the attention from privacy protection as embedded in data creation to the stage of implementation, where again the risk of breakdown in the anonymization techniques stands high on the appreciation of service customers. Also in this case, a pre-emptive Privacy Impact Assessment should be more than recommended.

2.2 Privacy by Design

A first concrete response to these areas of concern can be represented by the Privacy By Design principles, which were developed in the late 1990’s by the Commissioner for Information and Privacy at the Government of Ontario, Dr. Ann Cavoukian. At that time, the notion of embedding privacy into technology design was less popular than today – although verifying compliance with legislation and regulation continues to be the preferred course of action. Similar to quality assurance and certification, ‘Privacy by Design’ was originally proposed as the default mode of operation for an ideal organisation. Its seven principles include:

- Proactive not Reactive; Preventative, not Remedial;
- Privacy as the Default setting;
- Privacy Embedded into Design;
- Full Functionality: Positive-Sum, not Zero-Sum;
- End-to-End Security: Full Lifecycle Protection;
- Visibility and Transparency: Keep it Open;

- Respect for User Privacy: Keep it User-Centric.

This translates into the deployment of Privacy-Enhancing Technologies (PET's) like the ones that have been recently proposed in the context of the SAPERE project (2012): a technique inspired by the natural immune system, in which documents are active entities that are able to determine whether access is allowed to their content based on the context of use. Just as the immune system regards its cells as normal within the body, and a pathogen as an abnormal presence to be fought, the self-protecting document can decide on its own if provide authorised access to its content, or deny it to 'foreign' elements.

Whenever a user wants to access a self-protected content, the current context information is used to generate a binary string, which is passed to the detector. If the binary string is not detected, this means that access to the content is within the boundaries specified by the owner. If the string is detected, meaning that content is accessed outside the boundaries specified by the owner, access to the content is denied. Additionally to that, the detector set can adapt to changes in the environment using co-stimulation signals provided by a human observer, and periodic updates.

This protection system is deemed to work both in addressing the protection of personal privacy at the level of end users, and the compliance with data protection/copyright laws and the 'right to be forgotten' at the level of organizations.

2.3. Privacy as a Service

Another possible response to the above issues is the concept of Privacy as a Service (PaaS), which was developed at IBM in San José, California (Maximilien et al., 2009). Figure 4 shows an architecture based on eight components:

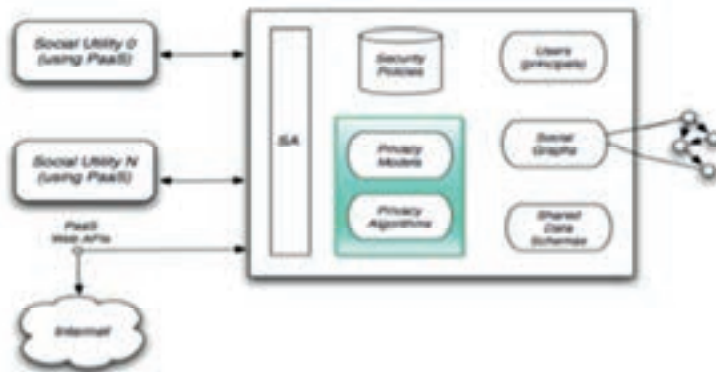


Figure 4: The PaaS framework (source: Maximilien et al., 2009)

1. A Security Assistant (SA) that ensures that access to the information in the server strictly follows the rules in the Security Policies repository;
2. A set of Security Policies that store the social utility's reference information, their associated credentials, a list of the information that the utility can retrieve;
3. A directory of Privacy Principals, e.g. Users;

4. A graph of Social Relationships between principals;
5. A collection of Data Schemas shared between principals, e.g., profile data;
6. A collection of Privacy Algorithms that can return the privacy index of a user for any piece of data that the user is trying to view or expose;
7. A collection of Privacy Models that contain the means for users to make selections between other users in their graphs (based on relationships, e.g., friends, friends of friends, networks, and so on) as well as a specific privacy algorithm to be used;
8. A collection of Web API's exposing the main functions of the privacy system such that it can be remotely invoked and incorporated (in a secure manner) into existing systems that do not have privacy concerns realized or solved.

For each profile item, the users themselves are asked to set a privacy level that determines their willingness to disclose some personal information associated with this item. The privacy index of a user quantifies the user's privacy risk caused by his settings. This is a growing function of both the sensitivity of information a user reveals, and of the number of people (e.g. in a social network like Facebook™) that know about that piece of information about the user. In the experimentation done at IBM, users are enabled to view their settings and particularly their current privacy index and a recommendation of a different one based on the opinions of other users in the network.



Figure 5: User Privacy Score Index and Recommendation (source: Maximilien et al., 2009)

There may be other technical approaches (for instance: Itani et al., 2009) to meet the purposes of 'Privacy as a Service' in terms of legal compliance. However, the important aspect of PaaS is the provision of a (shared) feedback process or a semi-automatic mechanism that informs users about the different operations applied on their data and makes them aware of any potential risk that may jeopardize the confidentiality of their sensitive information.

3. Conclusions

Does privacy protection have to do with Open Data? At face value, the immediate answer should be no. However, some areas of attention have been identified in this paper, as far as privacy protection in the context of PSI exploitation is concerned.

- First is customer's trust in service provider. As the Deloitte UK survey quoted above demonstrates, fear of personal data misuse is far more critical as a hampering factor of service usage than concern about privacy breaches. This definitely speaks in favour of a visible and active role of both local and national governments in supporting and sustaining the technical and juridical integrity of the service systems activated.
- Second, and related aspect is how to preserve the anonymity of anonymized datasets. Technically speaking, there is plenty of evidence about the possibility of recovering the protected identities of data owners in a variety of cases. This should not be taken as a pretext to stop the creation of open datasets out of collections of personal information that governments certainly gather. On the other hand, this is an issue not to be undermined – also in relation to the previously mentioned aspect of customer's (or citizen's) trust. Among other implications, the process of opening up data should not be improvised. This also confirms the usefulness of introducing the Privacy Impact Assessments proposed in this paper.
- Third, in relation to the purposes of the upcoming EC Regulation, another consequence of Web 2.0 is the blurring of the traditional distinction between data holders and collectors, but also between application providers and users. If we admit the possibility of user inputs to an initial City Points Of Interest collection, it is likely that in a relatively short while, the most popular applications will heavily rely on citizen's own data. Here the risk of mixing up relevant (to the service) and irrelevant personal information is high, and must be considered upfront. If we admit the possibility of user led improvements to existing apps that are developed in the logic of Open Source, what if those who make these improvements are not established businesses and nevertheless participate with success to the co-development? Remember that according to Art. 3 of Directive 95/46/EC, its provisions do not apply to the processing of personal data "by a natural person in the course of a purely personal or household activity". The same concept is repeated by the new Regulation (see Art. 2 of the current text). Now the 'Citizen-Developer' figure seems to comply with the former – being a natural person – but not necessarily with the latter qualification – which may require a deeper preventive assessment, in order to decide whether this activity falls outside the scope of Community Law.
- Fourth, the need to tackle with privacy upfront should not hide the fact that in a world populated by goodwill people acting in good faith, the real attacks to privacy we should defend ourselves from are not coming from the abuses committed by Citizens-Developers, and even less from public organisations that are subject to an internal systems of rules and controls to their daily operation. Of course, being prone to the identification of innovative and sustainable business models that leverage Open Data as a valid source and support, does not imply losing the attention towards the possible misuses and illegal forms of exploitation. But an excess protection against the risk of personal data disclosure might be

too similar to inviting people not to get out of their homes to prevent the risk of break-in and theft. As it is very much in the spirit of the new Regulation, commercial use should not be seen with suspicion, and certainly not to prevent educational or civil purposes of Open Data exploitation.

- Fifth, and in relation to the above, the cost of opening up and cleansing the public datasets – as well as of developing open data based applications – can be unsustainable for many local governments today, which opens a window towards enabling third parties to contribute heavily, and relatively easily, to the same process. Then if any concern about privacy were confirmed in practice, it would always be possible to spot and document the abuses that have been really committed in relation to that.

In conclusion, Privacy and Open Data are only partly overlapping as domains of policy and legal intervention. With the fast increase of openness and transparency in the digital world, it will prove harder and harder to protect personal privacy and prevent involuntary disclosure of sensitive data. However, this should not become a motivation for slowing the process of opening up public and linked data. In principle, the ownership of these datasets belongs to the same entities they are being disclosed to, and there can be strong socio-economic reasons for enhancing and accelerating this process.

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About the Authors

Francesco Molinari

As an independent researcher and advisor he has worked for several public and private organizations in Europe, including clients from Belgium, Cyprus, Greece, Israel, Italy, Portugal, Slovenia and the UK. In his career he has been involved in the coordination of (or participation in) about twenty ICT-related R&D and innovation projects at European, national and regional level - many of which on the topics of eParticipation and eGovernment. For the European Commission, among others, he wrote in 2008 a study for the assessment of the Living Labs approach in the EU innovation and Future Internet scenario. For the Italian Ministry of Economic Development, he led in 2010-2012 a State-Region Working Group aimed at the establishment of PCP (Pre Commercial Procurement) in the local public administration practice.

Jesse Marsh

In different consultancy roles first in Milan and since 1995 in Palermo, he worked in learning technologies and teleworking to then broaden his scope to include the relation between the information society and sustainable development, cultural diversity and democratic participation. Recently his interest has further broadened to include issues related to cultural heritage, spatial planning and local development, working with local authorities in Sicily and with different Departments of the Regional Government. Over the last two years, he has become an active member of the Living Lab movement. He is the founder and coordinator of the Territorial Living Lab TLL-Sicily, a member of the ENoLL (European Network of Living Labs) since 2007, as well as of the "Regional and Territorial" thematic domain network within ENoLL.

Parliamentary Information Visualization:

Paving the way towards legislative transparency and empowered citizens

Aspasia Papaloi*, Dimitris Gouscos**

**PhD Candidate, Laboratory of New Technologies in Communication, Education and the Mass Media, Faculty of Communication and Media Studies, University of Athens, Greece, apapaloi@media.uoa.gr*

*** Assistant Professor, Laboratory of New Technologies in Communication, Education and the Mass Media, Faculty of Communication and Media Studies, University of Athens, Greece, gouscos@media.uoa.gr*

Abstract: *The objective of this article is to highlight the contribution and importance of parliamentary information visualization (PIV) with a view to legislative transparency. The constant appeal for parliamentary openness regarding information on laws and bills and accountability of elected representatives calls for transparency at parliamentary procedures and at several areas of parliamentary informatics, in order to enhance democratic control and re-establish constituents' trust. The provision of easy to understand and analyze information plays a central role to the achievement of transparency. In this respect, an overview of the characteristics and capabilities of information visualization can contribute to delineating not only the institutional, but also technical possibilities and constraints of achieving legislative transparency. The article provides such an overview, attempting to highlight some causal relationships between parliamentary openness, legislative transparency and parliamentary information visualization, and discussing the potential and limitations of PIV not only in terms of technical solutions but also with respect to human factors and political aspects that need to be considered further.*

Keywords: Information Visualization (IV), Parliamentary Information Visualization (PIV), openness, legislative transparency, transparency indicators, empowered citizens

The famous quote “a picture is worth a thousand words” is able to summarize the meaning of how an image is capable of communicating our words and messages. The field of contemporary visual communication encompasses a wide spectrum of disciplines ranging from linguistics, neuroscience and psychology, to communication, human-computer interaction (HCI) and aesthetics; an interdisciplinary field that examines how our vision and brain perceives the visual stimulus, how this is interpreted and expressed, how we interact with the existing message and, finally, what are the offerings of this kind of interaction.

Nowadays, the effort to communicate information is of utmost importance given that (a) the confluence of data received from the web is of high-density, (b) available documents contain too much information, (c) our time is limited and, sometimes, (d) information may be unclear or ambiguous. Information visualization (InfoVis or IV) is a means of facilitating this procedure in a dynamic way taking into account the constraints regarding the nature of information and

visualization, respectively. Current research regarding visualization of public information, especially with regards to transparency, unfortunately focuses mostly on the technical side rather than the institutional or political aspects of this effort.

However, this discussion becomes even more interesting and opens a new research field when it is linked to legislative transparency and the visual representation of parliamentary information, namely *“information and statistics about individual legislators; particular legislative proposals; votes thereon; text of legislation”* (Wikipedia, 2013).

In addition to this, parliamentary information visualization (PIV) offers a broad spectrum of issues to investigate and discuss due to the fact that it encapsulates three components: (i) the issue of information provision with a view to informing citizens; (ii) the issue of transparency in technical terms; and (iii) the issue of legislative transparency as a means of empowering citizens. Concepts such as the Right To Know, the Right To Information (RTI), Access To Information (ATI), Freedom of Information (FOI), openness, accountability, empowerment but also those of timeliness, accuracy and comprehension are among those highlighted in the draft text of *“Open Government Standards/Principles”*, as well as in the *“Declaration on Parliamentary Openness”*¹.

These initiatives, not to mention the latest World e-Parliament Report of 2012, demonstrate vividly the need for presenting and explaining the legislative process to citizens in an explicit and comprehensible manner. To a further extent, openness is able to lead to transparency and, in the long run, to the accountability of legislators and the empowerment of citizens regarding their say at several stages of their participation in decision-making, according to each country's political system.

The article is divided in three parts, each focusing on a different set of issues. The first part of the article departs from an overview of IV features in order to set the canvas for the contribution of IV to gains in knowledge, communication and collaboration. Subsequently, these features are discussed as to their contribution in outlining the basic characteristics of openness and transparency, but also in extracting transparency indicators, which are important for the measurement of the availability and accessibility of the information provided. This discussion leads to highlighting the contribution of IV to legislative transparency, with a view to an opened-up parliament concept. The last part of the article discusses these points with regards to their usefulness for PIV. Opportunities and constraints of visualizing parliamentary information are highlighted, whereas a direction of future work is outlined with respect to initiatives which implement visualization techniques related to Parliamentary Informatics.

1. A framework for Information Visualization

1.1. The role of visual patterns and structures for Information Visualization

Taking a closer look at the numerous examples of visualizations or, otherwise called, visual representations, it can be concluded that they give the opportunity for browsing large amounts of information, seeking information, exploring relationships and even comparing the latter or following their evolution by isolating other factors or entities, in an easy to follow and systematic

¹The *“Open Government Standards/Principles”* and the *“Declaration on Parliamentary Openness”* stem from civil society initiatives. Detailed information can be retrieved through <http://www.opengovstandards.org> and <http://www.openingparliament.org>, respectively.

way. Ware (2004), mentions that the intelligence of people is not evolving without cognitive tools; in our case computers, networks and the World Wide Web. That is to say, *"the world is the repository of the information needed to act"* (Ballard, 1996, p. 111) and visualization serves this purpose by bringing the knowledge of the world to users by *"presenting the data in such a way that the important and informative patterns stand out"* (Ware, 2004, p. xxi), helping users categorize the incoming information, facilitating its connection with previous knowledge and helping build new connections and new knowledge.

Whereas knowledge is the end result of visualizations, IV has to do not only with the representation of information but also with the interaction leading to subsequent changes of this representation (Yi, Kang, Stasko & Jacko, 2007). Moreover, due to this dynamic transformation visualizations are able to call for engagement, questions and disagreements at each stage of the visual representation by fostering collaboration and giving the sense of *"where you might want to go next"* (Schrage, 2013). The following definition summarizes the essence of IV as *"the use of computer-supported, interactive, visual representations of abstract data to amplify cognition"* (Card, Mackinlay & Shneiderman, 1999, p. 7) where abstract data *"refers to (heterogeneous) data that has no inherent spatial structure"* (Info-Vis Wiki, n.d.). Additionally Meadows (2003), talking about the art of interactive narrative, distinguishes among three forms of interactivity namely *"acquiring of information, discovering additional information, and facilitating the distribution of that information among multiple people"*. As these points indicate, IV can serve as an intermediary between information and knowledge and has the potential to allow users engage in interactive participatory activities, known as collaborative IV.

Lengler and Eppler (2007) brought the theory and research agenda of visualization one step further by compiling a table of visualizations categorized by objective. Their classification distinguishes between Data Visualization, Information Visualization, Concept Visualization, Strategy Visualization, Metaphor Visualization and Compound Visualization. This assortment of IV approaches contains techniques such as timelines, flowcharts, clustering, cycle diagrams, loop diagrams, semantic networks, treemaps, parallel coordinates, radar chart cobwebs, and other (ibid.). In the periodic table of IV techniques that Lengler and Eppler propose, most of the techniques available promote, on top of their interactivity, critical thinking through which users *"reduce complexity through analysis and synthesis"* (ibid., p. 4). The cognitive process is discussed below in more detail. In particular, the importance of critical thinking in deliberative democratic processes and in forming empowered citizens lies at the heart of our discussion.

1.2. Accessibility, usability and IV

Accessibility and usability guidelines, which are already in place for websites, are also related to the technical, cognitive and social requirements for IV. Moreover, this is to be expected, since both accessibility and usability and IV deal with the broader agenda of Human-Computer Interaction (HCI).

According to the definition given by W3C (2012), accessibility refers to allowing people with visual, auditory, physical, speech, cognitive and neurological disabilities to achieve equal access and opportunity to information. Accessibility standards are also applicable for users that are not visually oriented and prefer other means of being informed (Card et al., 1999) and, of course, in the case of elder people. Requirements for accessibility further relate to design issues (including choice of colors, pictures, multimedia, contrast, and others), where there are clearly common grounds

with IV. As McEachren et al. (2012) state, different visual variables are able to communicate differences in information through commonly understood metaphors, which is quite useful especially for the case of people with cognitive and neurological disabilities. IV techniques seem to be able to reach a “*diverse, widespread, less technical audience*” (Gershon & Eick, 1997, p. 29) with different backgrounds, education, skills and needs. In this respect, IV techniques can also be considered to create an inclusive audience and help bridge, up to some extent, problems of digital divide.

The ease of use of IV techniques has to do with the quality, efficiency and effectiveness of the user experience, as well as with the end satisfaction of the user. In particular, the dimensions to be considered for IV include “*visual impact; clarity; perceived finishedness; directed focus; facilitated insight; modifiability; group interaction support*” (Bresciani, Blackwell & Eppler, 2008, p.1). Respectively, Bresciani et al. (2008) explain that the usability of IV needs to take into consideration the following factors:

- The degree of visualization attractiveness;
- The ease of comprehension without any particular cognitive effort;
- The degree at which contributions and modifications to the visualization are possible, as opposed to the case in which a visualization seems to be “*a finished, polished product*”;
- The ability to direct attention to the principal item(s) of discussion;
- The possibility of generating new insights;
- The possibility of modifications in the visualization items while the discussion evolves;
- The degree at which visualization facilitates or structures the interaction of a group.

As far as technical requirements are concerned, Card et al. (1999) suggest the use of open standards with a twofold purpose: (a) in order to avoid user frustration due to “*misinterpreting displays*” and “*coming to incorrect conclusions*”; and also (b) as a common pattern of data representation.

Last but not least, the clarity of information is an issue of utmost importance and has a significant degree of difficulty to achieve. This difficulty basically stems from the fact that the information received in the form of a document contains many variables and is more often than not quite complex. Clarity of information has a number of technical, visual and cognitive aspects and, for this reason, “*it is imperative to contextualize messages in terms of their purpose, scope, and time*” (Eppler & Bischof, 2011, p. 11).

The next section investigates in depth the cognitive usefulness of IV and attempts to outline its connection to other disciplines.

1.3. Information visualization at the service of knowledge, communication and collaboration

IV is an interdisciplinary field and its techniques embrace both technical and cognitive issues. In order to better understand how an IV-based application amplifies cognition, it is necessary to discuss the processes of visual thinking, visual learning and visual communication.

From an IV standpoint, the process of thinking starts by browsing data without having a concrete goal or question in mind, which leads to the examination and exploration of data and ends by making new discoveries and gaining insight (Fekete, Wijk, Stasko & North, 2008). Furthermore, Lengler et al. (2007) make a distinction between convergent and divergent thinking, meaning that this process results either in critical thinking or in the development of unique and creative responses to the issue that is faced. McLoughlin & Krakowski (2001) and Constantine & Lockwood (2002) state that visual thinking is a manipulating process rooted in instructive interaction and involving

"(...) implicit guidance of the user by the user interface in order for the user to best learn how to use a system". "The structure, appearance, and behavior of the user interface taken as a whole provide all the needed help, guidance, and instruction" (Constantine et al., 2002, p. 2).

This approach corresponds to a number of technical issues for IV that according to Eppler et al. (2011) require:

- Reduction of item number through structuring or grouping;
- Focus on the essential relationships of the items;
- Ability of an overview before drilling down to details;
- Consideration of the possible changes.

Apart from *"visual queries on information graphics"*, which partially enable the solution of the problem when seen, and the element *"of non-visual information"* evocation, namely evocation of verbal information and subsequent storage *"to long-term memory"* (Ware, 2004, p. 352), this part of visual thinking signals the transition to visual learning and to an interactive process based on *"constructing connections between visual and verbal representations of a system"* (McLoughlin et al., 2001, p. 128).

This procedure indicates that the implicit process of visual thinking leads to an explicit one and, additionally, to the amplification of cognition thanks to the encoding of the information; to the condensed searching and *"monitoring of a large number of potential events"* (Card et al., 1999, p. 16); to the enabling of inferences; to the visual organization of data based on structural relationships enhancing patterns; and finally to *"the increasing of memory and processing resources available to the users"* (ibid.).

The end result of visual thinking and learning, therefore, is not just plain knowledge; communication, interaction and collaboration are also potentially enhanced. Additionally, an interactive visualization implies possible changes on the user interface and communication patterns. Here comes the field of knowledge visualization, that aims to exploit visual representations for the transfer of knowledge *"in order to increase its speed and its quality"; "to further transfer insights, experiences, attitudes, values, premonitions, perspectives, opinions and predictions (...)"*; to address knowledge at several levels ranging from *"among individuals, from individuals to groups, and from individuals and groups to the entire organization"* (Burkhard, 2004, p. 520; Eppler & Burkhard, 2004, p. 4). In turn, this kind of knowledge and communication among users enables collaborative IV and collaborative knowledge work contributing to a further step of decision-making, beyond sheer problem-solving. Finally, as Bresciani and Eppler (2009) note, the benefits of collaborative

knowledge sharing seem to reinforce not only individual learning and team performance but also enhance significantly the performance of organizations, which is crucial for legislatures.

As we have tried to highlight in this short overview, IV is a prerequisite to access of information, gain in insights and construction of new knowledge in order to further enable collaborative knowledge sharing. Especially nowadays, existing social networks and their possibilities seem to be a promising channel in connecting various groups at a social level and further encouraging collaborative information visualization. A recent study of Viégas and Wattenberg (2010) based on the “Many Eyes” public website, where anyone could upload and visualize data, resulted in engaging groups with different backgrounds as well as inexperienced users. Moreover, the completeness of data and the identification of original sources have enabled extraction of useful outcomes, based on reliable data and effectiveness of the overall process. Last but not least, visualization has revealed perspectives that the concerned parties had not planned. Efforts like this showcase the potential of IV to result in interactive environments that lay the grounds for a new discussion on openness, transparency and their correlations.

2. Information visualization at the service of transparency

2.1. Mapping transparency and its interrelations

Transparency is a slippery term, having different meanings in different contexts; its meaning is quite interesting, however, when talking about parliamentary information. Special attention should be given in the discussion between transparency and openness due to the fact, as Bannister & Connolly (2010) also claim, that both these concepts have interwoven meanings, yet they are not identical. In general terms, openness has to do with the availability and accessibility of information, whereas transparency is linked to the degrees of accessibility, visibility (Florini, 2007; Bannister et al., 2010) and reliability of information (Fox, 2007). One more characteristic could be added to this list for the aspects of transparency, namely the degree of achieving an inclusive audience, in line with the principles of accessibility. Transparency, according to this analysis, can be considered as a natural corollary of openness, “*one form of operationalization of openness*”, that indicates “*how openness is delivered or achieved*” (Bannister et al., 2010, p.4). Taking a step further, in the context of legislatures, parliamentary transparency serves a twofold purpose, namely that of representatives’ accountability and citizens’ empowerment.

In an attempt to draw an analogy between this discussion of transparency, and the previous discussion on IV as an intermediary between information and knowledge, one could say that IV is related to openness, knowledge is related to empowerment and transparency can be placed in the center of such a concept map. In this respect, we would like to propose a set of relations between IV and openness, IV and transparency and, finally, IV and empowerment, with a view to outlining a set of indicators for legislative transparency and parliamentary information provision.

The difficulty in drawing a strict distinction between openness and transparency in relation to information provision is also encountered in the literature, which does not easily allow to distinguish which features belong to openness and which to transparency, especially with regard to parliamentary information. Nevertheless, we make an attempt to draw such a distinction based on the concepts and definitions put forward in the Declaration of Parliamentary Openness of the OpeningParliament.org forum, as well as on the draft Open Government Standards/Principles

proposal of the Open Government Standards initiative, coordinated by Access Info Europe. Our proposal is visualized in Figure 1.



Figure 1. Interrelations between openness, transparency and empowerment

As depicted in Figure 1, our proposal attempts to draw a distinct agenda for transparency, as an end result of openness, and operationalize this agenda through a number of indicators having to do with the usefulness, reliability, positive impact, clarity, flexibility, directedness and modifiability of the information provided. Satisfaction of all these indicators, then, could enable users/citizens to gain not only insight but also enhance their critical thinking. What is more, empowerment of citizens' thinking and say can lay the grounds for enabling further demands for accountability on behalf of elected representatives.

As a last point, this discussion should also be considered in terms of human factors, especially when talking about IV. It is clear that transparency is not achieved by merely giving away information, but rather by the way this information is perceived through human understanding and interaction, "*searching for both known and unknown information*" (Gershon et al., 1997, p.31) and problem-solving. This subject, which goes beyond the scope of our current analysis, calls for further research into the perception of visual information provided for transparency purposes, at the cross-roads of IV, visual design and cognitive studies.

2.2. Transparency, IV and non-technical aspects

The potential of web-based IV techniques, as discussed in the previous section, to implement the indicators for transparency proposed in Figure 1 above is manifold. Firstly, an IV platform is able to provide information efficiently and effectively, which can satisfy users and support their interaction. Secondly, the quality of the IV and the information itself can build users' trust, to the extent that it is inclusive and enables inspecting several aspects of an issue. The issue of information quality, of course, varies according to the end users' perspective and depends on their point of view (Miller, 1996). The characteristics of timeliness, accuracy, relevance, coherence and validity of information are some significant dimensions regarding information quality. Besides the point of view and the degree of perception of each user, Miller (1996) also states that the management of information quality is a "*continual process*", which constantly changes depending on the needs and the technologies offered.

Consequently, the social, legal and institutional aspects of the analysis visualized in Figure 1 cannot be overlooked. Openness, transparency and empowerment are at the same time end results and processes that cannot exist in isolation from each other. Their correlation and the degree of their impact are determined by the various interested parties and stakeholders involved in their realization, namely politicians, senior officers, public servants, civil society initiatives, whistleblowers, Parliamentary Monitoring Organizations (PMOs). These characteristics, on the other hand, are also dependent upon the extent of Freedom Of Information and Right To Information provisions established in each country and embraced by each culture. Last but not least, the kinds of information that can be disclosed or need to remain classified also vary significantly in each country, according to the ways in which the issues of secrecy and privacy are regulated for citizens, but also for politicians and legislatures. IV may enhance or promote transparency but the process of opening data is not as simple as it might seem. This is explicitly outlined in the research of Janssen, Charalabidis & Zuiderwijk (2012), which concludes that opening data does not necessarily lead to transparency, due to a significant number of barriers starting from a *“no uniform policy for publicizing data”* to *“lack of ability to discover the appropriate data”*, barriers related to use and participation, as well as barriers related to legislation. These problems are also acknowledged by Wilson & Linders (2011) examining the US 2009 Open Government Directive and stressing, among others, that *“the guiding principles of collaboration, participation, and transparency are simply too broad, vague, lacking in scope, and insufficiently quantifiable to provide actionable guidance”* without exempting the human factor from a policy formulation process. This discussion, extending beyond the scope of the present paper, gives rise to two points worth keeping in mind:

- As the results by Viégas et al. (2010) on the “Many Eyes” website show, an IV effort can reveal perspectives on top of the information visualized which politicians had not planned for, and this may be seen as a political danger. This, in turn, can generate the need for multiple levels of regulated information disclosure ranging from secrecy, opacity, obfuscation, full disclosure or divulge of information and, finally, privacy.
- Whereas ATI relates to openness and its characteristics, FOI and RTI belong to another sphere of discussion, with respect to the definitions and meanings of freedom and right. Staying focused on the political dimension, FOI implementation laws can be most crucial, demanding *“time, money or personnel to easily organize information”* and requiring not only political commitment but also the engagement of senior officers and public servants (Neuman & Calland, 2007, p.191).

2.3. Contribution of information visualization to legislative transparency

The discussion, in the sections above, of the potential of IV applications to enable information transparency needs to be complemented with a discussion of the central role that information provision currently has for legislatures. This discussion can then lay the grounds for the potential contribution of information visualization to legislative transparency, as well as serve to introduce a concept of Parliamentary Information Visualization (PIV).

Indeed, information provision seems to be one of the most significant factors in order to enable transparency for legislatures. The latest World e-Parliament Report of 2012 gives a clear picture of the challenges that parliaments face in terms of communication with the citizens. The most

important one is that of citizens' difficulty to familiarize themselves with the legislative process (United Nations, Inter-Parliamentary Union & Global Centre for ICT in Parliament, 2012), whereas the top-three objectives for using ICT-based methods of communication are identified as informing citizens about policy and bills; explaining what parliament does; and engaging more citizens (ibid.).

Today, most parliaments already operate with a significant degree of transparency regarding information provision according to their Constitution and Rules of Procedure. Still, this is not enough; information provision seems to be dependent on the political will and priorities of the administration that holds power every time (Wilson et al., 2011, Scholl & Luna-Reyes, 2011). Moreover, legislative transparency must be examined as part of a system that includes other stakeholders such as the press, citizens, and lobbyists, as well as in accordance with the norms of the executive and judicial branches of power. As the research of Scholl et al (2011) shows, the extent of information provision regulates the balance, feedback and effect of each of these branches. In this context, what seems to be failing is that the top-level goal of informing citizens about policy and bills has to be achieved in an effective and simple way in order for parliaments to further develop citizen engagement. This argument is also shared by the majority of non-profit initiatives that implement ICT-based applications for informing citizens with respect to parliamentary operations.

The relation between visualization and transparency is outlined explicitly by the listing of the advantages of visualization by Ware (2004), according to which IV (i) *"provides the ability to comprehend large amounts of data"*, (ii) allows to perceive patterns that are not anticipated and gives further and new insight, (iii) *"enables problems with the data itself to become immediately apparent"*, thus serving quality control, and (iv) *"facilitates understanding of both large and small-scale features of the data"*. These characteristics respond to the requirements for parliamentary openness and attest to the need for provision of parliamentary information, especially in the case of bills and long documents, through tools for Parliamentary Information Visualization (PIV). The importance of PIV approaches as a candidate solution for parliamentary transparency is also stressed through cases like the example of the Parliamentary Management System of the Asamblea of Madrid using semantic concepts for integration, sharing and reuse of legislative information. According to the literature, experience with this effort shows that *"the automation of the parliamentary work is sometimes inefficient and difficult to solve by intelligent information systems"* (Costilla, Palacios, Cremades & Vila, 2005, p.142). This point, in our view, can serve as an argument in favor of less automated and machine-intelligence based approaches to provision of parliamentary information, focused more on visual representations of data that address the capabilities of human perception.

Still, creating an open parliament that allows and amplifies cognition over parliamentary information, legislative processes and procedures seems to be a difficult venture to carry out successfully. A holistic approach on IV, transparency and its interrelations can constitute the cornerstone of deliberative democracy, which is perceived as *"an open, continuous and dynamic process"* that enables the *"perception and understanding of complex problems by citizens as well as the discovering of other aspects related to an issue"* (Held, 2007, p.328).

3. Concluding points

The discussion over IV as regards to governmental and parliamentary data is an emerging research field. Rogers (2010) mentions some projects already implemented in the USA within the Open Government Agenda, with a view to promoting transparency, participation and

collaboration. Moreover, other initiatives try to aggregate and present in a single database cases that promote transparency and categorize them according to the techniques and tools employed.

In this line of thought, our future work is intended to focus on an overview of Parliamentary Informatics initiatives all over the world that attempt to implement IV applications. Such an overview is envisaged to be organized along the geography and type of institutions (i.e. legislatures, non-profit, for-profit institutions) that pursue PIV efforts, and proceed by evaluating their scope and degree of success, with a view to seeking best practices that could be abstracted to a more general approach for Parliamentary Information Visualization.

In technical terms, PIV may be feasible. Juxtaposing the discussion of the previous sections for the potential of IV against the requirements and objectives set out in the Declaration on Parliamentary Openness, and taking into account the distinctive nature of transparency, its correlations and limitations, the feasibility of PIV can also be argued through a SWOT analysis framework.

A factor that can be considered as strength in the quest for PIV is that IV advocates openness through a wide range of characteristics, such as open-source software; usability and accessibility; two-way interaction; and the ability to discover hidden aspects, all of which fall within the current agenda of Parliamentary Informatics.

A weakness for the PIV effort, on the other hand, relies on the fact that legislative information is not available in a format readily suitable for diffusion to the general public, especially in the case of documents such as bills or laws that contain a lot of detailed data, rules, exceptions and legal terminology; these difficulties, it should be noted, are strongly reminiscent of the barriers mentioned in the literature for the creation and adoption of open data.

On the contrary, an opportunity for PIV is offered, in our view, by the ability to visualize historical parliamentary or legislative information through time-lining techniques, giving to citizens some tangible evidence on the records of a parliament's operation.

Last but not least, as far as threats are concerned, we refer to the following two points from the work of Stray (2010) and his team, when they tried to visualize the Iraq War Logs:

- The actors who bear the responsibility of choosing what kind of details will be emphasized or omitted, are not necessarily favorable to transparency; and at the same time,
- The manner in which a visual representation enables a user to make correct inferences is not always chosen as the most flexible one.

In conclusion, it should not go unnoticed that contemporary media and channels are able to support IV-based applications and reinforce their interactive character. Social media, in particular, constitute a privileged platform for diffusing visualized parliamentary information along a large social network, which would allow a diverse audience not only to get informed, but also have its say in legislative decision-making.

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About the Authors

Aspasia Papaloi

Is a public servant at the Hellenic Parliament since 2002 and she is currently working at the IT and New Technologies Directorate. She holds a B.A. in German Literature and Language (1999), a MA in ICT Management (2006) and for the time being she is a research fellow of the Laboratory of New Technologies in Communication, Education and the Mass Media (Faculty of Communication and Media Studies, University of Athens). Focal point of her PhD research is the field of e-parliaments with regard to applications promoting transparency and citizen participation.

Dimitris Gouscos

Is Assistant Professor with the Faculty of Communication and Media Studies of the University of Athens and a research fellow of the Laboratory of New Technologies in Communication, Education and the Mass Media, where he contributes to co-ordination of two research groups on Digital Media for Learning and Digital Media for Participation. His research interests include applications of digital communication in open governance, participatory media, interactive storytelling and playful learning. More details available on webpage: <http://www.media.uoa.gr/~gouscos>.

Reflections



eGovernment in India

*Singara Rao Karna, **Divya Kirti Gupta

*Center for Electronic Government & Open Democracy (CEGOD), Bangalore-560034, India, e-mail: s.raokarna@gmail.com

** Indus Business Academy, Greater Noida, India e-mail:divyakirti@rediffmail.com

Abstract: *The advancements in mobile telephony and the evolution of Social Media as Web 2.0 are co-evolving in a mutually re-enforcing manner. Mobile Phones are now the most ubiquitous technology of all the technologies. The eGovernment efforts for the past two and half decades have not garnered much support from the citizens by e-participation. The low e-participation is due to general citizen apathy towards governments combined with lack of ease of use with the desktop personal computers, laptops and non-availability of handheld smartphones which until recently have combined social media and mobile telephony with wireless internet. The phenomenal penetration of mobile phones, in particular, in developing countries than in developed countries, brings a promise that people from all strata and regions regardless of their education, location and status can now participate in electronic governance. Mobile and Social Media hold this promise to bridge digital divide through smart phones provided in regional and vernacular languages in diverse and vast countries such as India and China. The onus now lies on governments to reach out to all citizens through all channels of service delivery for achieving larger and purposeful e-participation*

Keywords: e-governance, mobile telephony, social media

1. Introduction

In the present globalized and recessionary world climate, the lives of people have become ever more interconnected. Governments around the globe have been taking advantage of the power of ICT to deliver much needed sustainability in socio-economic areas to their citizens. And the challenge is to deliver improvement of the standards of living in such a manner that today's development does not compromise tomorrow's development with the motto of "eGovernment for the people". Areas requiring special emphasis include increasing usage of eGovernment services, encompassing multiple channels including the latest mobile telephony technologies and a whole of government approach in promoting equity and bridging the digital-divide through extension of service delivery to all, in particular the vulnerable groups (UN eGovernment Survey, 2012).

The United Nations eGovernment survey (2012) explored the inter-linkages between e-government and sustainable development efforts. Through the rankings the UN analyzed how governments of the world are employing e-government policies and programmes to support

efficiency, effectiveness and inclusiveness as the parameters of sustainable development efforts worldwide. The sustainability comes with the participation of people from all walks of life in a country. The ICT and in particular, the mobile phone technology has come a long way in achieving this participation – e-participation introducing a trajectory towards total participation of citizens in day today governance by governments at local, state and federal levels. According to this survey, the Republic of Korea is the world leader, followed by Netherlands, UK and Denmark and USA, Canada, France, Norway, Singapore and Sweden closely behind. The digital divide is found to be rooted in the lack of e-infrastructure, which has hindered information use and knowledge creation. The huge difference of broadband width and subscriptions between the developing and developed world proves that there are yet many milestones to be reached in order to close the gap of the digital divide. Citizens have diverse needs and demands for services; hence it is no longer sustainable for governments to utilize one preferred way of service provision over the other. It is now ever more necessary that governments exploit all possible delivery channels in order to reach out to as many citizens as possible, irrespective of poverty, illiteracy, disability or isolation of the citizens. Interestingly, 71 per cent of the member states partner with third party organization such as those in the civic society or the private sector to provide e-services. UN also observed that progress on digital divide is far from satisfactory, but hopes the rapid dispersion of mobile technology gives a fillip to bridge the gap. Although the global average number of mobile phones per 100 inhabitants is now 88.5, Broadband penetration, however, remains very low with a global average of only 8.7 fixed broadband connections per 100 inhabitants. To fill this void, there comes the Mobile Phony combined with Social Media and apps, most rapidly adapted technologies to provide e-services playing a pivotal role, especially in developing countries. Rural areas with little access to telephony can now benefit from mobile and broadband services to access services and even using the Social Media with availability of local languages for smart phones. The UN survey, observed that 25 countries have developed separate *m-government websites*, and 24 countries provided the option of making payments via mobile phones (UN eGovernment Survey, 2012).

The evolutionary maturity of Mobile and Social Media has been happening in a mutual reinforcing trend. Mobile Smart Phones are driving the usage of Social Media multifold compared to non-mobile/non-web mobile phone era. The recent report of 2012 from Nielsen (Nielsen, 2012), a global marketing research company states:

Social media and social networking are no longer in their infancy. Since the emergence of the first social media networks some two decades ago, social media has continued to evolve and offer consumers around the world new and meaningful ways to engage with the people, events, and brands that matter to them. Now 20 years later, social media is still growing rapidly and has become an integral part of our daily lives. Today, social networking is truly a global phenomenon.

This paper aims to take an overview such an opportunity for governments at local, state and national level in India to communicate with and to encourage active and purposeful citizen participation in the day to day governance process. The challenges to embrace Mobile Social Media are then discussed.

2. ICT, Mobile and Social Media: For larger, better and interactive eParticipation

One of the basic premises of eGovernment is to bring citizens and businesses closer to governments and the governance processes, which was the initial slogan for implementing

governments in keeping with the first stage of eGovernments i.e. Web Presence. Now after more than a decade later, when ICT has evolved into Web 2.0, the governments want citizens and businesses not only closer but take part in day to day decision making and implementation process of the democratic governance process.

Currently, the mobile phone subscription amounts to 6 billion worldwide, with 88.5 percent of world's population now having access to a mobile phone (UN eGovernment Survey, 2012). The World Bank in this report suggests that Mobile Technologies are the most ubiquitous modern technology. Besides, being ubiquitous, mobile phones provide the ease of use for making voice calls, sending short messages, transferring money to kith and kin, conversing through Social Media with peers etc. For those of us interested in eGovernance, mobile communications provide major opportunities to advance human social development – from provision of basic access to human to human communication to education, agriculture, health information or making social welfare cash payments to inspire citizen involvement in democratic processes. With the developing nations becoming more mobile than the developed world, mobile applications not only are empowering individual users, but also are enriching their lifestyles and livelihoods and boosting the economies as a whole (World Bank IC4D Report, 2012).

However, the discouraging fact of minimal e-participation from citizen's side has made governments get cold feet. Nevertheless, the social media and mobile media are abuzz with participation from the same citizenry. The reason being that, the Mobile and Social Media provide a very easy and rich interaction with peers, friends and onlookers on any aspect, and any walk of life. What more even regional languages are being introduced for the convenience of rural folk to entice them into Mobile Media revolution, in vast and diversified countries such as India and China.

In India the trend to introduce local languages and free give away of mobile phones has started with Karnataka state in the southern part of India. Odisha another state in the eastern part of India also followed the same practice. It appears the gestation period for e-Governance to mature in the minds of citizens and businesses has been over, but the governments have to take a proactive approach to habituate citizens at least those who visit Social Media and use Mobile Media extensively to participate in eGovernemnt process, covering all aspects of citizens' lives. Already countries such Germany, Norway, Austria, Sweden are making trials to entice citizens and businesses to participate and actively involve with governments through these media. The bottom up approach is the only way governments can strive for transparency and openness (Anked, 2012) and this bottom up approach is the only way governments at all levels can become VOTERS eGovenments (Karna, 2012).

It is true that there are very few computers in India's six million villages. Less than 0.5% of rural families have internet facility at home, says the National Sample Survey Organization's report on expenditure in 2009-10, but that is no longer a barrier to Internet access (Srinivas, 2012). He further states that with mobile phones in the pockets of four out of every 10 rural people, Internet, Facebook email are a push-button away and this has transformed the game. But, the scenario has changed in last 15-20 years.

11th Report of Administrative Reforms Commission (ARC, 2008) gives a comprehensive idea about various G2C (Government to Citizens), G2B (Government to Business) and G2G (Government to Government) initiatives in India. Computerization of Land records, *Bhoomi* Project in Karnataka (One of the southern states in India) through which Land Records are made available

to farmers, *Gyandoot* in Madhya Pradesh, which is community owned service delivery initiative, *Lokvani* Project in Uttar Pradesh which was a public-private partnership at Sitapur District, initiated in 2004 its objective was to provide a single window, self sustained eGovernance solution with regards to handling of grievances, land record maintenance and mixture of other essential services, Project FRIENDS (Fast, Reliable, Instant, Efficient Network for the Disbursement of Services) in Kerala, *e-Mitra* Project in Rajasthan, *e-Seva* in Andhra Pradesh which provides 'G2C' and 'eBusiness to Citizens' services, Revenue Administration through Computerized Energy (RACE) Billing Projects in Bihar, Common Entrance Tests for Admission to Professional Colleges. Under G2B initiatives, eProcurement project in Andhra Pradesh and Gujarat, MCA 21 by Ministry of Corporate Affairs etc. G2G initiatives focused on large scale processing of information and decision making within Government. They included *Khajane* Project in Karnataka which is a comprehensive online treasury computerization project of the State Government and SmartGov in Andhra Pradesh Secretariat.

Much progress has taken place since 2008. Apart from the e-governance initiatives mentioned above, scholars and practitioners today are discussing the impact of some of the principles of eGovernance – Transparency and Accountability - to reduction/elimination of corruption (Mistry, 2012); integration of social responsibility in the entire scheme of e-governance and e-participation through the idea of 'Centrality of Citizens' (Karna and Gupta, 2012) which talks about 'Citizen' at the centre of four forces - Market, State, People and Self (given in the Model of 'Holistic Globalization' by Prof. Subhash Sharma) and their balancing and the idea of State Social Responsibility (Karna, 2010); green e-participation, assessment of e-participation projects for their success; technological advancement to support the growing aspiration of e-participation etc.

Today, some of the sectors in which mobile and social media are contributing and will further improve and strengthen the quality of services, accessibility, delivery and e-participation in India are Governance, Health, and Agriculture.

Hospitals in India have started adopting social media as a tool to grow their business (David, 2011). He states that super-specialty hospital chains such as Apollo Hospitals, Fortis Healthcare and Max Healthcare have aggressively pursued social media marketing. But, apart from being used for marketing, Social Media is also changing the scene of health care in India. David (2011) continues to mention that Narayana Nethralaya Foundation funds KIDROP as a part of her social responsibility in keeping with the hospital principle that "no child must go blind for want of financial resources" and KIDROP is also present in Facebook and it uses the channel to create awareness about Retinopathy of Prematurity (ROP) which is the leading cause of Infant Blindness in the World. Apollo Hospital launched 'Apollo Hospitals Health Quiz' on 31st August 2012, the objective of the contest was to bolster the health awareness of users and reward those who fare well (Shreeram, 2012).

In India, the case of people's outrage and protest over Nirbhaya's gang-rape and murder in Delhi after 16th December, 2012 incident is an example of where social media was used for creating people's movement that connected rich & poor, young & old, city dweller & village dweller, Business man & service man. The social enabled people's movement generated so much of discussion, debate and pressure in political circles that it led to passing of the Ordinance by the government on 2nd February, 2013 which is designed to change the Criminal Law (Amendment Bill) 2012. This recent use of Social Media demonstrated that it has capacity to dissolve social and political hierarchy as well when it comes to social issues.

The Mobile and Social Media (MSM) are actually empowering farmers of India. Farmers have greater access to information on seeds, pesticides, weather, rainfall, farming tools and machinery, prices, farming practices etc. Srinivas (2012) reports following in context of use of Mobile and Social Media by farmers in India:

Reuters Market Light, and IFFCO Kisan Sanchar, launched in some states in 2007 and 2008, are now becoming popular. Farmers pay to get customised SMSes and voice mails, several times daily, in the local language, which provide a variety of information throughout the cultivation cycle of their chosen crops, right up to mandi prices. Aavaaj Otalo, an on-demand information service launched by Stanford University and IBM Research India in Gujarat, allows farmers to dial a phone number and listen to a voice message board, where they can post questions, listen to the questions and answers of other farmers, and post answers to the questions themselves. Agropedia, spearheaded by IIT-Kanpur, is trying to create a kind of Facebook for agriculture where experts from across India can easily communicate with each other. Social media is also available to illiterate farmers through services such as Digital Green, Spoken Web, Conspeakous VoiceGen and VoiKiosk which use audio and video uploads to convey crop and market information. A mobile-based service, called GappaGoshti, allows Maharashtra farmers to send audio and video messages without using the keypad. Mobile news service CGnet Swara (Voice of Chattisgarh), developed with the help of Microsoft Research India, is transforming how people in remote areas receive and share news. In February 2012, Maharashtra farmers used Facebook to boycott Sangli, Asia's biggest turmeric mandi, because traders were fleecing them.

3. Discussion & Conclusion

Internet, mobile and social media certainly create spaces and platforms for collaboration and e-participation (Pereira et al, 2012), but there are certain aspects that need special attention, if the empowerment of participants has to happen. Reaching out to the Indian masses with Internet, and ensuring e-participation through interesting content and ease of use of a computer or a hand held mobile phone are some of them. According to research firm Gartner (Economic Times, 2013) India may be embracing latest technologies like mobility and cloud, but factors like privacy concerns and cultural fabric could slow the process of Social Media growth in the country as compared to other nations.

Moreover, low e-participation is also due to unattractive and non-interactive sites, and lack of enough time to spare for the techno savvy and social media dependent citizens. Mobile and Social Media provide immense potentiality to villagers and remote citizenry in India. Once India's rural areas (called Villages) connected with Internet or have provision of mobile smart phones, the villages will bring about a greater participation in eGovernance.

Although initially e-government was projected as a panacea for governance constraints and problems, but, focusing on potential service delivery online and cost savings and subsequently low e-participation, dampened the governments' enthusiasm. It has not been easy to break down the organizational boundaries within and between various government departments due to the antiquated bureaucratic work processes resulting in limited eGovernance services.

There are challenges to mobile and social media's growth and their usage in India. So far the mobile media developments have strengthened the masses in India, since more people are connected with each other on real time basis. Thus, mobile media technology has empowered people to voice their opinions through discussion forums thereby ushering in mass participation.

But, the diversity of needs and huge variation in literacy rates in rural and urban population makes the task of e-participation very challenging but a clear possibility to happen.

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About the Authors

Singara Rao Karna

Mr.Singara Rao Karna, is a visiting faculty in Marketing, International Business and Strategic Management. Mr.Karna has been involved with eGovernemnt research for over a decade, since year 2000 through his assignments in Australian and New Zealand city councils. Currently, Norway, Austria, Japan and S.Korea are being studied for eGovernment maturity levels. Other research interests include Electronic Marketing Strategies, Business Process Innovation and eCRM.

Divya Kirti Gupta

Dr. Divya Kirti Gupta is working as Associate Professor, Indus Business Academy (IBA), Greater Noida, UP, INDIA. She is co-drafter of ISO26000, International Standard on Social Responsibility of organizations and is Expert Member of ISO26000 Post Publication Organization Stakeholder Advisory Group (PPO SAG). The research interests include Corporate Social Responsibility, Organization Development and Management Thought.

Barriers to Entry and Online Political Activism:

The Hopes and Fears Around Slacktivism

Marko Skoric*, Nathaniel Poor**

* Nanyang Technological University, Singapore, marko@ntu.edu.sg

** Independent Scholar, New York, USA, natpoor@gmail.com

Abstract: *Low levels of youth engagement in politics, young people's widespread use of digital communication technologies, and hopes and fears projected upon new media are overlapping topics that are vital to understand in order to support citizens' political engagement. One fear is for the spread of slacktivism, that is, digital campaigns which accomplish no more than gathering 'likes' or shares while making users feel as if they had contributed to something meaningful. We explore the term, related issues, and the usefulness of low-engagement campaigns.*

Keywords: Online, activism, engagement, slacktivism, politics.

New media's role in activist movements has been a long-standing topic (Rheingold, 1993). The free communication of ideas has long been linked to democracy, since the time of the ancient Greeks, and the commercialization of communication forms used for political change has been well covered (e.g., Habermas, 1989). Our fascination with the newest media forms and political action continues today with a focus on social media. Although social media allow for easy dissemination of information, some uses have raised concerns about the needed level of involvement. Online activism, if manifested as mere voicing of opinions, posting of comments, and 'liking' various items, has been criticized as a pointless exercise that does more to make the participant feel good about themselves than to address important political and social matters (Hindman, 2009; Shulman, 2005).

This is especially true for young Internet users who use social media, download digital music, write blogs, and review restaurants. One stereotype of youth is they are lazy, i.e., they are 'slackers'. When combined with the nebulous quality of computer bits and the general perception of anything on the Internet as not quite real, this new flavor of citizen engagement has been referred to as 'slacktivism'. Slacktivist activities could damage the quality of civic and political life as they distract citizens from making more meaningful and important contributions. It is hoped that by lowering the barrier to entry for political action, people could increase their engagement and over time increase that engagement. The fear is that those who are highly engaged could become less engaged due to the lower barriers to entry for activity, however slight.

Some of the few studies of online-oriented campaigns, such as Breuer and Farooq (2012), stress how the easy online component of a campaign has to be combined with a greater level of engagement originating with the campaign organizers. This engagement can, and probably should, include both online and real world efforts and activities, not just real world action. One large (and overlooked) problem with slacktivism may not be its low level of engagement but that social media companies are beholden to shareholders and differing legal regimes, which can seek to avoid disturbances or repress activist opposition (Youmans & York, 2012). Activists can in turn apply pressure of their own, as Youmans and York point out, yet this must come from the more motivated individuals of a campaign. Campaigns need to have an overall media plan and should count on using multiple media and face to face messaging (Tufekci & Wilson, 2012).

1. Slacktivism Defined

A portmanteau of the words “slacker” and “activism”, slacktivism was first used to denote “bottom-up activities by young people to affect society on a small personal level” (Christensen, 2011), a positive connotation. Today, slacktivism is defined as “feel-good online activism that has zero political or social impact” (Morozov, 2009a). It has been used to denote different types of online engagement that require little effort from the participants, and are thus deemed less worthy than traditional forms of participation (Christensen, 2011).

Slacktivism does not involve financial or personal risks, merely light commitment that brings social acknowledgement and praise (Gladwell, 2010). Some examples include changing one’s Facebook profile to that of a cartoon character to show support for efforts against child abuse, or using a green-colored Twitter avatar to show one’s appreciation for the pro-democracy movement in Iran (Golsborough, 2011).

1.1. The pre-Internet origins of slacktivism

Although the term ‘slacktivism’ had been coined in response to the advent of online activism, it is “neither new nor an Internet phenomenon” (Golsborough, 2011). Offline acts of slacktivism also come in the form of political bumper stickers, T-shirts, or rubber wristbands, which do little more than simply announce one’s support for a particular political party or a cause, with an aim to make citizens feel good without having to do anything substantive (Golsborough, 2011), although they may also denote having made a financial contribution.

Slacktivism is typically used in reference to online activities, such as “liking” a cause on Facebook, yet most campaigns have different dimensions of activity, both online and real world. Successful campaigns are going to have accomplished more than receive millions of “likes”, they will have caused some real world change even if they had millions of likes from people who did nothing else. Although they have a slacktivist level of activity, they succeeded with real engagement. Perhaps efforts that allow for a slacktivist level of activity and that do not accomplish much are the ones that end up with the label.

Online activist efforts are a form of crowdsourcing, that is, when someone has a problem and they throw it out to “the crowd” to solve, usually over the Internet due to its reach. Online activism does exactly that. The specific problem that this crowdsourcing seeks to solve is not that of the cause itself, but more immediately using the potentially massive reach of online social networks to find those who will help. Those who merely like and share aren’t solving the problem behind the cause, they are instead instrumental in the outreach effort.

2. Profile of a Slacktivist

McCafferty (2011) defines 'slacktivists' as "people who are happy to click a 'like' button about a cause and may make other nominal, supportive gestures. But, they are hardly inspired with the kind of emotional fire that forces a shift in public perception". The critique of slacktivism is frequently linked to the possibilities for participation that the Internet offers, since it enables citizens to engage cheaply and easily.

Literature shows that since the 1990s, citizens, especially the younger generations, prefer participating in looser and less hierarchical networks, as well as various lifestyle-related sporadic mobilization efforts (Bennett, 1998). Morozov (2009a) pessimistically labels slacktivism as the ideal type of activism for the "lazy generation". Landman (2008) counters this view, arguing that while most slacktivists are "probably genuinely well-meaning people", their weakness is that they do not take the time to think about the value, or lack thereof, of their actions.

3. Slacktivism vs. Activism

Slacktivist campaigns differ from traditional activism in certain ways. Morozov (2011) posited that a good way to tell if a digital campaign is slacktivist is to look at what it aspires to achieve. According to him, slacktivist campaigns seem to be premised on the assumption that, with enough tweets (or 'likes' or 'shares') all the world's problems are solvable. This is what drives such campaigns towards a signature-collecting, member-adding, link-sharing spree. For success, awareness needs to transform into action, and social media do not have a successful track record here.

One recent example is of the US White House's digital petition site, "We the People." Citizens can create petitions, other citizens can sign on, and if a petition gets enough signatures the White House will formulate a response. Launched in 2011, at first the threshold for a response was 5,000, then after that proved too low a bar it was raised to 25,000, and eventually it was raised to 100,000 as knowledge of the site spread and use increased. Signing on to a petition is very easy. Even farcical petitions can cross the threshold for a response, as did a petition for the US government to build a working 'death star' from the Star Wars movie franchise.

According to Vitak et al. (2011), one of the major differences between traditional political participation and political participation on Facebook relates to the reduction in resources typically needed for engaging in political activities online. In general, political activities on Facebook are not resource-intensive, whereas many forms of offline political participation require a more substantive commitment. In Vitak et al.'s (2011) study, the respondents indicated that they overwhelmingly engaged in the least intrusive, least-time consuming activities. Though information-seeking is an important element of political involvement, if little else in terms of concrete political action follows, such participation is less likely to have any impact on political institutions (Vitak, et al., 2011).

In contrast to Facebook activism, traditional activism often involves significant time investment (and perhaps risks to personal safety), and is characterized by strong bonds among activists. Highlighting the example of the Mississippi Freedom Summer Project of 1964 – one of the defining campaigns of the civil-rights movement. A quarter of those in the program dropped out after a string of violent attacks against churches and volunteers (Gladwell, 2010). It was not the lack of ideological fervor that caused the dropouts, what mattered more was the "degree of personal

connection to the civil-rights movement". High-risk activism is a "strong-tie" phenomenon, in stark contrast to the platforms of social media, which are built around weak ties and are made for networks (Gladwell, 2010). These weak ties seldom lead to high-risk activism. However, many causes, like fighting cancer, are not a threat to any established groups, and supporting such causes does not cause an outpouring of rage and hostility at the supporters.

4. Pros and Cons of Slacktivism

One of the key advantages of digital campaigns is their ability to reach a large number of people with minimal effort and at low cost, hopefully mobilizing citizens (Christensen, 2011). The act of spreading information or awareness of an issue is often the first step towards change (Conway, 2012; Golsborough, 2011). By increasing awareness of an issue attention is generated, which may lead to action (McCafferty, 2011). For example, wearing a pink ribbon does not directly lead to finding a cure for breast cancer, the increased awareness hopefully leads women to be more informed and diligent about examination and mammography (Selleck, 2010). By lowering the barriers to entry for participation, this type of activism creates the potential for the rate of participation to increase. Vitak et al. (2011) also found that this effortlessness generates an opportunity to "practice civic skills with minimal commitment of time and effort". They argue that this facilitates the development of civic skills that can increase political participation. Slacktivist campaigns can play a role in invigorating civic life in terms of increasing the reach of political and social movements.

Critics of slacktivism argue that this kind of activation of citizens is pointless as the activities do not have any impact on political outcomes in the real world, and that it would lead to a deterioration in the quality of participation as citizens opt for digital rather than offline methods of participation (Christensen, 2011; Shulman, 2005). However, Boulianne (2009) found that the Internet has a positive effect on engagement. Shah, Schmierbach, Hawkins, Espino, and Donovan (2002) concluded that time spent online leads to engagement. Research shows that informational use of new media platforms promotes political expression online, and that political expression online is, in turn, related to traditional civic and political participation (Rojas & Puig-i-Abril, 2009). The study carried out by Vitak et al. (2011) further suggests that as the number of political activities people engage in on Facebook increases, so does political participation in other domains, and vice versa. This is also affirmed by previous research that found that any form of association helps promote political participation (Rosenstone & Hansen, 1993). Slacktivist campaigns on social network sites can positively impact political participation by creating awareness and driving more people to become better informed about political and social issues, opening the doors for potential mobilization.

However, sheer numbers are not enough, and are not good indicators of the success of a digital campaign. For example, a popular Facebook cause, 'Save the Children of Africa' looks impressive with over 1.7 million members, but the amount of funds that they have raised is only about \$12,000, adding up to less than a penny donated per member on average (Morozov, 2011). Morozov argues that due to its granularity, "digital activism provides too many ways out". This is aggravated by some organizers of online campaigns who demand less and less of their members in order to inflate participation rates (White, 2010). The result is a degradation of the quality of activism, until it consists of little more than a series of petition drives to raise money, yet not every problem can be solved with a simple injection of funds. Because the Internet has opened many

new channels for raising donations, fundraising frequently becomes the primary focus of the campaign, while the real problems are usually sidelined. This is clearly different from traditional activism, which has always been about the people, specifically people “showing up in person” (McCafferty, 2011). If the act of joining a Facebook group is seen as the answer to a political or social issue, it frames that act as the end point, rather than the beginning, of a person’s engagement with a cause, undermining the very nature of activism.

The major problem with most of the commentary about slacktivism is just that – it is merely commentary and is not grounded in any data. Without a range of data from different campaigns, understandings of slacktivism lack a defensible basis.

5. Conclusion

There is no reason to be outright dismissive of all slacktivist campaigns. Even a small effort helps, whether is about creating awareness, raising funds, or stimulating interests in issues, which over time may lead to more substantive political action. For instance, in their study of an Austrian student movement *unibrennt*, Neumayer and Schoßböck (2011) found that new members first participated passively by simply sharing information, but gradually became more active as they became familiar with the norms of the group. Even skeptics like Morozov (2009b) note that there are successful online initiatives with realistic expectations and goals. Livingston (2010) suggests that the first step towards turning slacktivists into activists is to stop thinking of these users as slacktivists in the first place because the term “has its own baggage”. Instead, individuals and organizations seeking to mobilize citizens for a cause should tailor their messages according to the individual levels of interest and specific preferences for engagement, and by doing so, could encourage citizens to take more substantive actions at later stages. Slacktivist activities should be developed as integral parts of the activism repertoire, and not simply seen as an easier way to achieve change. Slacktivists should be cultivated to take their actions beyond the social media sphere and into the real world. Future research should actively focus on developing innovative, interdisciplinary methods for evaluating slacktivism’s role in contemporary political life.

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About the Authors

Marko Skoric

Marko M. Skoric is an assistant professor at the Wee Kim Wee School of Communication and Information, Nanyang Technological University, Singapore. He holds a Ph.D. in communication studies from the University of Michigan. His teaching and research interests are focused on new media and social change, with particular emphasis on civic and political implications of new communication technologies.

Nathaniel Poor

Nathaniel Poor is an independent scholar living in New York City, where he studies how people use electronic communication technologies, especially online communities. He was awarded his Ph.D. in communication studies from the University of Michigan in 2004.

Just Like Paper: A classification system for eVoting Machines

Damien Mac Namara*, Paul Gibson**, Ken Oakley*

**Department of Information Technology, Limerick Institute of Technology, Limerick, Ireland,
mail@dualvote.com.*

*** Le département Logiciels-Réseaux (LOR) Telecom & Management SudParis, 9 rue Charles Fourier,
91011 Évry cedex, France, Paul.Gibson@it-sudparis.eu.*

Abstract: *This work presents a classification system for commercial electronic voting machines. We term this classification system the ‘Just-Like-Paper’ or JLP classification. We are particularly interested in incremental differences in functionality between voting systems and how that functionality differs from ‘traditional’ pen and paper based voting. We successfully applied the JLP classification to the ongoing development of our novel DualVote eVoting system where its application led to the development of a passive feedback protocol.*

Keywords: ICT, Classification, eVoting, Usability

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1. Introduction

This paper emerges from previous work on a novel e-voting system which we have developed called Dual Vote. (MacNamara et al., 2010), (MacNamara et al., 2011), (Gibson et al., 2011). With Dual Vote, a voter's preference is simultaneously recorded on both electronic and paper media. The Dual Vote system allows a user to cast a vote using a pen and paper interface and simultaneously records the vote electronically using an optical sensor array and a capacitive-based electronic pen. Previously, classification models have been developed for eVoting schemes based on differing criteria. One such classification defines systems based on how the voter submits their vote to the tallying authority. Systems are classified by: Hidden voter (anonymous voter) hidden vote (encrypted vote), hidden voter with hidden vote. (Sampigethaya et al., 2006). Other research has classified privacy and verifiability requirements in an attempt to define such requirements of eVoting systems in less formal language while retaining precision. (Langer et al., 2009). Recent previous work in this area has also looked at commercial systems based in the US while including those intended for disabled voters. The work offers a classification structure based around four ‘tiers’ namely: Core technology, components, voter interface and ballot presentation and is termed the Electronic Voting Classification Structure (EVCS). The motivation for the work was to create a ‘common language’ for eVoting systems technology which may help in the procurement and

classification of such systems. Franklin and colleagues omit remote based voting systems but include significant work in this area in the US Election Assistance Commission's Survey of Internet Voting (Franklin et al., 2012). As we were developing a full commercial eVoting system, with particular emphasis on a novel pen and paper interface, we did not consider technologies for disabled voters. Additionally, we omit remote voting technologies from the classification.

2. Classification

During our work on the most recent DualVote prototype, we wished to extend the functionality of our system without weakening our most fundamental requirement. To this extent, we analyzed the interface features of twenty-six commercial systems and ordered them within a feature based classification. Each system was then ranked in accordance with the number of interface features that it had in common with a pen and paper baseline. The baseline system that we chose is that of the current pen and paper system used in the Republic of Ireland where the voter uses a pen and paper to cast their vote before depositing the paper ballot in the ballot box. It is completely non-electronic. Ultimately, our goal is to develop our DualVote system to the extent where the usability of pen and paper is preserved while having some of the extended functionality of electronic voting. The JLP classification thus starts with systems which are most like our baseline. To rank the systems, we use the postfix JSN followed by a number. Our baseline system is therefore JSN1. The next classification - JSN2, builds on the functionality of JSN1 while sharing some of its features and so on. The higher the system classification the less the system has in common with the baseline but the more functionality that it offers.

3. Specification of Interface Features

We identified five broad categories of interface features: Error-Feedback, Ballot-Confirmation, Machine-Activation, Duality Generation and Interface Modality.

Error-Feedback. This is the ability of the eVoting system to provide feedback to the voter in the case of a detected voter error. We have identified two subcategories of error-feedback:

1. **Basic Feedback.** Basic feedback occurs when the vote is only accepted or rejected by the voting machine. No further information is given to the voter. For example, some voting machines will return the ballot paper via the optical scanner interface if an error is detected on the ballot but no further information is given to the voter.
2. **Detailed Feedback.** Detailed feedback occurs when the voter is told why their vote was rejected by the voting machine. For example, some voting machines will print out a detailed report of the errors made by the voter on the ballot paper.

Ballot Confirmation. This interface feature category refers to all aspects of the interface which allow the voter to confirm the electronic interpretation of their vote before it is cast. Some optical scan systems will only ask the voter to confirm their vote once there are detected errors on the ballot - this is often coupled with detailed feedback which gives an explanation for the ballot rejection.

Machine Activation. An activation interface activates the voting machine. This is done by either the voter or the poll-worker. On optical scan systems, the ballot paper activates the voting machines once it is inserted into the scanner. Therefore the scanner has a double function; firstly to activate the machine and secondly to interpret the vote. We can therefore define a subcategory of machine activation:

1. **Dedicated Machine Activation.** On some systems, the machine is activated when the voter inserts a ballot into the optical scanner on others the voter is required to insert an 'activation token' into a specific port or slot on the voting machine in order to activate it. This port/slot is not used for any other purpose and is therefore a 'dedicated' activation interface.

Duality Generation. This is the ability of the eVoting system to generate another copy of the vote (from paper to electronic or from electronic to paper). Duality Generation is further broken down into two subcategories:

1. **Simultaneous Generation.** This refers to the generation of a paper vote and electronic vote at the same time.
2. **Multiple Generation.** This refers to the generation of an electronic vote or paper copy through multiple user actions (for example; touch-screen then printing or writing and then scanning).

Interface Modality. This refers to the number of interfaces that a voter must interact with in order to generate their vote. Most systems require a single user interface and are 'uni-modal' however a few systems are 'multi-modal' requiring the voter to interact with more than one interface. One further distinction for interface modality is the use of non-standard interfaces which are classified as follows:

1. **Standard and Non-Standard Interfaces.** We define a standard interface as one the following: Touch-screen, Push-button, Pen and Paper. We have encountered some interfaces which we describe as 'un-common' or non-standard in eVoting systems. For example: Navigation-dial, Vote-recorder apparatus, Pen-stylus for touch screen.

From our review of the eVoting systems we found fourteen distinct interface features (IF) of eVoting interfaces which fall under the various five broad categories.

Error-Feedback

- IF1: No feedback interface features. The voter will receive no feedback if an error is detected on the ballot;
- IF2: Basic feedback interface features. The voter will be informed that an error has occurred without any information concerning the type of error;
- IF3: Detailed feedback interface features. The voter will be informed that an error has occurred and is provided with additional information concerning the type of error;

Ballot-Confirmation

- | | |
|------|--|
| IF4: | No ballot confirmation interface features. The voter is never required to confirm their vote; |
| IF5: | Error-related confirmation interface features. The voter is required to confirm their vote only when an error is detected on the ballot; |
| IF6: | Compulsory confirmation interface features. The voter is always required to confirm their vote; |

Machine Activation

- IF7: No dedicated-activation interface is present or the poll-worker activates the voting machine;
- IF8: A dedicated-activation interface is present.

Duality Generation

- | | |
|-------|--|
| IF9 | Interface features support simultaneous vote generation; |
| IF10: | Interface features support duality generation with multiple voter actions; |
| IF11 | No duality generation interface features are present; |

Interface Modality

- IF12: The vote creation interface is uni-modal;
IF13: The vote creation interface is multi-modal;
IF14: The interface features consist of a non-standard interface technology or apparatus.

[illegible]

Figure 1 A Sample JLP Table

From the table we can see that there are two extra columns next to the classification number. The first column labeled ‘Diff. Mag’ refers to the difference magnitude or by how many features is this system different from our baseline. The column next to this is called ‘Common Feat.’ or Common

Features; referring to how many features this system has in common with our baseline. We add these columns in to make clearer distinctions between classifications so the JSN will more closely represent the differences in functionality between systems.

4. Conclusion

The JLP classification shows how twenty-six commercial systems incrementally differ from each other in terms of functionality and subsequently how each system differs from our baseline. Naturally, this list of commercial systems is not intended to represent every commercial eVoting system, but it is presented as a representation of the most common systems found in use at the time of writing. Whereas many other commercial and experimental systems exist, it was beyond the constraints of this work to facilitate each design into this classification. The JLP was instrumental in helping us to understand how we could build on the usable but less functional DualVote system. It helped us to further classify voter feedback, confirmation, activation, paper audit trail technologies and the vote creation interface in itself. We found our system lacking in terms of feedback and confirmation but somewhat advantageous in terms of duality generation, activation and interface modality.

The JLP classification is an initial attempt to classify systems in terms of interface features and functionality. With some work, we believe it could be applied to usability. It may be interesting to explore the number of ideal actions for each voting system and apply it to the classification. We are aware that this has been done on a smaller scale in other work (Conrad et al., 2009). It may be already feasible to deduce that a machine with a lower classification requires less voter actions (in an ideal session) than a higher classification. Further improvements on the JLP may give another perspective on usability as well as using the established Systems Usability Scale as such scales are not designed specifically for eVoting machines. (Brooke et al., 1996)

Finally, the abstract nature of our interface features, abstracts away from the lower hardware level (in contrast to the EVCS developed by Franklin and colleagues). We believe that this abstraction ensures a more robust classification that is less easily affected by technology innovations in electronic voting user interface design.

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About the Authors

Damien Mac Namara.

Damien is the Principal Investigator on the Dual Vote Research Project since 2007. He is also currently lecturing in computer science.

Paul Gibson

Paul is a Maître de conférences at TSP, Evry, France. He has been carrying out research into all aspects of e-voting for the last 8 years.

Ken Oakley

Ken Oakley is a senior lecturer in information technology with the Limerick Institute of Technology. He has over 20 years of system engineering experience.

Unpicking the design space of e-Voting for Participation

Vasilis Vlachokyriakos*, Paul Dunphy*, Nick Taylor*, Rob Comber*, Patrick Olivier*

* Culture Lab, Newcastle University, UK; v.vlachokyriakos@ncl.ac.uk, paul.dunphy@ncl.ac.uk, nick.taylor@ncl.ac.uk, robert.comber@ncl.ac.uk, patrick.olivier@ncl.ac.uk

Abstract: *The use of technology either for providing additional voting channels or facilitating conventional election settings has been proposed to increase dwindling participation in national elections. Whether technology can provoke participation is still questionable, with current e-voting systems allowing easy access to the voting mechanisms but failing to motivate participation effectively. The inevitable shift from conventional voting methods to digital ones gives us the opportunity to re-envision voting as a social tool that better serves democracy. In this paper we re-envision the design space of electronic voting by critically unpicking the potential of digital technologies to support voting.*

Keywords: e-voting, participation, decision making

The use of digital voting systems is being championed as a means to tackle dwindling participation in national elections by facilitating voting and providing multiple voting channels. However, recent research suggests that merely increasing the number of possible voting channels does not necessarily increase participation in voting processes (Electoral Commission UK, 2007). This suggests that there is more to the problem of participation than access to the voting apparatus. Indeed, studies (Funk, 2008) show that remote voting could have negative effects on participation due to the lost ritual and the lost social pressure to vote. The potential of social technologies in this regard is significant. A recent study found that banner messages on a social network about friends who had voted in government elections drove more than 340,000 people to vote (Bond et al., 2012). Moreover, studies have indicated that social stimuli can positively affect the quality of decisions made (Tindale & Kameda, 2000). In this sense, the design of e-voting system must move beyond concerns simply for the security and trustworthiness of a system, to understanding voting as a fundamentally social process. In this paper we take a fresh perspective on e-voting: as a space for designing engaging shared experiences that enable users to make collective decisions. Taking conventional formal instantiations of e-voting, such as government elections, as a starting point, we revisit the design space of e-voting.

1. Designing E-Voting

The attributes of voting systems observed in elections center upon principal considerations of fairness, eligibility, verifiability, accessibility, privacy and coercion-resistance (Gritzalis, 2002). Table 1 illustrates a taxonomy of the key attributes of a typical election, organized according to which aspect of a poll they impact upon. These attributes are largely drawn from security requirements rather than a desire for participation. In this light, there appears to be much to learn from a number of voting instances in everyday life that have developed their own voting conventions. For example, where formal voting mechanisms are typically designed to prevent multiple votes, reality television viewers can often vote many times by text message, restricted only by their own financial limitations. In such contexts, participation is not achieved by the significance of the poll or fairness but due to characteristics of the voting process, such as the social interactions and the observable outcome triggered by the poll’s result. Such voting instantiations provide critical perspectives on the constraints of formal voting systems. In this paper, we explore the potential to subvert the aforementioned attributes of formal polls—eligibility, fairness, secrecy and the method of expression given to voters— with participation and engagement in the center of the discussion.

Table 1: Design attributes of a typical formal poll

Categories	Design attributes
Eligibility	Universal Suffrage
Fairness	Vote Weighting
	Accessibility
	Verifiability
Secrecy	Secret Ballot
	Coercion Resistance
	Results Embargo
Expression	Advance nomination phase
	Non-transferable votes
	Non-revocable votes
	Approval voting

1.1. Eligibility

In elections today the principle of universal suffrage is commonly applied, which allows all citizens of sufficient age to vote. Yet, in many countries, despite struggles for universal suffrage, many people are eligible to vote but simply do not. In contrast with modern societies, Athenian democracy required by law every eligible voter to vote and publicly announced the names of the citizens that did not do so to increase the social pressure for participation. With e-voting we have the opportunity to rethink the way the electoral roll is managed and published to provoke social pressure for participation. As we mentioned earlier, recent work on the affect of social media on

voter turnout demonstrated a significant increase of participation just by placing banner messages on users' profiles showing friends who had voted in government elections.

1.2. Fairness

Fairness refers to both the value of differing perspectives and the ability of individuals or groups to express those perspectives. In many Western political systems, fairness implies both a "one person, one vote" principle and universal accessibility of the voting system. However, there are many occasions when voters' opinions are not given equal weight in a poll. The use of weighted votes is common where there exists a hierarchy of stakeholders with different levels of investment in a decision. Thus the fairness of a vote may be designed to reflect, reinforce or destabilize existing power structures which is the purpose of voting in the first place. It is prominent that e-voting systems to support decision making should be configurable to support a wide range of power structures or question those if necessary.

Recently, with the introduction of e-voting systems in national elections, fairness also involves verification that votes cast were indeed counted. The efficacy of voting, that is, the belief that voters will effect a change through their actions (Carroll, Rosson, & Zhou, 2005), is at least partially dependent on the ability of the individual to verify their vote. Historical and informal voting methods often achieve this through "social verifiability", such as showing of hands. In this way the social verifiability of a vote is in contrast to concerns for secrecy and this interplay is widely underexplored in modern e-voting systems. Even though considerations of privacy of the vote and securing the integrity of the voting process are important, we believe that voting systems could be designed to provoke the social stimuli for participation that has been lost throughout the years of constitutional and voting evolution.

1.3. Secrecy

Secret ballots were introduced in 1856 in the USA. The secrecy of formal votes is important for coercion resistance: when voters sell their votes, no documents are provided to verify that the vote has been cast a certain way. In formal elections the proportion of the electorate that has voted is used as an indicator of the credibility of the associated democratic process. Yet, in less formal polls it might be important to know that particular individuals have voted to give the results credibility. Research is necessary to find the balance between social pressure, social verifiability and secrecy in order to explore the full capabilities of technology to support participation as well as privacy.

Secrecy in formal voting also relates to the publication of interim results prior to the end of a poll (i.e. results embargoes). Many Western democracies forbid the publication of exit polls until after voting has closed. Studies have demonstrated (Schmitt-Beck, 1996) that by publishing articles about the strength of big parties and opinion polls only before the elections, the mass media can stimulate a bandwagon effect (McAllister & Studlar, 1991) that leads voters to choose one of the 'apparent' winners. By allowing participants to review the results before they vote we can increase their perceived self-efficacy and ultimately reflect on voters participation (Alvarez, Hall, & Llewellyn, 2008; Carroll et al., 2005).

1.4. Expression

Expression refers to the way the user is permitted to express their preference. The methods of expression given to users in formal polls (as we can see in Table 1) are largely drawn from a small

space of possibilities. In formal polls candidates are typically nominated in a phase several weeks before the opening of the poll. Voters are generally not allowed to spontaneously add nominations to the ballot slip, though they may choose to spoil the ballot or vote to reopen nominations. The vote itself cannot be transferred to others without extenuating circumstances. In practice technology introduces possibilities for ballot sharing as an act of political strategy, interest in the issue to be decided or simply kindness.

Conventional voting systems employ approval voting where voters can only express a preference for a particular option. Actions such as spoiling ballots emerge due to the need for voters to express themselves in a manner the voting system does not allow. Digital technologies offer the potential to explore alternatives to approval voting, including disapproval voting and computationally complex systems. Indeed in ancient Greece one of the forms of voting used was disapproval voting. Finally, in many formal polls, each of the participants has the same number of votes to use (typically just one). As mentioned earlier the “one person, one vote” principle ensures that the voting process is fair, yet in different contexts vote weighting or the number of votes reflect power structures in an organization. Additionally, depending on context, a more flexible system could lead to a result that better reflects the engagement of the participants who voted. For example, users of Viewpoint (Taylor et al., 2012) suggested that allowing multiple votes per person was an effective way of capturing how strongly individuals felt about a community issue. There is also an assumption that votes cannot be transferred to other polls. If this were allowed, voters could be empowered to express their preferences within and across polls.

2. Discussion

Since its origins in Greek and Roman history, voting has formed the bedrock of functioning democratic societies. One of the first voting methods used in Athenian democracy was the showing of hands or later using colored rocks thrown into a large jar (Ober, 1996). These voting practices were developed and used in order to provoke the social settings for participation and deliberation and close the gap between politicians and citizens. Indeed, in ancient Athens lottery has been used as the method of selecting councils or senate that did not require special expertise. This way every citizen had the chance – and responsibility – to be involved as a ‘politician’ for the common good and a random selection of citizens to probe their views on important public issues in depth.

These days modern western democracies have evolved from this early form of direct and participatory democracy to indirect representative and ‘telegraphic’ constitutions. Inevitably, technology has been proposed as a means to improve the efficiency and reach of the voting process, and is changing the way we vote. However instead of taking advantage of this shift from conventional to digital voting to reform our democratic constitutions, research is only focused on either security considerations or making it easier for people to vote. It is probably a little known fact that the “revolutionary vote recorder” was one of the first inventions of Thomas Edison in 1869 as a replacement of conventional showing of hands and manual counting of votes in the US congress. Although the efficiency of this new invention that could make voting in congress a matter of seconds the congressional leaders rejected the vote recorder as “an enemy of minorities who attempt to gain advantage by changing votes and filibustering legislation” (Wilhelm, 2000). These days with the wide use of technology in politics and electronic voting systems in elections we respond as we reinvented the vote recorder and we are rushing to apply a bad fix on an

already malfunctioning democratic system. In this paper we adopted a fresh perspective on e-voting by trying to open the discussion of how technology can provoke a democratic reform and bring modern democracies closer to their original form. Taking modern requirements of voting systems in elections as a starting point, we revisited the design space of e-voting for participation. Through the configuration of any poll on the design categories of *eligibility*, *fairness*, *secrecy* and the method of *expression*, we open up the design space of electronic voting.

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About the Authors

Vasilis Vlachokyriakos

Vasilis Vlachokyriakos is a PhD candidate based in Culture Lab, Newcastle University, UK. His PhD project explores how technology and electronic voting systems could increase participation in a wide range of democratic practices from informal collective decision making instances to political elections.

Paul Dunphy

Dr. Paul Dunphy is a research associate in the School of Computing Science at Newcastle University. His research interests centre around usable privacy and security mechanisms with particular focus on security, usability, deployability and user experience.

Nick Taylor

Dr. Nick Taylor is a research associate in Culture Lab at Newcastle University. His research has focused on the study of technologies situated in public spaces, particularly when utilised to support communities and empower citizens.

Rob Comber

Dr. Rob Comber is a senior research associate in Culture Lab at Newcastle University. His research currently focuses on everyday practices of community, social communication, participation and social media.

Patrick Olivier

Prof. Patrick Olivier is a Professor of Human-Computer Interaction in the School of Computing Science at Newcastle University. He leads the Digital Interaction Group in Culture Lab, Newcastle's centre for interdisciplinary practice-based research in digital technologies.

The Use of Technologies for Electoral Administration in Nigeria since Independence: 1960-2011

Omoleke Muslim*

* Independent National Electoral Commission (INEC), Ogun State. omolekeolujide@yahoo.com

Abstract: *The paper examines the appropriateness of technologies used by the electoral bodies in Nigeria with a view to recommend a framework for the choice and effective utilization of technology in future elections. The study covers the Independent National Electoral Commission (INEC), Abuja. A set of questionnaires was administered on thirty (30) purposively selected Directors at the INEC headquarters, Abuja. Focus group discussions and interview guides were also used to elicit information on the inventory of technologies used since independence among others. Secondary data was sourced from the annual reports of INEC and the Electoral Act, 2010 as amended. Using a Likert scale of 1-5, the results show the manual compilation of voters lists (4.07), manual process of election results (3.87), facial identification for accreditation (3.80) among others that were mostly used since independence. It further reveals the application of Direct Data Capture Machine (DDCM) to compute voters lists (3.69) and the use of Geographic Positioning System and Geographic Information System (GPS/GIS) to delineate constituencies (3.06) were the most appropriate technologies among the technologies used since independence. Finally, most infrastructural support facilities needed for modern technology such as availability of technical manpower (2.97), supply of electricity (1.60) were not effective and efficient. The study concludes that without prejudice to the employment of traditional technologies, the application of ICT in electoral process is the most viable option to ensure accountability and transparency of the electoral process in the country as it could facilitate the integrity and acceptance of the results.*

Keywords: Technology, Electoral Administration, Appropriateness, Work station

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It is a common fact that the nature of electoral process until recently in Nigeria was faulty and in a sordid state. It has been observed that voting methods from 1960 to the 2007 general elections in the country were easily manipulated by unscrupulous actors to precipitate the problems of electoral fraud.

Various electoral bodies in Nigeria had deployed technology (techniques, tools and equipment) to assist them in the management of electoral process. The areas where technology can assist electoral processes include but not limited to voters registration, voting which includes accreditation, balloting, sorting, counting, transmission of results and delimitation of constituencies.

In spite of the volume of technology applications, it is disheartening to note that most of the above named activities were manually handled and where modern technology was applied, became controversial and inconclusive. It is against this backdrop that the study investigated the choice and application of technology in the management of electoral process in Nigeria, with a view to recommending an appropriate framework for effective utilization of technology in future elections.

1. Theoretical frame work

As earlier stated, hitherto the process of conducting elections in Nigeria since independence (1960) was basically manual. Only few instances of application of machines existed. Consequence upon the above, the research work was anchored on system and network theories.

System theory. This theory was proposed by the biologist Bertalanfy (1956) and expanded by Ross Ashby (1968). The system theory emphasizes that disciplines such as Physics, Biology, Management, Technology, and Sociology among others are interconnected and interrelated. Oribabor (2003) explained a system as an interconnected set of elements that have orderly interactions that form a unitary whole. Simply put, it is a set of connected things or parts, an identifiable and complicated whole.

Network theory. Rogers et al. (1986) characterized a communication network as consisting of interconnected individuals who are linked by patterned communication flow. He went further, saying that communication network analysis studies the interpersonal linkages created by the sharing of information in the interpersonal communication structure. In general, network analysis focuses on the relationship between people instead of on characteristics of people (Burt, 1992).

System and network theories explain the proposed technology for electoral process in Nigeria. Using the technological framework in figure 1, the installation of relevant equipment in polling units, registration areas, local government headquarters, states and the Federal Capital Territory (Abuja) would facilitate e-regisration, e-voting and a host of others. The theories when applied to electoral process in Nigeria especially the registration of voters using DDCM, Direct Data capture machine brought the following benefits among others:

There were appreciable reductions in the multiple registrations, thereby leading to the existence of correct number of registered voters in the country. Voters' register and voters' cards also contain the photographs of the voters, thus making it easy to identify the owner of the card. This will check impersonation during election.

2. Methodology

Data for the study was obtained through the primary and secondary sources. Primary sources included the use of questionnaires, interviews and participant observation. A purposive sampling technique was used for the study. Thirty directors of INEC were purposively selected from the

population of about thirty five directors. Data were analysed using weighted average, percentages, factor analysis and a host of others. The validity and reliability of the research instrument was done through the pilot studies that were carried out in Osogbo Local Government of Osun State. The first pilot had an average reliability value of 0.6. After re-administration, the second pilot study showed reliability and validity value of 0.9.

3. Empirical investigations

3.1. Identification of Technologies used since 1960

Table 1 indicates the extent to which the various technologies had been used.

The application of weighted average to determine the extent of use of the technologies indicates that manual computation of voter's list had the highest weighted mean of 4.07 out of a benchmark of five. This is an indication that the technology was extensively used. Similarly, transmission of results off line and facial identification during accreditation were rated very high as being extensively used (3.87 & 3.80) respectively. Also, technologies such as optically scanned ballot (1.63), lever machine (1.63), the use of Smart Card for accreditation (1.73) and many others with a weighted mean of less than 2.5 are indication of low or non-application of such technologies in Nigeria.

Table 1: Identification of Technologies for Electoral Activities used since Independence

Technologies for Electoral Administration	Wt.Av
Manual computation of voters register (the use of ECIA)	4.07
Announcement of results on the spot and later taken to the next collation level	3.87
Facial identification	3.80
Physical counting of votes	3.67
Physical sorting	3.63
Physical conveying results to the next collation centre	3.63
Delimitation by manual process	3.63
The application of direct data capture (DDC) machine to register voters	3.57
The use of form EC8 series to record votes	3.57
Monitoring by traveling hundreds of kilometers	3.57
Ordering of votes by handwriting	3.50
Paper ballot	3.43
Delimitation by Geographic Positioning System (GPS) and (GIS) Geographic Information System.	3.37
Physical identification by checking voter's cards	3.23
Auditing by handwriting	3.20
Option A4	3.00
Announcement through networking (simultaneous announcement all over the states)	2.97
Internet voting	2.70

Use of computer in transmission of votes	2.53
The use of computer for counting	2.37
Kiosk voting system	2.23
Automatic Finger Identification System (AFIS)	2.20
Application of cell phones to transmit results	2.20
The use of computer for sorting votes	2.17
Biometrics	2.13
Ordering using computers	2.13
Fax machine	2.10
Direct Recording Electronic Machine	2.00
Cryptography	1.97
Auditing using computer	1.97
Monitoring by the application of remote sensing equipment	1.97
Use of smart card for accreditation	1.73
Electronic recording	1.67
Lever machine	1.63
Optically scanned ballot	1.63
Punch card	1.53

Source; Field Survey November (2009)

Using a 5-Point Linkert Scale, Weight Average is measured as:

Not used at all - 1

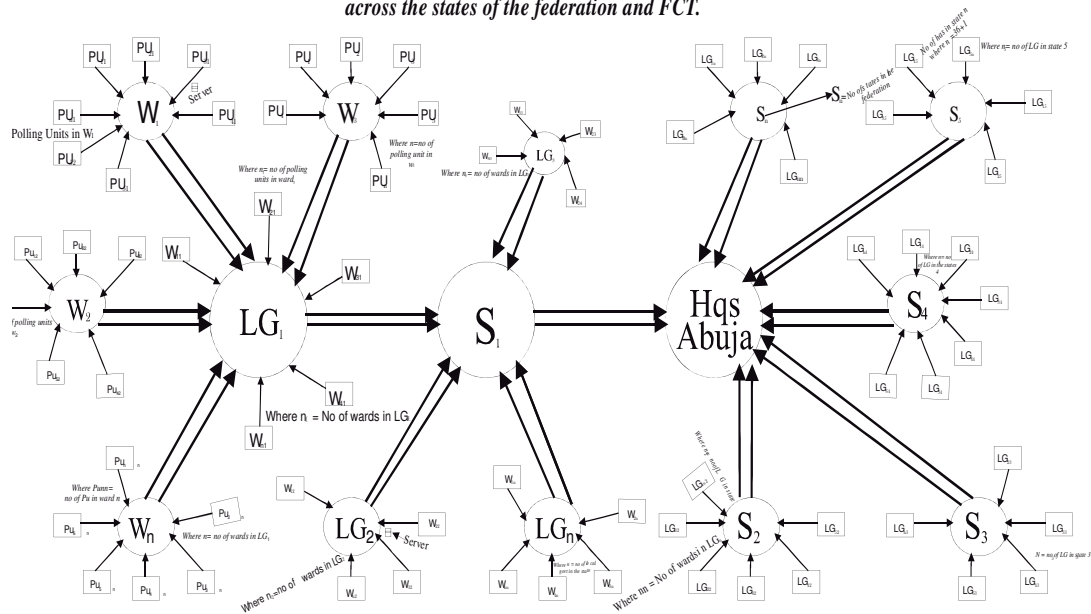
Slightly used - 2

Moderately used - 3

Strongly used - 4

Used to a greatest extent - 5

Model 1
Electronic processing of registration of voters, Voting, transmission of results and other information across the states of the federation and FCT.



Key
PU= Polling Unit
W= Ward / Registration Area.
LG= Local Government
S= State
Hqs= Headquarters.

W_n = Number of wards in a Local Government
 LG_n = Number of Local Government Councils in a state
 S_n = Number of states in Nigeria

Figure 1: Conceptual Framework I for Electronic processing of registration of voters, Voting, transmission of results and other information across the states of the federation and FCT
(Author of the paper)

4. Appropriateness of the Technologies

Table 2 indicates the frequency and weighted mean for the appropriateness of technologies for electoral administration using such parameters as accuracy, transparency, effectiveness among others. On a 5 point Likert scale, the application of Direct Data Capture Machine to register voters was considered to be the most reliable; accessible; effective; efficient and technically durable (3.69). Also, the application of Geographic Information System (GIS) and Geographic Positioning System (GPS) was also considered the most accurate, transparent, timely, neutral and simple (3.66). On the other hand, the registration of voters by manual process was comparatively rated lower in terms of reliability, transparency, affordability, accessibility, effectiveness and appropriateness (3.37), while

the technology for the transmission of results introduced in 2007 called Very Small Aperture Terminal (VSAT) and cell phone were rated as the least accurate, reliable, transparent and efficient (2.92). Focused Group Discussions (FGDs) organised among INEC staff indicate the reasons for the low rating of Very Small Aperture Terminal (VSAT). It was observed that some of the problems encountered by the operators of the Very Small Aperture Terminal (VSAT) technology include inadequate planning, inadequate technical staff and improper training of staff. It was however suggested that such Very Small Aperture Terminal (VSAT) technology is likely to enhance transparency if properly deployed.

Table 2: Appropriateness of Technologies used for Electoral Activities since Independence

Technologies	Mean Rank	Probability Value
Application of DDC machine to compute voters list	3.69	0.18
Application of GPS/GIS to delineate constituency	3.66	0.35
Application of manual process to delineate constituency	3.37	0.02
Application of form EC1A to compute voters list	3.37	0.30
Paper ballots, physical sorting, Counting and accreditation by examining voters card	3.34	0.022
Application of Optical Mark Recording (OMR) to register voter	2.94	0.28
Application of VSAT/GSM to transmit results	2.92	0.026

Source: Field Survey November (2009)

Key: Not appropriate - 1

Slightly appropriate - 2

Moderately appropriate - 3

Appropriate - 4

Most appropriate – 5

Parameters used are: Accurate, Reliable, Transparent, Affordable, Accessible, timely, Effective, Efficient, Appropriate, Neutral, Simple, flexible, Recoverable, technically durable and speed of counting (ACE Electoral Knowledge Network)

Measurement is on a 5 point Likert scale

5. Operational and infrastructural support facilities

As part of requirements for the introduction of a new technology, Administration and Cost of Election, Electoral Knowledge Network, (2008) noted that secured transportation, warehousing, adequate replacement plan for obsolete equipment, adequate staff with technical experts as well as power supply among others are identified as those infrastructural support facilities that needed to be present before introducing new technology.

For the purpose of this report and on a 5 point Likert scale, weighted averages which are below 3 are regarded as not effective or efficient. Table 5 shows that power supply. (Electricity) - 1.60 is the most ineffective and inefficient operational and infrastructural support facility. It is observed from the table that all the technical and operational infrastructural support facilities are not effective or efficient as they all fall below 3.

However, technical manpower and warehousing seem to be the two highest 2.97 and 2.90. This might be so because the commission had in the recent time zoned distribution of materials by building more warehouses in all the geo-political zones to facilitate distribution of such materials during elections.

Table 3: Technical/Operational and Infrastructural Support Facilities for the Introduction of Technologies in Electoral Activities

Technical/Operational Support Facilities	Weighted Average
Availability of technical man power	2.97
Warehousing	2.90
Availability of equipment for operation of direct data capture machine	2.80
Availability of stand by generators	2.77
Secure transportation, warehousing and distribution of equipment	
	2.67
Availability of spare parts	2.10
Power supply (electricity)	1.60

Source: Field Survey November (2009).

- Key: 1 - (NEF, NEFF) — Not effective and efficient
 2 - (SLEF, SLEFF) — Slightly effective and efficient
 3 - (MEF, MEFF) — Moderately effective and efficient
 4 - (SEF, SEFF) — Strongly effective and efficient
 5 - (VEF, VEFF) — Very strongly effective and efficient.

Measurement is on a 5 point Likert scale

6. Situation before applying the theory.

As a very senior officer of the commission, the situation with the electoral process before a partial introduction of technology was bad. Since independence, 1960, there has been one problem or the other about the process of conducting elections. For instance, people pointed accusing fingers to electoral bodies and some political parties, blaming them for the massive rigging. The 2003 and 2007 general elections were greatly condemned both nationally and internationally. However, the conduct of 2011 general elections which witnessed partial application of modern technology was adjudged better by local and international observers.

7. Changes noted after applying the theory

One of the major benefits of using Direct Data Capture Machine (DDCM) to register Voters is the elimination of multiple registrations which hitherto was the order of the day. It is expected that the adoption of voting method in future elections would solve other problems associated with traditional method of voting.

8. Important lessons.

As an experienced Civil servant who has put in more than twenty five years in the conduct of elections in Nigeria, I think it is important that developing countries, Nigeria inclusive should embrace the use of modern technologies in the conduct of elections. It is a fact that some of these technologies may have challenges; it is worthwhile embracing them while attempting to deal with the challenges.

9. Conclusions

From the foregoing, the following conclusions were drawn:

Most technologies used in the conduct of elections since independence have mainly been manual and not within the standard operation around the world.

Without prejudice to the traditional approach of conducting elections in Nigeria, modern technology such as the application of DDCM to register voters have been considered to be appropriate. Some manual techniques such as paper ballot were also considered as accurate and reliable in the absence of proper deployment of ICT tools.

Where the old technologies are rated high, it was observed during interview that those technologies were better since the new ones introduced were improperly deployed and managed. However, it was suggested that modern technologies would be more efficient, effective, accurate, reliable and appropriate than the old ones, if they are properly deployed and managed.

Infrastructural support facilities for the management of the existing technologies are not so effective and efficient. Power (Electricity) was the most affected. Electrical supply has been a major problem for the country several decades back. The use of back up batteries could assist in solving the problem.

10. Recommendations

Based on the findings of this research, it is recommended that:

The commission by virtue of the appropriateness of modern technologies as established should introduce the application of ICT in the management of Electoral Process in line with what operates around the world. In doing this, the commission should network all the work stations nationwide, install servers, operating systems, and distributed data bases at the appropriate work stations.

Infrastructural support facilities particularly electricity should be adequately guaranteed before the introduction of modern technologies. Alternatively, provision of back up batteries could be encouraged in rural areas.

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About the Author

Muslim Omoleke

The author was born in Ikire, Irewole Local Government, Osun State, Nigeria. He attended the University of Ife, now Obafemi Awolowo University, Ile-Ife, Nigeria between 1981 and 1985. He got his B.Sc in Education/Economics with honors in 1985. He also holds a Master of Business Administration, Master of Philosophy in Management and Accounting and Doctor of Philosophy degree in Technology and Management in 1995, 2001, and 2010 respectively. Omoleke Muslim is a lawyer and was called to the Nigerian Bar in 2004 by the Council of Legal Education. He is currently a Deputy Director with Independent National Electoral Commission (INEC), Abeokuta, Ogun State, Nigeria

Researching Politicians Online

Identifying Research Directions

Anders O. Larsson*, Jakob Svensson**

* University of Oslo, Norway, a.o.larsson@media.uio.no

** Karlstad University, Sweden, jakob.svensson@kau.se

Abstract: *For more than a decade scholars have shown interest in politicians uses of the Internet. In this reflection paper we have gauged literature on this topic and have identified two research opportunities for interested scholars. First, research should move beyond dichotomization such as conceiving of the Internet as either revolutionary or normalizing. Secondly, scholars within the field should contribute to the arguably limited knowledge base on online practices of politicians at regional and local levels. With these two recommendations we argue that the research field would move forward and generate new and interesting results.*

Keywords: E-campaigning Normalization, Political Communication, Web 2.0, Research Review

While several variables certainly come into play when researching the electoral performance of politicians, the role of communication technology cannot be easily overlooked (Gibson, Lusoli & Ward, 2008: 15). Specifically, it is hard to imagine the key political activity of campaigning without also conjuring up images of such technologies and the parts they have played. As the bulk of research on these matters has largely emanated US electoral contexts, examples of techno-political processes from that particular environment are abundant, serving as sources of inspiration in other regions. Indeed, research has suggested that as former US presidents like Thomas Jefferson made successful employment of the printed press, Roosevelt made use of his “great radio voice” (Foot & Schneider, 2006: 7) during his famed fireside chats, and Kennedy played on his understanding of the television medium. Since the mid-1990s, the advent and spread of the Internet has “vexed academics and commentators” (Wright, 2011: 245) regarding its potential for politicians (e.g. Blumler & Kavanagh, 1999; Chadwick, 2006; Stromer-Galley, 2000; Vaccari, 2008a).

Indeed, while many such early scholarly exertions seemed to build on a classical effect studies rationale that “the Internet has the capacity to [...] reshape political communication and campaigning” (Lilleker & Malagón, 2010: 25), most empirical efforts would largely come up with results suggesting more of a status quo than anything else (e.g. Larsson, 2013). The more recent emergence of the Web 2.0 rationale for web publishing, harnessing design values such as “user participation, openness and network effects” (O’Reilly, 2005) has, however, yet again raised interest in the potential for the Internet to act as a “magic elixir” (Stromer-Galley, 2000: 113) for political purposes. As technological developments like the supposed shift from Web 1.0 to 2.0 are almost universally greeted with “predictions of [...] revolutionary potential” (Jackson & Lilleker,

2009: 233), we should be somewhat wary of this hype. Nevertheless, the employment of what has been loosely described as the “more human aspects of interactivity on the Web” (Barsky, 2006: 33) has apparently been successful in certain political campaigning efforts, such as the much-publicized 2008 Obama campaign for the US presidency (e.g. Costa, 2009; Montero, 2009: 30).

This reflection paper gauges the literature on use of the Internet at the hands of politicians, identifying a series of research opportunities and recommendations for interested scholars. As similar reviews of the literature have been performed looking into topics such as online political conversation (Wright, 2011) online journalism (Mitchelstein & Boczkowski, 2010), virtual communities (Hercheui, 2011) and blogging (Larsson and Hrastinski, 2011; Svensson, 2011), a comparable review focused on how politicians make use of their Internet presences should be of interest to researchers as well as practitioners. Specifically, the paper identifies two opportunities for future research efforts.

1. Two Opportunities for Researching Politicians Online

In the following, we outline what we consider are two of the most pertinent opportunities for scholars interested in studying how political actors make use of various web based tools and platforms. As will be made evident throughout our description of the two opportunities, we base our case on deficiencies identified and suggestions made by previous research. Each of the identified challenges are complemented with suggestions regarding their practical implications in research settings.

1.1. Research should move beyond dichotomization

While the broader field of political communication is home to a great many subfields, altogether making up for something akin to what Whitley (2000) has labeled a *fragmented adhocracy*, there are unquestionably concepts, methods and theories that gives the field a certain amount of coherency. This is also the case in the subfield of e-campaigning dealt with here. Specifically, the argument is made that the introduction of the Internet has led to two overarching perspectives or hypotheses regarding its role for political communication.

Ever since the rise of the in the 1990s, researchers have taken an interest in the utilization of the online at the hands of politicians. While early efforts – especially those with a more conceptual or theoretical focus – generally suggested a more positive take on the influences of the Internet on communication efforts by politicians, the bulk of later, more empirically oriented studies have conversely proposed what could be seen a more negative stance towards these developments. For example, early work discussed the Internet in terms of its potential for ushering in an era of “informational democracy” (Castells, 1996) through the employment of “phase 3” (Farrell & Webb, 2000), “post-Fordist” (Denver & Hands, 2002), “postmodern” (Norris, 2000) or “professionalized” (Gibson & Römmele, 2001) modes of campaigning. While these specific terms differ somewhat in scope and consequence, they all denote the idea of a sea change brought forward by the Internet in the way communicative efforts are shaped at the hands of politicians (e.g. Castells, 2001) – allowing for, among other things, increased conversation and dialogue between politicians and their respective electorates (e.g. Coleman, 2005).

In contrast, later scholarly work has more clearly emphasized empirical work looking into these matters, more often than not coming to more negative conclusions. What is often referred to as the normalization hypothesis has been corroborated in a number of studies (see Lilleker, et al., 2011 for

a comprehensive overview). This suggests that offline structures of political, economic and other sources of power are mirrored also in the online, allowing for established patterns of campaigning to shape the online counterparts as well. Over time, this cross-perspective approach of more positive to more negative approaches have led researchers to the adoption of one or more dichotomies, if not in their conclusions, often as a starting point for their inquiry and through which they interpret their findings.

More recent empirical inquiry has suggested a third, middle-ground alternative, suggesting a position somewhere between the positive and the negative takes outlined above. As labeled by Lilleker et al. (2011), "the ebb and flow thesis" (p. 197) proposes that a dichotomization of perspectives when dealing with these matters can only take scholarly efforts to a certain point. Similarly conceptualizations of a *Web 1.5* have started to emerge in order to further describe a midway between more positive and more negative takes (Jackson & Lilleker, 2009; Larsson, 2013).

Indeed, pairings like these, and their continued use in research, can be seen as indicative of what Kuhn (1962) labeled as a phase of "normal science" – wherein the here described dichotomized paradigm engages scholars in "mopping-up operations", keeping the paradigm tidy and leaving those views "that will not fit the box [...] not seen at all" (p. 24). Though the suggestion for political communication researchers to abandon aforementioned dichotomous perspective might not constitute "tradition-shattering complements to the tradition-bound activity of normal science" (ibid.: 6), the more recent middle-ground findings suggest that a search for new interpretative perspectives when assessing the online activities of politicians could be of use. As such, perhaps it is time to abandon our collective attempts at "measur[ing] whether the Internet is revolutionizing politics" (Wright, 2011: 248) and instead approach these developments as ongoing processes of evolution – as "the *longue durée* of social institutions" (Larsson, 2013) such as those under discussion here.

1.2. Research should focus on the local and regional level of study

Researchers often distinguish between scholarly work as being situated on distinctive levels of analysis, identifying units of observations accordingly. Studies at the level of individual country systems generally provide comparative analyses of political communication practices in two or more nation states, considering similarities and differences between the countries selected for analysis and presenting and discussing their results correspondingly. For example, Hara & Jo (2007) considered the uses of online practices like fundraising, civic participation and e-mobilization during presidential campaigns in the USA and South Korea (taking place in 2000 and 2002, respectively). The results from the cross-country comparison suggested that minority presidential candidates in both countries appeared more adamant in employing the web for the above mentioned purposes, especially when it comes to fundraising opportunities. As such, the results clearly relate to a minority of studies adhering to the previously mentioned equalization effect – suggesting that minor parties would make more extensive use of the Internet and its potential for voter engagement, effectively moving beyond the early definitions of political web use as "electronic brochures" (Kamarck, 1999: 108) or "campaign gimmicks" (Lilleker & Malagón, 2010: 26). While relatively early studies such as the previously mentioned, one tends to find minor parties as having the upper hand when it comes to employment of the web to a fuller extent (e.g. Schweitzer, 2005), the bulk of research has found major parties to generally be more proficient online. As such, more recent research efforts has generally found major parties to dominate when

it comes to the utilization of the online. Indeed, in their “search for a European model of web campaigning”, Lilleker et al. (2011) compared web use practices by parties in a series of European countries, finding that “parties offering the most innovative websites have the greatest resources at their disposal” (p. 205).

While the comparative design often obvious in studies at the level of individual country systems arguably is very constructive (e.g. Ragin, 1987), the bulk of studies of online political communication at the hands of politicians available have been performed as case studies focused on how the practices placed under scrutiny here are played out in specific countries. While many such studies focus on US elections (Schneider & Foot, 2002; Smith, 2009; Stromer-Galley, 2000; Vaccari, 2008a), a number of studies are available that look into party practices in a series of other countries. Adopting somewhat different approaches to study the 2007 French election campaign, Vaccari (2008b) and Lilleker & Malagón (2010) nevertheless came to similar conclusions – in general, finding significant gaps between large and small parties in respect to more innovative online practices, as well as substantiating the low degree to which those features are generally used. Employing a longitudinal approach, Schweitzer has studied the online activity of German parties during a series of elections in a series of studies (see for example Schweitzer, 2005; Schweitzer, 2011). Basing her analyses on various appropriations of the content analysis method, the overall results fall in line with the aforementioned normalization hypothesis, largely defying the “public and scientific hopes that have been placed on the democratic potential of the Internet” (Schweitzer, 2011: 324).

While longitudinal and comparative approaches such as the ones presented above are important in advancing our understanding of online political communication, we suggest that the relative dearth of studies on regional and local levels should be taken into account. While the aforementioned normalization hypothesis has been strengthened through a series of studies on the national level of politics, the knowledge base when it comes the online practices of politicians at the regional or local level is arguably more limited. As many of the studies focused on the local or regional level predominately deal with what could be described as administrative issues – such as usability (e.g. Baker, 2007) or accessibility (e.g. Evans-Cowley, 2006; Kopackova, Michalek & Cejna, 2010) – the suggestion is made here for researchers to complement “the managerial bias of e-government” (Chadwick, 2003: 450) with a focus on the more communicative aspects of local level political work. While interesting work dealing with these issues is certainly available (Gibson, Lusoli & Ward, 2008; Svensson, 2012), we argue that more insights are needed into local level practices – especially in times of voter alienation (Borge, Colombo & Welp, 2009; Haug, 2008), and especially since “smaller, incremental changes [...] can occur (often at the periphery)” (Wright, 2011: 252).

2. Summary

As we have reflected upon here, most studies have revealed that the effect of the Internet on electoral participation, opinion formation and established geometries of power is rather small. Nevertheless, the Internet in general, and social media applications in particular, appear to be increasingly used by politicians when campaigning. Such technologies are also discussed as potentially powerful campaigning tools by researchers in the field. Part of the explanation for this attention to the online realm within the field of political communication, is that its emergence and rise coincided with less civic participation and growing dissatisfaction with the processes and

people of representative democracy (Coleman & Blumler, 2009: 143). While many studies seem to underline "politics as usual", we as researchers continuous to be fascinated by the Internet and how it is/ can be used by politicians. We sense that there is something going on and changing when bringing campaigning to the online realm. However, our analyses and study designs somewhat fail to account for this. While the studies referred to in this paper certainly have been informative and enlightening, we suggest a move forward by encouraging scholars to look beyond dichotomies and devote more attention to case studies on more local and regional levels. While we perhaps should not expect revolutionary changes (see Wright, 2011), we still consider that research into politicians online to be important and timely.

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About the Authors

Anders O Larsson

Anders Olof Larsson (PhD, Uppsala University, 2012) is a Postdoctoral Fellow at the University of Oslo. His research interests include political communication, institutional use of online interactivity and social media and quantitative methods. Larsson's web site can be accessed at andersoloflarsson.se.

Jakob Svensson

Jakob Svensson is Assistant Professor in Media and Communication studies at Karlstad University where he directs the MA and BA program in Global Media Studies as well as the research center HumanIT at Karlstad University. His research focuses on political communication from a participatory and civic perspective.

Social Media Research: Network Users' Activities as a Reflection of Real Life

Lyudmila Bershadskaya*, Radomir Bolgov**, Andrei Chugunov***, Dmitrii Trutnev****

* e-Government Center, University ITMO, St.-Petersburg (Russia), bershadskaya.lyudmila@gmail.com

** St.-Petersburg State University (Russia), rbolgov@yandex.ru

*** e-Government Center, University ITMO, St.-Petersburg (Russia), chugunov@egov-center.ru

**** e-Government Center, University ITMO, St.-Petersburg (Russia), trutnev@egov-center.ru

Abstract: *The article presents the findings of social media research, analyzing the discussions regarding the enactment of new laws in social network LiveJournal. The research was conducted with “Sociodynamics”, an automated-tool web-center developed at ITMO University in 2012. Based on analysis of the data it was concluded that in Russia social media networks are actively utilized to serve as a discussions base in real time. These observations suggest that the study of social networking tools can be effectively used to estimate the G2C interaction.*

Keywords: social media, G2C, network approach, social networks analysis

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Social networks and the blogosphere are a significant part of the field of mass communication and become a research subject and data source. According to a study by ComScore conducted in 2012, Russia ranks third place in the world with regard to the amount of time spent utilizing social networks (9.6 hours per visitor) (Top 10 Global Markets by Average Social Networking Hours per Visitor, 2012). Currently, social networks are the major discussion platform with regard to demand for e-government services. Comparison between external evidence (opinion poll results, statistic data etc.) and discussions in social networks is an issue of practical importance.

1. Incentives for participation in social media (G2C)

There have been many examples of citizen interaction with social networks on a global scale, particularly related to the discussion of government activities, law enactment and the provision of public services.

P.Sobkowicz et al. (Sobkowicz et.al, 2012) presented a model of the formation of public opinion using social media. While researching, the authors used automated content analysis of social media to identify new trends, attitudes, propensities, relationships and expectations of stakeholders and society at large. In 2012 a survey of communication via social media and the influence this has on citizens' political activity, (sample size - 2.2 thousand people) was conducted in the U.S.A. (Raine et. al, 2012). According the results, the impact of social media on citizens' participation in the democratic process has become increasingly important. In particular, an average everyday Facebook user is 2.5 times more likely to go to a political rally or meet with a politician. Thus, according to researchers, social media is an effective channel of influence on political attitudes and civic engagement.

The best examples, demonstrating the use of social networks in the political arena, come from the U.S.A. In particular, the Barack Obama's 2008 election campaign demonstrated that the effective use of cyberspace communication can produce convincing results (Savanevsky, 2010). The Obama campaign took advantage of all effective social networking tools: a private social network for Barack Obama supporters - MyBo, a separate channel on YouTube, the presence of Twitter microblogging, photos on Flickr, SMS and e-mailing, various widgets, viral marketing, etc. As a result of this campaign, Obama collected more than \$ 700 million in campaign fundraising - a record sum in the history of U.S.A. elections. Online supporters accounted for \$500 million of this sum.

ICT and political networks are rapidly developing. The rapid technological development over the past two decades has been a catalyst for the changes that are taking place in several disciplines (Bolgov, 2012). Firstly, a wide range of political actors have accepted the use of advanced technologies. Non-state actors (e.g., mass media, business, NGOs and citizens' groups), whose actions are not tied with a particular government, use new technologies to achieve strategic and tactical goals. Secondly, political leaders' webpages on social networks are becoming widespread. With the growth of user-generated content and Web 2.0 technologies (YouTube, MySpace, Twitter, Google Maps) it is not just officials who have become participants in the information space, but also ordinary people (journalists, social activists and even soldiers), by posting photos, videos, and comments on various issues of state and local government on the Internet.

The state program "Information Society" was a starting point for e-democracy initiatives in Russia (Decree of the Russian Federation, October 20, 2010, №1815-p). The project's special direction "Creation of services for public discussions and authorities' activities monitoring; creation of public control tools at local level" is organized under this program. The state information system "Electronic Democracy" was developed under the framework of the state program in 2011. A single portal for e-democracy in the Russian Federation is one of the key elements in this system.

The webportal "e-democracy" (<http://e-democratia.ru>) was created to be a unified public information system, intended for discussions, making available information to organizations (public and local authorities, businesses, etc.) and public assessments.

Several e-democracy projects have been launched in Russia since 2011: "Demokrator" (<http://demokrator.ru>), "Democracy 2" (<http://democratia2.ru>), "Where-Who?" (<http://kudakomu.net/>) and numerous crowd sourcing projects at federal, regional and local levels (some of which provide an automatic generation of requests to authorities).

The Information Democracy Fund was established in Russia in 2012 (<http://id-f.ru/>). This fund is a Russian non-profit organization that brings together experts in the field of information technology, political science and management, whose activity is linked with the development of civil society and IT promotion in state and municipal government. The Fund's mission is to promote the renewal of democratic institutions, a constitutional state and the development of a civil society through the mechanism of direct citizen participation in government with the help of modern information technology.

Currently an active discussion about the concept of "Russian public initiative" is taking place in Russia. This concept supposes that the public will vote for citizens' proposals on the Internet. According this idea, the government will consider proposals supported by at least of 100,000 people (a similar rule is in place in the UK - <http://epetitions.direct.gov.uk/>). A special tool to account for citizens' views was created in April 2013. In this way, the development of the institutional foundations for e-democracy began over three years ago in Russia.

2. Research methods used for studying social network user activity

At this stage a number of social network studies in Russia are dedicated to political processes, but they are often complex in character. At the same time, the political situation in Russia can be characterized as dynamically developing (meetings, elections, adoption of new laws) and all of these facts are reflected in discussions on social networks.

The research webcentre "Sociodynamics" (<http://socio.escience.ifmo.ru/>) was developed on the basis of the CLAVIRE platform at the St. Petersburg National Research University of Information Technologies, Mechanics and Optics in 2011 (Bershadskaya et. al, 2012). The appearance of automatic research instruments for the analysis of virtual communities on the basis of cloud computing platforms allows for the application of a network approach at a new level, generating interesting and thought-provoking results.

The webcentre "Sociodynamics" has posited the following research scenarios:

- sociogram's construction of informal communities, analysis of the speed and distribution of information between community members:
- analysis and forecast of public moods indexes, monitoring of how views are manipulated.

While applying the "Sociodynamic" research instruments, the authors set the task to reveal the character and properties of community interests and their likelihood to discuss certain subjects..

Data on the topic "Laws regarding homosexuality and the promotion of pedophilia" was used to implement the research scenario. The acceptance of these laws in a number of Russian regions caused a wave of discussions, usually generated by human rights activists and representatives of sexual minorities. On the one hand, these laws were almost useless, because any sexual harassment of minors is actually forbidden by law. On the other hand, this law forbids the organization of gay parades and public displays of affection between sexual minorities, however, these limitations contradict the adopted international legislation, so much so that the European Court on Human Rights in Strasbourg has already decided that the government of the Russian Federation must pay a penalty of 50,000 Euros for the illegal restriction of the rights of sexual minorities due to the refusal to allow gay parades etc.

The crawling of LiveJournal's Russian-speaking segment was carried out on the basis of keywords. Social groups of users that discussed the mentioned topic were distinguished. The

network was formed on the basis of all found messages including keywords and communications between users. Only relevant users (those who have recently contributed) were selected for visualization and analysis. LiveJournal was chosen for data collecting because of it's openness for automated analysis. Unfortunately, the most popular networks in Russia do not open an access for the full information.

3. Research results

Selection of community members and its sociogram visualization are the first steps to implement the research scenarios.

The analysis of the informal community interested in the theme "The laws on the propaganda of homosexuality" produced the following results:

There are only a few unconnected users in the community. Single dots represent users who are not linked by a subscription with other members (on Figure 1 such users are distributed on the free space of sociogram).

Processes of self-organizing networks are displayed. Self-organization covers a sufficiently large number of members of this informal community. These conclusions are confirmed by the data of key parameters for these self-organizing informal networks. The average degree of a vertex is 5.6, the rate of adjacency - 7.0. These parameters indicate a relatively high cohesion of informal group.

The research identified the most influential members of the community and opinion leaders. The number of messages that have been posted, reposted or cited was used as an identification mechanism.

The frequency of posts on the subject "The laws on the promotion of homosexuality" was calculated. The results of these calculations are shown in Fig. 1.

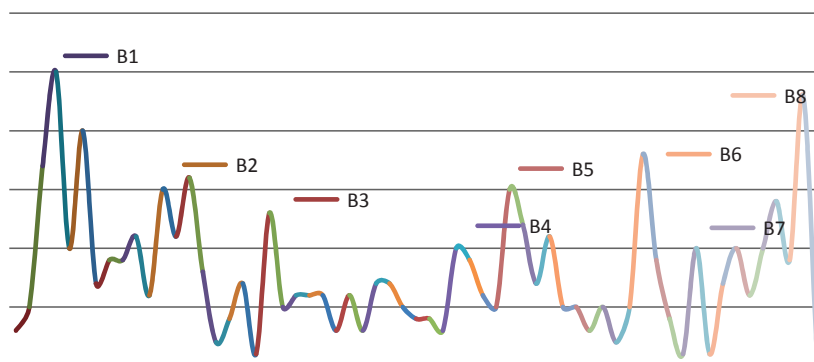


Figure 1: Dynamics of messages in LiveJournal with keywords related to "The law on the promotion of homosexuality" (April 21 - June 20, 2012)

It should be noted that in the background of a stable level of discussion of the subject (within a few messages per day), there was an explicit connection between active discussion in LiveJournal and external information from mass media, etc.

The marked peaks of publication activity in LiveJournal are most likely connected with the following events:

B1 - a prayer service at the Cathedral of Christ the Saviour (Moscow) with slogans decrying homosexuality, media reports about the authorities' intention to ban the promotion of homosexuality to minors.

B2 - activists in the movement for homosexual rights were detained in St. Petersburg, appeals to sign a petition on the Internet to reject consideration of homophobic legislation in the Ukraine, the first decision of the St. Petersburg Court under the law on the promotion of homosexuality.

B3 - the publication of the full verdict on gay propaganda.

B4 - the law "On the promotion of homosexuality" was recognized as relevant to federal legislation.

B5 - unauthorized pro-homosexuality picketing in Moscow.

B6 - development of a system of fines for propaganda (Novosibirsk region).

B7 - collection of an online petition to the President demanding for attention to be paid to the problems of promoting homosexuality and gay relationships.

B8-the law was appealed at the Strasbourg Court.

It was concluded that the processes taking place in real time are reflected in social network discussion. These observations suggest that the study of social networking tools can be effectively used to estimate the G2C interaction. The bursts' of information activity in social networks identification (which is the catalyst for political and social processes, including the adoption of regulations) is of particular interest in this regard.

4. Conclusions

This analysis leads to the conclusion that the discussion space on social networks is actively utilized in Russia. These processes are the object of study in a variety of subject areas. An automated webcentre for the study of processes in the Russian blogosphere was created in St. Petersburg. The webcenter's instruments give opportunities to gather information about the users' communities by discussing a particular theme in the network. The authors conducted a case-study based on opened resource LiveJournal, which reflects the scale of a one law enactment discussion. The following steps of research should be addressed to e-petition analysis as well as reposting analysis for making the conclusions about qualitative aspects of social networks discussions.

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About the Authors

Lyudmila Bershadskaya

The analyst of the e-Government Center, University ITMO. At the moment she is pursuing a PhD in sociological science. Since 2009 has been engaged in more than 20 research projects. Participated in 1 EU-funded projects "Support to e-Government in the Russian Federation" with responsibilities related to civil servants education needs assessment, and training materials preparation in the area of e-Government.

Radomir Bolgov

Senior lecturer of the School of International Relations, St.-Petersburg State University. He achieved the PhD in political science in 2011. He lectures on the courses "Government information systems", "Information Security", conducts seminars on the course "Information society and international relations". He completed an internship at the National Institute of Information Technology, New Delhi (India). His current work focuses especially on the study of international aspects of the Government 2.0 (e.g., international e-cooperation between national parliaments).

Andrei Chugunov

The Head of Governmental Information System management Department, the director of e-Government Center, University ITMO. He achieved the PhD in political science in 2000. Having more than 20 years of experience in the field of education and training courses conduction. He has published more than 100 papers dedicated to information society development, eGovernment technologies and educational services implementation. Since 2002 actively involved in projects in the area of e-Government development.

Dmitrii Trutnev

The deputy director of e-Government Center of University ITMO and Certified Information Systems Auditor (CISA). Dmitrii has more than 20 years experience in consulting and teaching in the areas of “E-Governance” and “Information System Management” and also 17 years of faculty management experience at higher education institution in faculty forming, management, curricula design and delivery in accordance with the Bologna Process Requirements. Since 2002 actively involved in international projects and participated in more than 12 EU, USAID and UNDP-funded projects in the area of e-Government development and education in several countries.

Social media analytics for sustainable migrant integration policies

Reflections of the FP7-ICT project UniteEurope from a tool-oriented perspective

Irmgard Wetzstein*, Peter Leitner**

* SYNYO Research, Research Manager, irmgard.wetzstein@synyo.com

** SYNYO Research, Head of Research, peter.leitner@synyo.com

Abstract: *The role of social media as participation platforms in democratic societies has been widely discussed in academia, while their exploitation with concrete tools has hardly been centered. This paper then focuses on social media analytics (SMA) in general as well as the conception of a social media analytics tool (SMAT) being developed within the 36-months FP7-ICT-project UniteEurope, which aims at equipping policy-makers and NGOs with decision-support for sustainable migrant integration policies. While the project is based both on in-depth social-scientific research with regard to analyzing those stakeholders' requirements on the one side, and on technical conception and software development on the other side, this paper explicitly emphasizes the latter.*

Keywords: social media analytics, migrant integration, decision-support, policy-making, ICT, UniteEurope

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Seeing to serve and equip NGOs and policy-makers in cities and on the pan-European level with facilitations and innovations to support sustainable migrant integration policies, the present paper focuses mainly on a respective social media analytics tool (SMAT) conception, referring to the ongoing FP7-project UniteEurope. Being strongly connected to social inclusion, migrant integration is generally understood as a process in which both the immigration society (and host country respectively) on the one side and immigrants on the other side have to engage actively (Zick, 2010). Consequently, good collaboration on a political and societal layer is obviously needed when aiming at functioning migrant integration, especially in cities, which are generally characterized by rising pluralism, heterogeneity, diversity and societal fragmentation, which makes it hardly possible to oversee and involve all positions and interests concerning socially relevant issues, such as migrant integration (Andersen & van Kempen, 2001).

Within the UniteEurope project it is then assumed that social media analytics (SMA) do have the potential to support decision-making processes towards sustainable integration policies by considering citizens' discourses on social media platforms and channels, and thereby strengthen

especially of the voices of the younger generation, who generally use social media extensively. Consequently, a sophisticated SMA solution is aimed to be developed within the project for

collecting, filtering, aggregating and presenting mass data generated by citizens in already existing global and local social media channels and platforms (e.g. platforms such as Facebook, micro-blogs such as Twitter, weblogs and online newspaper forums) to support policy-makers in cities as well as local and pan-European NGOs to identify important migrant integration issues and trends and develop efficient and effective measures and policies.

1. Outlining social media analytics: potentials and limitations

User generated content has been strongly increasing ever since social media emerged (boyd & Ellison, 2008). In recent years, marketing strategists, NGOs, entrepreneurs and other professionals have become aware of the information capacities arising from social media and demand for tools, which support them in overviewing the unstructured but valuable information generated by users in the “natural setting” of various social media platforms. Therefore a variety of SMAT has been developed to manage, channel, aggregate and analyze user generated content.

Generally SMA, also called social media listening or social media monitoring, is comparable to traditional market research, whereby people do not have to be consulted with questionnaires, but authentic answers are already available in the WWW and are filtered and analysed automatically (Lange, 2011). However, in contrast to traditional market research, the social-scientific research principle of “informed consent” is not given within SMA, and SMA cannot claim to work with representative data, but depends on data produced by – mostly young – people active in the social media. In other words, besides ethical and privacy issues raised, SMA cannot provide representativeness (e.g. regarding the possible underrepresentation of migrants and of “digital immigrant” or older generations in the social media), but have strong potential in considering migration integration perceptions especially of the younger generation (especially so-called “digital natives”).

Like in market research, an important aspect of various SMAT is the analysis of sentiment and opinion respectively. Usually, positive, neutral and negative sentiment towards a brand or topic of interest across all identified relevant mentions is indicated in percentages. However, automated sentiment classification may fail in some cases, no matter which tool is used, as systems are not able to detect linguistic and contextual specifics such as irony and sarcasm (Harlinghausen, 2001 and Liu, 2012). For this reason, the UniteEurope project consortium decided to renounce the automated analysis of sentiment of the generally highly delicate issue of migrant integration.

In contrast to other SMAT, which focus mainly on brands and products, the UniteEurope SMAT will emphasise the socially and politically highly relevant issue of migrant integration. Thus, exploiting SMA for sustainable integration policies is the main goal of the UniteEurope project, in which RTD in this regard is centred for the first time.

Even though SMA emerged only in recent years, respective SMAT have already reached high complexity and manifoldness (see for example the Aberdeen Group Benchmark Report, 2008; Goldbach Interactive, 2011). In the course of the UniteEurope project, 100 SMAT were collected and evaluated within a best practices report regarding their usability and manifoldness, for example regarding language options, sufficiency of sources coverage, structural clarity, the variety of features, and the visualization of aggregated data (Wetzstein & Leitner, 2012). The results show,

in a nutshell, that while most of the analyzed SMAT are generally advanced and sophisticated, and mostly products of US companies, manifold language options are not (yet) self-evident in the SMAT landscape. However, there are a few tools existing, which provide multilingual user interfaces and dashboards (e.g. Heartbeat, see <http://www.sysomos.com>) and, more often, language filtering, segmentation and detection options (e.g. BrandsEye, see <http://www.brandseye.com>). In contrast to many other SMAT, the UniteEurope SMAT will be provided with multilingual interfaces as well as the possibility to detect and analyse social media content in different European languages, for which multilingual keyword lists including lists of word stems and slang words are to be elaborated.

2. Concept of social media analytics serving sustainable integration policies

As the UniteEurope SMAT aims at supporting local and pan-European NGOs and political decision-makers in sustainable migrant integration policy-making, the respective UniteEurope SMAT is needed to be attuned especially to their needs. Concretely, having the City of Rotterdam, the City of Malmö as well as the Austrian NGO ZARA (Zivilcourage und Anti-Rassismus-Arbeit) in the project consortium, their individual needs and requirements with regards to the planned software solution have already been investigated, the thereby gained insights directly flowing into the UniteEurope SMAT conception.

2.1. Specified UniteEurope modules

Scalability, flexibility and customizability are indispensable prerequisites for the UniteEurope SMAT conception in order to be able to attune the solution to stakeholders' individual needs. However, tool capabilities, requirements and expectations could be clearly extracted from the mentioned analysis of SMAT best practices and requirements analyses with end users in the project consortium, and resulted in the following UniteEurope modules (Leitner et al, 2012):

Main dashboard: The main dashboard of UniteEurope will be the landing page when entering the tool and the central navigation point, and will include cumulated information of all other modules and an intuitive overview of all possible services.

Organisation monitoring: The organisation monitoring will be a predefined monitoring service for the adopters of the solution. Based on pre-defined keywords related to the organisation name, continuous monitoring of related articles and posts on the web will be realized.

Campaign tracking: Within campaign tracking users will be able to define a specific phrase in combination with a series of parameters. The related content will be collected and presented in an intuitive way.

Live monitoring: This module will allow live (real-time) searches with user-defined keywords in selected social media sources.

Multi streams: Due to multi streams users will be able to select a set of social streams out of a preselected collection related to each target group. For example, the most influential Twitter streams for a specific NGO will be included.

Integration monitoring: Integration monitoring will be the core module of the UniteEurope solution for local target groups. With the mentioned language-based keyword list, a data pool of relevant articles and posts will be built.

Measures and cases library: The UniteEurope software will include a measures and cases library for supporting its users in decision-making. Measures will be partly pre-defined, and the users will have the possibility and be encouraged to set up and share measures and specific cases.

Benchmark analytics: Benchmark analytics will be the core module for the pan-European target groups. It will deliver a comparison of city-based content, figures and statistics.

Generally, the set of UniteEurope modules is fixed, and a prototype has already been developed. However, even if cyclic interaction and feedback loops with the end users represented in the project consortium take place on a regular basis, the aspect of usability, which will be tested and evaluated in depth with them in the near future, might still make minor changes necessary.

2.2. Social media analytics for city administrations and NGOs: Main tool characteristics

Given that local and pan-European policy-makers and NGOs each have differing demands regarding integration policy-making, the UniteEurope solution must be conceptualized within a stable, modular, scalable, flexible and customizable solution architecture based on a framework combining crowdsourcing, collective intelligence, mashup and Web 2.0/3.0 approaches, in order to be able to meet individual needs. The UniteEurope solution will be delivered applying a software-as-a-service (SaaS) approach, which means that tools and dashboards will be accessible whenever Internet access is available, and will enable the project-relevant stakeholders to collect mass data and integration-related content generated by citizens appearing in pre-defined social media sources, based on pre-defined keywords compiled in the cities' most common languages (official language as well as languages of the most represented immigrant groups). Publicly available relevant data will be visualized with dashboards for cities and NGOs on the local (Figure 1) as well as pan-European level in an intuitive way, whereby data presentation will be more aggregated and less detailed on the pan-European level. Additionally, an integration issue grid model with multi-layer logic patterns (Figure 2) is the core of the UniteEurope SMAT conception, with which mass data and content along social-scientifically well-founded pre-defined integration issues, taxonomies and algorithms will be structured with several layers of connected variables. The grid model therefore serves as a standardized categorization of integration issues and enables comparisons and the identification of good practices in European cities.



Figure 1: Exemplary dashboard



Figure 2: Multi-layer model

Within the multi-layer model, integration areas such as culture, e.g. the case of the opening of a new Turkish cultural center in a city, and public space, e.g. conflicts in a park (layer 1); multi-

lingual keywords (layer 2); local (e.g. local online media sources) and global (e.g. Facebook, Twitter) social media sources (layer 3); parameters and indicators to enable cities and NGOs to set priorities and determine needs of action (layer 4); and integration measures (layer 5) are defined and specified for each end user (cities and NGOs) in the project consortium, based on in-depth social-scientific desk research, systematic literature reviews and qualitative interviews with end users. Regarding the definition of sources, the UniteEurope solution will refer to social media sources as well as to journalistic online media in order to be able to generate holistic results, include as many voices as possible and give a variety of perspectives for decision-making. However, social media are given the main emphasis within the conception of the tool. With the widest possible coverage of social media and online media sources, the UniteEurope SMAT will enable policy-makers and NGOs to overview and analyze migrant integration discourses from within one single platform.

3. Conclusion

This paper overviewed the conception of the UniteEurope SMAT and clarified the aim and purpose of the solution to serve NGOs and policy-makers on city and European level with decision-support for sustainable migrant integration policies. Yet, a SMAT solution approaching especially migrant integration issues does not exist. Being a new area of research and technical development, the UniteEurope project produces various challenges, which could not be centered in the present paper, but which the project consortium already faced and will also have to deal with in the future. This refers to the complexity of the differing migrant integration policies and measures in the partner cities within the project consortium (Dekker et al, 2012); to ethical, legal and particularly privacy-related challenges in social media data collection (Stöckl et al, 2012); and to the recent critical academic discourse on the power and handling of so-called “big data”, meaning for example the seemingly unmanageable masses of social media mentions, and its public benefits and/or threats of misuse (boyd & Crawford, 2012). With in-depth analyses of cultural, legal and ethical aspects (Stöckl et al, 2012) and the approach to access and assess only publicly available information and sources including APIs, not to target or to crawl individual users as single subjects, and maintain standards of anonymity and aggregate relevant data correspondingly, the UniteEurope team ensures and takes care of the purposeful use of the software to be implemented, tested and customized for each partner city and NGO represented in the project consortium as a next step.

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About the Authors

Irmgard Wetzstein

Dr. Irmgard Wetzstein, MA is Research Manager at SYNYO and Senior Lecturer at the University of Vienna's Department of Communication. She holds a PhD in media communications and a master degree in mediation and conflict management. She has been working as a social researcher for several years and teaches academic courses in social research and media communications.

Peter Leitner

Dr. Peter Leitner is Head of Research at SYNYO. He holds two masters degrees and did his PhD at the Vienna University of Technology. He has extensive experience in the fields of web technologies, social media, collaborative systems and interactive frameworks. He is a lecturer at the Vienna University of Technology specialized in project management, software engineering and ICT strategy.

The Right to Information as a Question of Public Sovereignty

Ivo Babaja

Branitelja Domovinskog rata 2g, 22000 Sibenik, Croatia

Strojevina d.o.o.

ivobab@gmail.com

Abstract: *The paper approaches the issues of public participation and government transparency from the standpoint of public sovereignty.*

Starting with the premise that the sovereignty in modern democracies is public, equally shared between the citizens of the community, and perceiving the public administration as an information system, conclusion is drawn that this system should be oriented towards citizens as its ultimate information clients.

By conceiving public administration as a system that should ultimately report to its true owners - the citizens - it is possible to think about changes to public governance, not from the position in which it is now, but from the position in which it eventually should be.

This shift in thinking -from partial, technical improvements to value-based, comprehensive conceptualization of the goal of changes - is seen as an important step for coherent enhancement of the democracy, and, moreover, as a requirement for accepting contemporary political systems as true democracies.

Keywords: public sovereignty, information system, public administration, information client, authenticated access, privacy, publicity

Once in the past, only a small number of people claimed, and were considered by others, as the ultimate authority, sovereign, in a given area and within a given community. Today's political systems (at least, democratic ones) are based on the model of public sovereignty, where the citizens of the community equally share the supreme authority over that community. This principle is unquestionable¹, but the power and the rights of sovereign, in many aspects, remained in the hands of minority.

Modern information & communication technology development actually only uncovered and illuminated the fact that political processes and mechanisms that actualize the position of citizens

¹ For example article 2 of French Constitution (1958) states that democracy is government of the people, by the people and for the people. New Zeland's *Declaration on Open and Transparent Government* (2011) concedes that "the government holds data on behalf of the New Zeland public".

as the sovereigns, are completely ignored and neglected, often stagnant at the level they had in the ancient times of absolute monarchies².

Contemporary open government initiatives opened space to exercise some of the sovereign's rights that belong to citizens/people, but were unattainable by now.

The agenda here is to question how the public sovereignty can be exercised in the work of public administration, looking at this administration (government) as an information system.

1. Why Sovereignty Matters

The question is: why are we opening public administration, what are the reasons and what are the goals? It seems that this question remains somehow unanswered. For example, Open Government Declaration states:

"We acknowledge that people all around the world are demanding more openness in government. They are calling for greater civic participation in public affairs, and seeking ways to make their governments more transparent, responsive, accountable, and effective." (Open Government Partnership, 2011, p.1)

So, the reason is public demand. The goals are more elaborate:

"to promote transparency, empower citizens, make governments more effective and accountable ... with a view toward achieving greater prosperity, well-being, and human dignity in our own countries and in an increasingly interconnected world." (ibid)

Similar approaches are presented in the other documents concerning open government. For example, in Sunlight Foundation mission statement implicit is "...an understanding that openness and transparency, enabled by technology, lead to more democratic accountability, and that, on balance, this leads to better governance. It's an understanding that we share with a growing global community." (Drutman & Furnas, 2013.)

So it is not about exercising inherent right of citizens, but in the name of pursuing future benefits, that opening of government is required. The people demands are acknowledged, but just as needs, not as rights.

This may be related to the very foundations of the open government movement. One of the most important pillars of open government initiatives is its open source heritage³. The Open source community is of invaluable importance for open government development, because of its vitality, its high ethical principles, and its ability to deal with complex technology issues.

Open source (and open data) principles are based primarily on the ethos of free scientific and technical collaboration. This spirit of free, facultative relation to the subject, where the primary incentive is pursuit of future benefits and not some deep-rooted obligation, is in some way felt in contemporary open government discourse.

But the real improvement of political system must be founded on the rights, demands and obligations, not on the free decisions (of administration segments) to participate or not. This right, on which demands for open and participative government are founded, is the sovereign's right, based on the principle of the popular sovereignty.

² Similar, but non-IC related observations are long time present, for example in Chomsky, 1989.

³ Chignard, 2013.

If we accept the fact that citizens are real sovereigns of the political community, then this must be acknowledged in the concept of the information system of that community, by making these sovereigns ultimate clients of the system. Since public administration is the information system of the political community, conclusion is that citizens must be the ultimate clients of the public administration.

The question of the client is crucial for understanding and conceiving any information system. It is the question for whom the system works, not just declaratively, but in the sense of real subjects to whom it responds and reports. In public administration, therefore, these should not be government officials, but citizens.

Now, let's look at some of the issues that this approach opens.

2. From 'right to know' to 'obligation to publish'

In the terms of information processing, the sovereign has two basic functions: to supervise and to manage (direct), and the former function is requirement for the meaningful execution of the later.

Both of these functions are subjects of the open government's initiatives. The primary concern, however, is the function of surveillance, because it is implicitly considered that the progress in this area is not only possible, but also relatively harmless, compared to the far-reaching implications of the attempts to change the way the political decisions are made. So occupation with "right to know" is just logical and pragmatic approach, with goal of participation (second sovereign's role) always in sight⁴.

So, the citizens' 'right to know' what public government is doing is understood as one of the basic civil rights. But it is *not* the best approach, when thinking about open government in terms of information processing and popular sovereignty. To illustrate this, let's try to turn the tables for the moment.

Does the public government have the 'right to know' citizens personal data? Is this government's 'right to know' people's personal information somewhere proudly declared as an important feature of modern democracies? No. But governments have all the rights they need to access this data; there is no government's 'right to know', but citizen's obligation to publish and present personal data. There are public authority subjects that can demand a document containing personal data from a person to be presented, and failure to do can even lead to immediate legal punishment.

This information/communication relation is logically seen not as a government's information right, but as a citizen's obligation, and that is what it really is. To really have the full information about some process, and especially to control it, the abstract 'right to know' is not enough. The process itself, or some intermediate layer, must ensure that all relevant data is always available, so that it can be easily accessed when needed. So it is not *the right to know* but *obligation to publish* that should be demanded.

And therefore, the main question should not be : *How to best exercise our right to know?* but *What should a future open administration system (let's call it OAS) look like?*

Some reasonable propositions could be:

⁴ *Charter of Open Democracy (Chart de Démocratie Ouverte)*, *Open Government Declaration* by Open Government Partnership and *Open Data Handbook*, all point out the participation as one of the goals, even if no concrete obligation is made in that regard.

- To publish information as it is made. Instead of keeping it on local storage devices, public documents should be kept in OAS, on the Internet.
- The system should serve to exchange data between different public bodies and to allow public access at the same time. The same system and same information should be used for administration purposes and for public access.
- The system should be comprehensive; it should include both public and classified data, and it should include all of it, even if some high level of classification prevents data even to be on the Internet.
- Publishing the information in the OAS must be requirement for making that information official and legal.
- The system should track the record of the authorized requests that are made.

3. From abstract 'people' to real sovereign person

One of the mayor reasons for negligence of popular sovereignty principle is the fact that the words *popular*, *people* and similar are understood exclusively as general nouns, like some kind of abstract, general realm, separated from real persons and also notorious for being used in political, often demagogic speeches. But technology progress made it possible, at least concerning information processing, to serve individually every person, respecting all the rights and relations that the person enjoys. This is true even in regard to a large number of people, like that in population of nation states.

And so the right of sovereignty, that was only abstract, general and practically unusable on individual level, now becomes an inherent human right that must be respected, just as other universal human rights.

In the context of open government discussions, related and often-overlooked function of information system is the ability to track the users of the system. So, it is not only that informational content could now be immediately available to everyone, but it is also possible to know who is accessing the data, if authentication is required for access.

We know that, in regulated information system, the authentication is in any case necessary for authorization of access to classified data, and thus for access to public administration's data that is not publicly available. That is, of course, if the public administration system is regulated and organized at all. If it is, then there can be no exception to this rule.

This fact opens up several matters where citizens' sovereignty is natural to be exercised. First, for the sake of accountability, it is necessary to track all accesses to classified data. This is simply information requirement for imposing any accountability on data usage.

Then, it would be appropriate that every citizen has the right to know who, when and why accessed his personal data - every time it is accessed. And also to know what of his personal data exists in the system at all. The public administration system should be able to provide such information. But to do so, the citizen himself must be able to authenticate to the system.

And that is also potentially valuable path to exercise sovereign's right - the citizen's authenticated access. This authenticated access allows citizens to demand more information from public administration, than it is possible through the simple process of public revelation of data. Aside from citizen's personal information, some other data that is not suitable for public display

could be delivered this way, avoiding the inconvenience of public announcements. This way, a new realm for public insight is open, as access is not limited only to 'public' and 'classified'.

Moreover, personal authenticated access provides the citizen with the tool to exercise his rights. The authenticated request for data is not just a general appeal to make some information available to the whole world, but a legitimate information demand - from the sovereign's position.

4. Permissiveness and privacy

The absence of true sovereignty principle in today's regulations makes them ultimately inconsistent, because the sovereign's rights of the citizens are embraced only partly. One example can be the eligibility criteria for the right to access government (public administration) data. In many legal regulations this criteria is very permissive. In some national laws, the right to request information is granted to every legal entity or person, domestic and foreign alike⁵. In many of them, this right is granted at least to all local residents of the country, regardless of their citizenship⁶.

This makes the whole position of the contemporary "open government" more absurd. Not only that the information is provided on request, and without estimation of the work and resources that it may require, but also it is open to anybody. From technical (ICT) point of view, this is simply a wrong way to design the system. It is no wonder that allocation of resources for tasks related to right-to-information requests, and even more, for its meaningful usage, is one of the central problems that today's initiatives faces⁷.

In present situation, one can even imagine the possibility of Denial of Service (DOS) attacks to some country's administration system, just by sending numerous information access requests. For countries with the most permissive legislation, it would even be possible to conduct this attack from foreign country.

With system that is designed consistently with sovereignty principle, these contradictions cannot exist. Because – contrary to today's situation – it is clear for whom the system is constructed, i.e. who is its ultimate client.

One important question, concerning surveillance part of the sovereign's job, is the question about the boundaries of the privacy and the publicity. It is a rational demand that public affairs have to be made public and private affairs private. The exact route of the boundaries between public and private sphere is eminently political question that every political community must answer by itself, but it is the decision that is required for further meaningful policy making.

Simply put, it is not appropriate to share people's personal information with everyone. But this principle should be equally applied inside and outside public administration system. If the data is protected for public, it should also be protected within the administration, so that all non-authorized subjects in public administration are in the same position as general public. Within OAS, authorization levels and access tracking should regulate this issue. And so in this system it would not be possible to impose limitations on public access to data without imposing it also on

⁵ Croatian *Zakon o pravu na pristup informacijama* (2007)

⁶ New Zeland and EU regulations are examples.

⁷ Keseru, 2013.

administration access. This principle in reverse - if access is not regulated within administration, it cannot be imposed on public access - is also sane argument for deciding about data requests today.

5. Conclusion

To begin to observe the state administration as a system that is *primarily* intended for the citizens, and only then to politicians and administrators, is the approach that brings numerous benefits. It is the perspective that can perceive 'the right to know' as the crucial step towards greater goal of 'the right to decide'.

These steps are not only quirks in the information sphere of the public administration; they are opening new means of exercising public sovereignty principles, and should be comprehended that way. Since today's political systems are so far from really accepting citizens as true sovereigns, these changes are revolutionary in its very nature.

The problem with the present open government approach is that it proceeds from the existing system and then tries to improve it by introducing new elements into it. But it is hard to tweak a system that is in many respects centuries behind its times, and in doing so to achieve the desired result.

It is necessary to conceive a new system, and then to work top-down to find the best ways to evolve present government practices in the right direction.

Just like outdated computer programs reach a point when there is no sense in further trying to adapt them to work in new hardware and software environment, the same is true for the processes of the political system. In the long-living mechanisms, at a certain point, it is best to start anew, with a clean white sheet of paper, and a clear concept of how to rearrange things, based on previous experience.

This moment has now come for the political processes. This change is needed, not only because it brings future benefits, but because it is requisite to consider current political systems for what they declare themselves to be.

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About the Author

Ivo Babaja

Ivo works as an ICT and SME consultant in Šibenik, Croatia. He holds a Master of Science degree in political sciences, and for the last ten years has been preoccupied with problems of enhancing public governance in democratic societies.

Transparency, the Council of the EU and its General Secretariat

Simon Dalferth*

* Rue de La Loi 175, Brussels, Belgium, Council of the European Union,
simon.dalferth@consilium.europa.eu

Abstract: *This reflection addresses the transparency challenges that public institutions face in meeting the conflicting demands from a changing technological and social context and their stated mission.*

Keywords: transparency, EU, Council, open data

Disclaimer: The views expressed in this paper are mine only. They cannot in any circumstances be regarded as stating an official position of the Council or its General Secretariat.

1. Transparency and Transparency

Transparency in the understanding of open government is about the provision of government information in general. It is a broad concept and covers a wide range of issues: access to information, the opening up of decision-making processes and open data, to name but a few.

Such an understanding of transparency implies an opening up of the process of governing and deciding. Consequently, the role of public administration in structuring these processes must be highly proactive.

A narrower definition has been used in many countries to define transparency of public administration and decision-making through access to documents or information. This implies a more passive behaviour of public administrations as the provider of information in response to citizens' requests.

Technological developments in information technology exert pressure on public administrations to move towards the broader definition of transparency, while rules and structures are adapted to the more narrow understanding. This creates challenges for those institutions involved in putting transparency into practice. I will illustrate this using the Council of the European Union as an example.

2. Technological challenges to government transparency

As many have recently noted, transparency has become a modern topos in thinking and describing the relationship between citizens and the state (Han, 2012). In particular, transparency has been heralded as a means to improve control over political institutions and bureaucracies (Erkkilä,

2012). By making information available, so the assumption, the public can see whether representatives behave according to their promises. Transparency therefore is a transparency of outcomes, or what Mansbridge (2009) calls transparency of process. The desire for such transparency in process can be linked to the decreasing trust in government in liberal democracies. In this view, transparency acts as an accountability instrument (Mansbridge 2009) through which representatives (elected officials, but also non-elected bureaucracies) can be held to account. When distrust is the major driving force, there is no area of institutional activity, which would not benefit from “sunshine”. In the same context, some conceptualisations of “participatory democracy” focus not primarily on the constructive side of deliberative inclusion, but on participation by citizens through control.

This conceptualisation of transparency has consequences for the types of information that are requested by the public, including civil society organisations. Over the recent years a number of projects have been developed which combine the possibility to use available information for transparency with the increasingly decentralised structure of interpersonal communication networks. These include projects such as abgeordnetenwatch.de or theyworkforyou.com. What is common to these projects is that they want to allow everybody to be able to “find out what your MP is doing in your name” (theyworkforyou.com).

What makes these projects powerful is not only their ease of use, but their interactivity and shareability. Everybody can contribute to the content of these sites, and, more crucially, can use services, such as Twitter or Facebook to spread information to a larger public. The information provided through such pages can be the starting point for public deliberation on an issue. This public then has the possibility to engage either with the platform or with the person concerned directly. In combination this can be a very powerful tool to hold (particularly) elected representatives to account.

On another trajectory, and in line with an increasing demand of quantifiable information for new public management purposes (Erikklä, 2012, 15), the open data movement has taken off, in particular with the increasing ability of computers and networks to handle such often voluminous data sets. One underlying rationale is that the real activity of public administration can be quantified and that data points contained in data sets are a means to exercise control. In addition, the provision of public data — in theory — allows everybody to analyse the data with a view to their own interests. This provides opportunities for all interested parties to apply their own view to the available information. These developments thus establish increasing demand for public administrations to provide information in an easily-accessible format.

3. Transparency in the EU

The European Union (EU) has committed itself to “conduct its work as openly as possible” (Art. 10(3) in the Treaty on European Union [TEU] and Art 15(1) Treaty on the Functioning of European Union [TFEU]). The second element of transparency, in particular in the context of participatory democracy, is the commitment to engage with civil society (Art. 11 (1) TEU). In the following paragraphs, I will focus on the first element of transparency only.

For the Council of the European Union, i.e. the institutions representing the member states, this implies two fundamental aspects:

Access to documents: each citizen of the Union has the right to request access to Council documents.

Openness of Council sessions: the Council meets in public when it deliberates and votes on legislative acts; and

In 2001 the European Parliament and the Council adopted Regulation (EC) 1049 regarding public access to European Parliament, Council and Commission documents, which still is the applicable legal framework. The institutions are thus applying the “narrow” understanding of transparency as sketched out above. I would argue that within that frame of reference, Regulation 1049/2001 is actually rather far-reaching, in particular as the exceptions to public access to document on legislative decision-making have been interpreted by the Union courts rather narrowly.

Naurin (2013) argues that the Council is rather transparent in its work, but that its efforts do not achieve the intended effect of providing legitimacy. It has a rather strong record on transparency on process, as meeting dates and agendas of committee meetings are public at all levels. Similarly the minutes of many meetings are publicly available as well.

The element that seems most clearly missing is transparency through debates, as can be observed in parliamentary debates. But the Council provides elements of this type of transparency through the live broadcast of deliberations on policy proposals. Furthermore, the negotiating positions (before the actual negotiations) are also available through the media. The monitoring of twitter hashtags, such as #EUCO in particular before meetings of the European Council, will provide an overview of publicly stated positions by (most) negotiating actors.

4. The Council of the European Union and transparency

The Council has almost traditionally been called the most intransparent institution of the EU (Hix, 2008). Nonetheless, it has over the last decade, in response to changing treaty requirements, implemented a number of measures aimed at improving its transparency. Since the mid-1990s successive European Councils and Councils have adopted positions to increase transparency of the Council as an institution and of its decision-making process. The Amsterdam treaty mentioned transparency as a means to strengthen the legitimacy and democratic nature of the EU and added the principle of openness, which extended and specified these general principles.

The Council is in a certain sense a non-permanent institution. A lot of its work is conducted in its preparatory bodies. The Committee of Permanent Representatives (Coreper) meets regularly, as to issue-specific working parties. National representatives at working level mostly meet ad hoc in these meetings. The institution in the legal sense, namely the Council consisting of ministers of the member states, usually only meets for a couple of hours. Furthermore, the Council meets in nine different configurations (e.g. Agriculture, Justice and Home Affairs etc.), which rotate and thus create limited permanence of participants.

What is permanent, however, is the General Secretariat of the Council (GSC). It is a structure which has been a core element in ensuring the functioning of the Council. Its task is to “assist the Council” (Art. 240 TFEU). In particular, its role is to support the decision-making process by organising and preparing meetings and by supporting delegations in the work within the Council. In this context, the effectiveness of the decision-making process, i.e. obtaining outputs and results of the processes, as well as its efficiency, i.e. achieving results with the fewest possible resources, are central parameters on which GSC performance can be measured.

But in assisting the Council, its General Secretariat also acts to fulfil its transparency obligations and commitments. It has established a directorate “Transparency” within the Directorate-General

of Communication and Transparency. It is aptly placed, as transparency is to a large degree a question of communicating information about the activities of the Council. Within the directorate a unit is responsible for access to documents and legislative transparency. Members of this unit respond to all requests for access to documents directed at the Council (and the European Council), as under Regulation 1049/2001 the first reply to a request is an administrative decision.

In addition, members of this unit implement what is called “legislative transparency”. This is in particular the broadcasting of Council sessions where member states set out their positions on a particular policy proposal and the additional provision of structured metadata for these streams. Members of the unit also display voting outcomes when the Council has taken a decision on an act. Finally, they ensure that documents of legislative files are made available to the public once an act has been adopted.

The other directorate within the Directorate General for Communication and transparency is for “media and communication”. In light of the wide definition of transparency sketched out above, this directorate also fulfils an important function to contribute to the transparency of process of the Council. The press service is the single source of official information about the activities of the Council. It engages with EU correspondents in and beyond Brussels and provides up to date information about developments. This is done on the one hand through the traditional means of press work, such as providing background briefings, but also by engaging with their target groups directly and more permanently through social media e.g. on Twitter (@EUCouncilPress; @EUCouncil @EUHvR) or on Facebook (/eucouncil and /hermanvanrompuy) and by providing dedicated communication products and reliable information on the websites.

There is a tension between the two roles the General Secretariat has to fulfil. As a communicator to the public, be it in the formal context of transparency, be it in the context of communication more broadly, the GSC is subject to the pressures emanating from a changing media and societal environment. The interlocutors (civil society, journalists, online audiences) are demanding a reaction in line with the developments sketched out in section 1. The GSC as the sole communicator and direct contact point with the general public also has an interest in providing such services.

At the same time, the GSC is an agent supporting the Council. In this role, the GSC has an interest in organising the decision-making process as efficiently as possible. Transparency implies increased costs where requests have been replied to and where established work processes have to be changed.

Nonetheless, transparency and decision-making support go hand in hand. The GSC has been undertaking several measures to balance out the two roles. One important element is to make more information about processes available to the public. This can take numerous forms. Information on meetings is already available, but may be difficult to find. The GSC is working on improving available metadata so that available information can be better structured and better searched on the Council Public Register and website. The responses to requests for access to documents provide information for the applicant on the context of the documents when access to (parts of) these documents must be refused. The GSC also undertakes every effort to make communication as clear as possible in this context.

Interinstitutional cooperation is also increasing between the Council, the Commission and the European Parliament in the organisation of said metadata. This should in future allow the provision of compatible information on legislative files which will be brought together in a single

location.

The GSC is exploring the possibility of providing certain raw information to the public. Currently evaluations are undertaken to identify possibly available data and to see how that data can be made available in the most usable format.

Finally, the GSC is engaging with its target groups more closely. The objective is to engage in a conversation with its counterparts. On the one hand, the goal is to provide all available information in the best possible and most accessible way, taking into account existing budgetary and legal constraints. This goal must, however, be achieved without compromising the core function of the GSC, namely to assist the Council in its capacity of a decision-making body. This function will always require phases and times when information on substance cannot be made publicly available. The Council must remain able to agree internally on a common position and must be able to take that position into the negotiations with (mostly) the European Parliament. In other words, the GSC is trying to make the Council as transparent as possible to protect that must be protected as much as possible. Transparency will focus on better information on processes and stages of negotiations, but will not open up negotiations among member states themselves.

5. Closing remarks

This paper is a personal thought in progress. It aims to provide arguments in the ongoing discussion on the benefits and limits of transparency in a supranational and transnational setting. I have tried to describe the measures undertaken by the General Secretariat of the Council to reconcile its two roles of supporting negotiations and providing transparency. The measures I describe will not change the Council significantly, but will hopefully make the Council more understandable and thus more transparent in process. What no measure taken at the EU institutional level can achieve, however, is to address the lack of a European public sphere where public policy debates transcend borders.

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About the Author

Simon Dalferth

Works in the directorate for transparency at the General Secretariat of the Council of the European Union in Brussels. After studies at Freie Universität Berlin, Charles University Prague and Sussex University in Brighton, Simon obtained his PhD in Integrated Social Sciences at Jacobs University Bremen. Subsequently he has worked on eParticipation with the European Institute for Public Participation and on higher education in a European context. He lives in Brussels and is online @sdalferth.

Refining public sector services by applying innovative technologies

A case study using text mining and document clustering

Bojan Cestnik*, Alenka Kern**

* Temida d.o.o. and Jozef Stefan Institute, Dunajska cesta 51, 1000 Ljubljana, bojan.cestnik@temida.si

** The Housing Fund of The Republic of Slovenia, Poljanska cesta 31, 1000 Ljubljana, alenka.kern@ssrs.si

Abstract: *In this paper we present an approach that is based on text mining and document clustering that can be used to organize and represent knowledge stored in huge amounts of documents. The motivation for our research is the need to increase innovation in private as well as in public sector in order to better cope with problems spawning from economic crisis. We show that the technologies of text mining and document clustering used in the proposed approach can also be used to support the process of creative problem solving in public sector services domain by combining information from different disciplines.*

Keywords: innovation, knowledge representation, ontologies, document clustering

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Using software tools in daily business routines improves the quality and speed of services both private and public sector. Such progress on one hand advances standard of living, creates prosperity and inspires innovation, but on the other hand also increases complexity of everyday endeavors. With the emergence of text mining technologies, large data sets of documents can be straightforwardly and efficiently processed to semi-automatically construct structured document clusters. Resulting document clusters can be viewed as concepts (classes, topics) that can be used to form the domain ontology. In recent years, many tools that help constructing ontologies from texts in a given problem domain were developed and successfully used in practice. One example of such tool that enables interactive construction of ontologies from text documents in a selected domain is OntoGen (Fortuna et al., 2006).

Organizations have always valued innovative employees (Bekkers et al., 2011). The importance of innovative solutions has been widely recognized also when solving problems originating from economic crisis that the global society is facing nowadays. For example, in (Sørensen & Torfing, 2011) the authors analyze and compare innovation in private and public sector. Even though they admit that the need for innovation is much more important drive of success in private business, they also identify several factors for improved interest for innovation in public sector.

One possible solution for stimulating such innovative processes might be to better use several computerized tools that are designed to support human innovation. In this paper we describe how new technologies can be used to more efficiently explore vast amount of documents from various data sources. This paper is organized as follows. In the second section we give a short overview of the methodology used in the study. In section 3 we discuss the presented approach, emphasizing also broader themes that can be used to raise innovative contributions to the field.

1. Materials and methods

In this section we present the methodology that relies on text mining and document clustering and is regularly used to sensibly organize and represent knowledge stored in huge amounts of documents in a governmental organization. Knowledge discovery by combining text mining and clustering techniques can serve as a tool for addressing the information overload problem. Clustering methods can reveal the structures of implicit characteristics and classes. Clustering enables building up structured networks of interconnected subjects by exploring associations among several subjects and linking them through relevant relationships.

The process of forming clusters of documents from a set of document and naming them by keywords can be considered as creating topic ontology in a domain under investigation. Ontologies include descriptions of objects, concepts, attributes and relations between objects. They conceptualize and integrate the domain terminologies that can be identified in text. Therefore, ontologies reflect the content and the structure of the knowledge as it can be recognized through the use of terms in the inspected collection of texts. Note, however, that the documents that are used in the construction of topic ontologies must be carefully selected before they are processed and considered for analyses.

Ontologies for a given domain can be constructed manually using some sort of language or representation. Manual extraction seeks common sense concepts and organizes them in hierarchical form. Since manual ontology construction is a complex and demanding process, computerized programs have been constructed that support semi-automatic construction of ontologies from a set of documents. Based on text mining techniques that have already proven successful for the task, *OntoGen* (Fortuna, 2012) is a tool that enables the interactive construction of ontologies from text in a selected domain. Note that *OntoGen* is one representative of the tools that help constructing ontologies from texts. With the use of machine learning techniques, *OntoGen* supports individual phases of ontology construction by suggesting concepts and their names, by defining relations between them and by the automatic assignment of text to the concepts.

OntoGen allows users to make a more complex ontology in less time, but still have a full control over whole process by choosing the suggestions system gives (Fortuna et al., 2006). A user can create concepts, organize them into topics and also assign documents to concepts. A topic ontology constructed with *OntoGen* from a subset of abstracts of papers presented in CeDEM 2011 conference is shown in Figure 1. The topics represent logical divisions (clusters) of documents and are labeled with the most descriptive words from the documents grouped in each cluster. The topic ontology from Figure 1 can be regarded as a “bird’s eye view” on the structure of papers from the target domain, providing a structure of folders for the input set of papers. In such way it can enrich our prior knowledge about the domain, motivating creative thinking and additional explanations of the constructed concepts. For example, three top-level clusters are labeled as “data,

open, government", "election, voting, systems", and "participation, social, online" respectively, suggesting the logical division of the input papers into three groups.

The input for OntoGen is a collection of text documents. Documents are represented as vectors, which is often referred as Bag of Words (BoW) vectors, which together are often referred to as a vector space model. In the BoW vector space model, each word from the document vocabulary stands for one dimension of the multidimensional space of text documents. This way, the BoW approach can be employed for extracting words with similar meaning. Therefore, it is commonly used in information retrieval and text mining for representing collections of words from text documents disregarding grammar and word order, which enables to determine the semantic closeness documents.

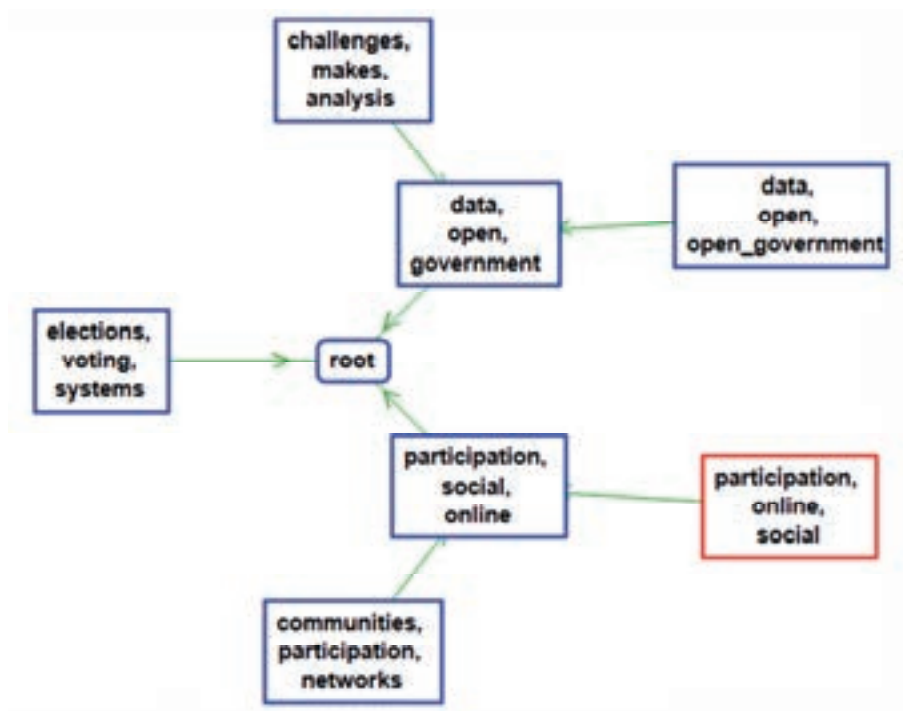


Figure 1: Topic ontology constructed by OntoGen from abstracts of papers of CeDEM 2011 conference.

Similarities between two documents can be defined as the cosine of the angles between the two corresponding vector representations. The cosine similarity measure is used to order the documents according to their similarity to the representative document (centroid) of a selected domain. Content similarity is measured using the standard TFIDF (Term Frequency Inverse Document Frequency) weighting method (Fortuna et al., 2006). By focusing on the construction of topic ontologies the OntoGen tool helps detect the document topics, and clusters the documents from the input collection according to these topics. Clusters can be viewed as nodes in topic ontology. When suggesting new concepts, OntoGen uses K-means clustering technique (Jenz, 2003) and SVM keyword extraction method (Ben Ayed et al., 2002). Concept naming suggestion by

keyword extraction facilitates the hierarchical organization of clusters by helping the user to evaluate the clusters of documents.

2. Discussion

State administration is constantly exposed to public criticism as it is expected to fulfill the needs and expectations of its clients – the citizens. To discuss the ideas elaborated in this paper we deliberately took a more broad narrative form for discussion. Instead of narrowly sticking to “numerical” facts and findings from previous sections, we broaden our perspective to address also softer intangible themes related to innovations in public sector. The novel approaches and results that are described in previous sections are taken as illustrative examples of how to improve the innovative climate within public administration. The fundamental line of reasoning behind the discussion is that by improving innovative climate in public sector its employees are better stimulated to find creative ways to refine the services offered to citizens.

Today's citizens are more than only clients in the process of service creation, as they are becoming active critics with the right to participate and to voice their opinion, through which they influence not only the quality but also the very way in which public e-government services are provided. If we want the state administration to become successful and efficient there needs to be a cooperation of everyone, the leadership – which has to cooperate and offer strong support, and the rest of the employees – which have to be suitably qualified and motivated. The improvement of qualification has to address all levels of personnel because of better system understanding and diminishing of resistance to changes. The same holds for motivation which incorporates selected measures for guidance of individuals to a specific goal. Qualification and motivation of employees are becoming critical success factors for business achievements in the future, replacing profit, to which we were accustomed till recently, because profit typically comes as a result of past activities and thus is not accurate factor when predicting success rates in the future. That is exactly why experts involved in human resources are becoming more and more aware of the importance of employees as one of the key resources in the organization.

Part of the innovative mentality is brought into the organization by its employees and it reflects their individual characteristics, educational system, social climate and never the less environmental culture in which the organization operates. A large part of innovative mentality is crafted in the organization itself and is presented in the form of innovation climate and the support for innovation in the organization.

Research of corporate climate in an organization typically detects relevant markers that indirectly suggest actions for establishing an atmosphere that encourages innovation in individuals and groups in the organization. Results of our analysis have shown that there is a larger accent on the work orientation and innovation support in the private sector compared with public administration, but most of all there seems to be a larger accent on individuals and on finding new paths to problem solving. The results have also shown that perception of innovation climate depends on satisfaction with the work being done by the individual and that perception of innovation climate doesn't depend on the size of the organization (Bekkers et al., 2011).

The approach described in this paper stimulates the rise of innovative ideas of employees at various levels within public administration. Even though innovation in government has often been considered as a paradox, its importance has been widely recognized in recent studies (Sørensen & Torfing, 2011). State administration in the modern society is becoming ever more important as a

decision maker and influences the entire social life, as does the life and situation of individuals. "The intuitive mind is a sacred gift and the rational mind is a faithful servant. We have created a society that honors the servant and has forgotten the gift." are the words believed to have been said by Albert Einstein. Based on our experience with of the applied methodology presented in this paper we believe that the results might foster intuitive thinking in organizations.

Innovation and creativity are more than just using new technologies in public administration. The process of reforming state administration is already happening and is considered as a continued process of business improvement, but the reforms should include a clear definition of a quality system from the starting point instead of happening even without any quality systems. Hope lies with the change of regulations, which are by all means the foundation of every state and its administration, but the hypertrophy of regulations is paralyzing the efficiency of administration and is diminishing its ability for reacting to changes.

Number of research papers and the practice itself demonstrates the limit of monetary reward system and its short term effect on employee motivation, which is a big meaning for public administration. As monetary incentives in public administration are very limited, the leaders' hands are often tied regarding means of motivation (Alrawi, 2011). The reward system in the public administration is therefore based on stiff rewarding models which don't stimulate those prepared to work better and even more. Wage and reward system in the public administration isn't suitably motivating and it doesn't include factors which would stimulate the employees towards better work. It doesn't give employees feedback information regarding their success or failure either.

If public administration desires to become efficient and successful it must first ensure an adequate material incentive based on the work of employees. The fact is that employment in the public administration remains fairly uninteresting for a young graduate because of fairly low wages and the inability of quick promotion. That presents the reason why many young people rather find employment in the private sector where they can prove themselves with their innovative ideas and are more adequately motivated and rewarded for them. Young experts, unburdened with negative experiences, are excellent innovation potential that often remains unexploited because of their lack of knowledge, skills and support for successful realization.

3. Conclusions

The key role of the innovation and change in public administration is in the hands of employees. According to the traditional values of state official culture the creation of an innovative environment for new public management offers a first class challenge. Changes and innovations are easier to develop in an environment where employees are ready to activate themselves, take responsibility, face mistakes, learn quickly and of course rejoice with their progress (Alrawi, 2011).

"Creative climate" is an important factor influencing productivity within a group (Puccio et al., 2006). The climate is considered creative when group members encourage each other; make unusual, original and bold suggestions and ideas. On the other hand, the climate considered non-creative usually lacks the feeling of freedom and uniqueness. In order to be able to make concrete and far fetching decisions complex matters have to be creatively simplified in this sense.

The long-term success of companies and public administration services seems to depend mostly on knowledge management techniques. In order to exploit existing but often overlooked

knowledge that is hidden in public information we investigated the potential of two information science disciplines, namely the text mining and document clustering. The use of OntoGen enables a quick insight into a given domain by semi-automatically generating the main topic ontology concepts from the domain's documents. With this tool we can first efficiently generate top-level domain topic ontology of concepts and thus obtain a general overview and understanding of the domain.

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About the Authors

Bojan Cestnik

He is the managing director of Temida d.o.o., a researcher at the Department of Knowledge Technologies at the Jožef Stefan Institute in Ljubljana, and associate professor of computer science at the University of Nova Gorica. His professional and research interest include knowledge based information systems and machine learning. He has been involved in several large-scale software development and maintenance projects.

Alenka Kern

She is the Head of the Sales and Marketing Department at the Housing Fund of the Republic of Slovenia, public fund. She is responsible for several large projects that are carried out by the Fund. Her professional interests include human resource management and business continuity planning. She is the author of several papers presented at both national and international conferences.



Edinburgh Council Whistleblowing – A Petition for Change

Pete Gregson*

* Kids not Suits, contact@kidsnotsuits.com

Abstract: *Changes at Edinburgh Council reflect the influence of the Labour Party on the governance of the city, with new opportunities being created for citizens to participate through a Petitions Committee. The internet encourages petitions to move beyond neighbourhood confines to embrace the interests of a city-wide electorate. The author has made use of this mechanism to propose an independent whistle-blowers hotline which will, crucially, only be accessible to the leaders of the political groupings at the Council. This will help overcome a climate of fear amongst Council staff about disclosing information and should help prevent future scandals. It is a model that would work for any public body employing a number of staff.*

Keywords: local government, petitions, whistle-blowing, mismanagement, staff, fear, moral purpose

Labour has implemented exciting new governance arrangements since it returned to power in Edinburgh in 2012. New Committees were created last year with the “Governance, Risk and Best Value Committee” and “Petitions Committee” standing out. In a key change from previous arrangements, these Committees were to be led by members of the opposition. The former by a Conservative Councillor, the latter by a Green.

The Governance, Risk and Best Value Committee replaced the previous Audit Committee with a strengthened and wider remit in relation to both financial and operational scrutiny.

The Petitions Committee¹ was set up to consider petitions from the public. As the Council website says:

“Taking part in or creating a petition is one way that individuals, community groups and organisations can get involved in what the Council does. It allows people to raise issues of public concern and gives Councillors the opportunity to consider the need for change. Our aim is to make the Council as inclusive and accessible as possible.”

Petitions can be submitted online as an e-petition or in writing, and Councillors determine the appropriate action to take. Petitions are declared valid once they have attracted 500 signatures.

¹ The only other Councils in Scotland with such a Petitions Committee are North Ayrshire, which has a Scrutiny & Petitions Committee and Scottish Borders which has a Petitions Committee. At the Scottish Parliament, there is the well-used Public Petitions Committee, which has been in service since the Parliament was established in 1999.

Citizens can sign online at the Council website or the petitioner can collect signatures on paper. Each must be “validated” by checking the person’s name off on the electoral roll.

These new Committees are helping make the Council more responsive to residents and better at dealing with mismanagement. In fact, the Governance Committee has become equivalent to a “Scandals” Committee, since it devotes much of its time to managing the impact of the City’s scandals.

1. A Petition to Committee

I submitted a petition to the Petitions Committee entitled “A Safer Way to Report Edinburgh Council Mismanagement”. It called for an independent whistleblowers hotline for staff to be set up at the Council, to which only senior Councillors would have access.

I am going to explain why we need this better system in place for staff disclosures. I believe my Petition will save ratepayers cash and improve Edinburgh Council’s reputation. It will help make our city safer, with greater levels of public trust and confidence in how the Council goes about its business.

My proposal could be implemented in any local authority or publicly-funded body. I am part of Kids not Suits, who support this Petition and who campaign for better government.

I will provide evidence that whistleblowers in Edinburgh Council continue to be treated in the way that the bringers of bad news always have been in authoritarian cultures. They are, metaphorically these days, taken out and shot, when they should be learned from and congratulated.

2. Sunlight is the Best Disinfectant

Why so brutal? For many years, as might be expected of any large bureaucracy, there have been dark corners of poor management. Sadly, it seems that some Council managers respond to whistleblowers that draw attention to poor practice, by trying to belittle or discredit them, whilst covering up the problem.

This behaviour is only human: managers want to fix the problem on the quiet, in order to avoid damage to the reputation of themselves and their institution.

That is not good enough, because, in an American saying that is particularly apt, sunlight is the best disinfectant. Openness is the best guarantee not just of speed and urgency in dealing with failings in any Council, but it is also the best way by which the lessons learned from mistakes can be spread through the system.

If staff are unhappy about a management issue, what’s the safest way to disclose? The idea of an independent hotline is not radical. Half the local authorities in the UK use one to allow staff to anonymously report concerns. I know that Edinburgh, too, plans the same. [Because, I think, I have been campaigning so loudly through many channels since October 2012]

But the issue before us is about who will access this hotline. My fear is that under existing plans the contents of these complaints would be relayed to the very same council officers, their friends and superiors who may be the subject of the complaint. With unpredictable results.

3. Only Elected Members should access the Hotline

My proposal is that only elected members should hear the complaints, and then agree amongst themselves on how best to proceed. I believe that this solution gives the greater openness and that this principle should apply across Council services: daylight is the best defence of the vulnerable.

There is already a Council Policy on Public Interest Disclosure. The present policy demands that staff disclose up the food chain: line manager, senior manager, etc. My case will show this Policy is

not fit for purpose. The Council is, as I've said, setting up a whistleblower hotline. But let's be clear that the one that's being proposed will be quite unlike mine- and I would like to lay out my reasons as to why my proposal is better.

To do this, I need to review two cases that took place over the past 10 years. All information that follows is in the public domain and has been reported in the press. These tales are salutary, and intrinsic to my claim that the Council's planned hotline may not be fit for purpose.

Everything regarding this matter is about the management of risk. And whistle blowing is a hugely risky activity. Risky for everybody.

4. Seeking Support for the Petition

We walked Edinburgh streets to collect signatures for the Petition. The more people who told us their concerns and complaints about the council, the more strongly we felt that what we were doing was necessary to try and bring about change.

Every council worker we spoke to was extremely encouraging and backed our campaign but would not sign the Petition for fear of the repercussions this may have had if their names were discovered by council bosses. They feared they would lose their jobs.

What also concerned us from talking to members of the public was their lack of faith in their council. This lack of faith was due to recent scandals, the most predominant being the trams², but with the added embarrassment of Mortonhall³ and the Property Conservation Scandal⁴.

My Whistleblower's hotline would have prevented the tram fiasco and could have cut some of the mismanagement that led to delays of completion and extra costs. If staff at Mortonhall had been able to report that they were being told to lie to parents, it could have prevented this too from

² The first scandal dates back to 2008 and was over the City's new tram route connecting the airport to the city centre (it was meant to go onto Leith and Granton, but the money ran out). Costs have rocketed, according to Tramfacts, from the original budget of £545M to an expected final total of £1,196M and this amount will not see the whole original scheme built; only a fragment of it. The endless tram construction works are running for 3 years longer than expected and many businesses along the route have gone bust, because customers can no longer get to them, because of the roadworks, which are immense. It is not now expected to conclude until January 2014.

³ Our city's most recent scandal of December 2012 saw the practice of staff burying cremated babies in mass graves in a field behind the Mortonhall Crematorium exposed. As has been reported in the press, staff were called upon to lie to parents about the whereabouts of their child's remains, apparently by their bosses. This practice had been going on for 45 years and thousands of bereaved parents have been shocked and angered by the news. The on-going investigation raises yet more questions over whistleblowing since crematorium staff are justifiably terrified of coming forward.

⁴ Until recently, 3,000 statutory notices were raised yearly by the Council, where owners reported problems with the common areas of their (shared) tenement buildings. The Council could then step in and instruct the repair, charging each resident for their share of the work's cost. Until recently, the Property Conservation section dealt with 40,000 owners per year. The Statutory Notice Information website reports there have been serious failings in the Council's management of many projects. And, consequently, huge numbers of Edinburgh citizens were being asked to pay for (or have already paid for) work that was not necessary. Work that was not done properly. Work that was not instructed. Work that was not reported to them. Work that was not done at all. The Council's Report of the Internal Audit of the Statutory Notice Process spells out the problems. Then, in December 2012, Audit Scotland's "Edinburgh Council Annual report on the 2011/12 audit" was published. It noted that due to dissatisfaction from owners for work completed but not paid for, the Council has already paid the contractors- so now carries a debt. There could be overall costs of £40 million relating to statutory notices.

being the scandal it became. What is also clear is that my hotline would definitely have stopped the Property Conservation scandal.

Supporters for the Petition came from every shade of the political and social spectrum. From the leader of the Conservative Group, to a Labour MP, to the SAND's Lothian charity [working with Mortonhall parents], to Edinburgh Residents for Statutory Notice Reform [fighting for compensation for Property Conservation victims], to Copymade [a printing business infuriated by the Haymarket Tram works, who sponsored the Petition publicity fliers]. There has been practical help on the Petition campaign stalls from volunteers with Occupy Edinburgh and Edinburgh and Lothian Purple People. All working together to help make the Petition a reality.

A most astounding rainbow coalition of left and right, of anarchist and capitalist, socialist, green and liberal. All helping to blow the winds of change at Edinburgh City Council. All angry at the mismanagement there. All seeking change.

5. Whistleblower 1- Community Learning & Development

The first tale relates to a Council Community Education worker. His case is outlined in two news articles from the Workplace Law website and the Times Education Supplement.

This worker, back in 2002, learned of the disappearance of almost £400,000 of Council cash from the coffers of a Council arms-length body: the Edinburgh Lifelong Learning Partnership. He wrote an anonymous e-mail to the Council Leader, Cllr Donald Anderson. The Leader passed this onto Council officials, who traced the e-mails and the worker was subsequently disciplined in 2004.

To clear his name, he borrowed £30,000 to hire a QC and he battled his way through an Employment Tribunal. Eventually he won his case and the Council was forced to pay £5,000 compensation. In a full written judgement, tribunal chiefs strongly criticised the council for concentrating on finding the sources of the claims rather than investigating them.

After the Tribunal's decision, at a full Council Meeting, Cllr Anderson said this:

"The Council has been found at fault in a very serious finding -at that employment tribunal -for the impact of its actions on an individual and we have to do what we can to put that right and make sure we do take the right decisions, for the right reasons, on all of these issues, in future." (Council minutes, 2006, p 39)

But no changes were ever made as a result of either this affair or the Leader's statement. My case is that things are no better now.

This worker thought that the person about whom he complained was so powerful that to disclose according to Council Policy was too dangerous. And if we look at what happened to him after he blew the whistle, he was right to be. The missing £400,000 was never tracked down but he was. And he suffered hugely for it. He spent years seeking justice and suffered a most miserable, stressful, expensive nightmare.

6. Whistleblower 2- Property Conservation

The Council did not learn anything from this debacle, as became clear when our second whistleblower came a cropper. This was the man who blew the whistle on the Edinburgh Property Conservation Scandal and was subsequently sacked.

The Property Conservation whistleblower first started raising concerns in 2006 but yet nothing was done until 2011 when the service was suspended. That 5 year delay will cost the city up to £40M. This will go into our rates bills. Every single tax payer in the city will pay their share – an average of over £170 each, to remedy the mess.

This is not just about money; many residents have suffered immense stress and are still suffering as they fight their case with the Council's Investigations Team, which is slowly dealing with almost 1,000 cases. Many lost their life savings.

Residents want to have faith in the knowledge that their local government is open and mismanagement issues are not being kept hidden in the dark, with citizens having to pay for these mistakes.

The legacy of this hotline for council staff and councillors will be to build trust with citizens.

To understand the magnitude of this case, I draw your attention to the book "Diary of a Whistleblower – The Edinburgh Property Conservation Scandal". It is being published on the Edinburgh Sucks website and anyone with an ounce of compassion cannot fail to be shocked by the treatment this whistleblower has suffered. This diary tells the story of this man's life, since the day he started at the Council in 1989, up until the present day. He was dismissed last year on a charge of leaking a password; a charge which he contests.

The diary talks about Mortonhall and the whistleblower's experience of working there during the 90s and how council staff were asked to lie to parents. It also reflects his battles since 1989 to do something about the misallocation of Council contracts and the bullying he suffered as a result. He is currently awaiting an Employment Tribunal and he believes that when that concludes in June his innocence will be proven and he will be able to start getting his life back on track.

The first chapter of this diary was only recently published on the Edinburgh Sucks Website. By reading this diary it becomes absolutely clear as to why this Petition must be implemented fully.

The remaining chapters can be read by visiting the website. I should stress that contractors aren't identified and most names have been changed.

You'll see how this man has suffered in his 24 years at the Council for reporting mismanagement. Yet over that time, none of his concerns about Council procurement and training were addressed.

The diary is about how internal Council processes fail again and again, most spectacularly in this case. Councilors NEED to know about mismanagement and this hotline would do that.

7. Member-officer relations protocol

The Property Conservation whistleblower lives in the ward of the Council Leader, had been to see him and was in e-mail and phone conversations from the day he was suspended, in fact. But Councillors try not to get involved in staffing matters, so the man was sacked all the same.

But yet these Councillors are known as the City Fathers are elected to run this city and if staff see something bad is happening, they naturally expect them to take an interest. But the Council's member-officer relations protocol forbids staff from raising matters relating to their duties with them. Councillors interpret this as meaning they are forbidden from getting involved in either the matters staff raise or their wellbeing at work.

Council Leaders past and present feel they owe their loyalty principally to the Council's Chief Executive and the Corporate Management Team. But I fear the impact when they take their confidences to these officials.

8. Summary

It's hard to explain the pain and misery that has been wrought on these two whistleblower's lives by the investigations they have suffered. Years later, they are still recovering. I have spoken to them both, and they have been through hell. The Property Conservation whistleblower is facing £40,000 in legal fees to date.

Both suffered months of bullying by managers for their actions. Their mental health has suffered: the battle consumes their lives. Suicidal thoughts prevail. Many workers know of this. Misery and penury are no incentives for staff to report mismanagement.

To reiterate, the whistleblowing hotline that the Corporate Management Team are about recommend in May will help solve the problem, but will not go far enough. My more radical

proposal is that no Council staff get access to the hotline. The only people who would access it would be politicians: leaders of each of the political groups at Edinburgh Council. I think the Councillors will then be able to act on concerns, long before they read about them in the newspapers. If necessary, they can frame how matters might be referred onto senior managers.

My Petition is about the management of risk. It may ultimately sit best with the Governance, Risk and Best Value Committee. It was they who took the Audit Scotland report of last December, which I believe misled them into thinking that the existing whistleblower policy was more or less fit for purpose.

This was on the same day that the Mortonhall scandal broke. If my hotline had been in place then, I suspect that crematorium staff might have saved a lot of legal fees for Dame Eilish Angioli, who is to investigate the scandal. She may yet appreciate its implementation, since callers would retain their anonymity and no other staff would access their disclosures. Mortonhall parents may get their answers sooner as a result.

I maintain that this Petition is all about the management of risk and the challenge of ensuring good governance. We need to build trust in a system that will work.

My proposal will lead to a safer Council, more trusted by Council staff, and more respected by the ratepayers. Because it gives Councillors, the people we elect, the power to intervene.

The Petition needs to be implemented for the sake of staff and for the sake of citizens and above all, for the sake of Edinburgh Council's reputation. Indeed, all I have outlined above could give other public bodies cause to consider the approach I espouse. It is simply a safer way to deal with mismanagement. Either the Board of Directors or elected members should be the first to hear of suspected mismanagement; any other approach is just too risky.

To conclude, we should recall the words of Winston Churchill, when reflecting upon the moral purpose that drives every whistleblower to act:

"A man does what he must- in spite of personal consequences, in spite of obstacles and dangers and pressures- and that is the basis of all human morality."

9. Postscript- The Petition Committee examines the Proposal

The Petition gained 636 signatures, with 515 validated and so was heard by Committee on the 18th April. The proceedings were recorded and can be viewed on the Council webcam. It agreed three things:

To refer the Petition to the Council's Corporate Management Team (CMT) and call for them to evaluate the proposal and report their view of it at a meeting on the 2nd May. Cllr Maggie Chapman, as Committee Chair, will arrange this.

To ensure that when the CMT proposals for a whistleblowing hotline are put to Policy and Strategy Committee, that the Petitioners are invited to send a deputation (possibly on 14th May or 11th June) to put their alternative bid.

To have progress on the matter fed back to the Petitions Committee to ensure the Petition does not get "lost".

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About the Author

Pete Gregson

Pete writes this as an Edinburgh ratepayer. He holds an honours degree in Biochemistry with postgraduate diplomas in Information Systems and Community Work. He is 56 years old and has worked in local government since June 2005. Prior to this he worked in the voluntary sector, running charities that offered courses and equipment in community video production, much of which was targeted at young people in the most deprived parts of the City. He lives with his wife and two sons, aged 7 and 11 and is an active member of the Labour Party and his trade union, Unison.

The changing face of the women's movement in Singapore: From contention, conciliation to contestation?

Carol Soon*

**Institute of Policy Studies, 1C Cluny Road, House 5, Singapore 259599, carol.soon@nus.edu.sg*

Abstract: *Women's movements are marked by heterogeneity, their identities shaped by the institutional contexts within which they emerge. This paper examines the transitions of the women's movement in Singapore which through three distinct phases of transformation within a short span of 60 years, reflecting the influences of changing political economy. This paper addresses the paucity of research that elucidates how Internet technologies shape the women's movement in Asia. It posits that despite creating new spaces for contestation for marginalized segments of the women population in Singapore, the Internet's effects are limited to promoting identity politics.*

Keywords: Women's movement, Singapore, Internet

As reflected in women's movements in the West and in Asia, the women's movement is often marked by heterogeneity, its identity shaped by the institutional context within which it emerges. Depending on the institutional context, non-governmental organizations approach the state as a challenger or collaborator (Coston, 1998). Institutional control strategies also exert a direct effect on protest strategies and modes of organizations adopted within movements (Della Porta & Diani, 2006).

There are two reasons why the women's movement in Singapore makes for a compelling case study. First, the identity and strategies adopted by the women's movement has gone through three distinct phases of transformation within a short span of 60 years which reflect the influence of changing political opportunity structures in the institutional environment. Second, in spite of indications that Internet is transforming the political and civil society landscape in Singapore, there is, surprisingly, a paucity of research that elucidates if and how Internet technologies have shaped the women's movement. The goal of this paper is to examine if the Internet has opened up spaces of contestation for women, and if it has, for whom in the women's population.

1. The First and Second Waves: Contention to Conciliation

Until 1959 when Singapore achieved self-rule from its British colonial masters, political and social conditions were chaotic due to communist activities against British colonial rulers, high unemployment, labor strikes and social unrest (Chew & Tan, 1993). In spite of the anarchic times, a

high degree of civil autonomy was accorded by the British to individuals and groups to pursue their own political and social agenda.

Recognizing that social problems faced by women arose from polygamy, the Singapore Council of Women (SCW) focused on polygamy as a symbol of injustices faced by women in Singapore. Except for a small number of women who were married under the Christian and Civil Marriage Ordinance, the majority of women lacked formal education and were unprotected against customary and religious laws which allowed men to take more than one wife. However, the issue of polygamy emerged to be a highly contentious one because leaders of various communities felt that SCW was interfering with local customs. Through public education, lobbying with the British and establishing regional and international networks, SCW raised awareness and garnered support for its campaign against polygamy. The women's movement was given an additional boost when two key political parties clamored for power during Singapore's progression to self-rule. When the People's Action Party (PAP) won its landslide victory, it fulfilled its promise to the women's movement and passed the Women's Charter in 1961¹.

However, the passing of the Women's Charter Bill saw the beginning of SCW's demise with its founder's departure and a lack of purpose (Chew, 1994). It was also during this time when the PAP consolidated its power and started a new era of governance in Singapore. Democracy under the PAP government, equated with periodic elections with an emphasis on majority rule rather than on minority rights for system-maintenance, has been referred to as "illiberal democracy" (Rodan, 1993) and "communitarian democracy" (Chua, 1995). The PAP took strident steps in culling dissension in different segments of the society (e.g. trade unions, the mainstream media and civil society) which it viewed as threatening nation-building.

Although the Women's Charter had by and large improved women's rights as wives and mothers, practices that reinforced women's subordinate role in a patriarchal society remained². Policies continued to reinforce the traditional roles of men as heads of household, protectors and providers for their families and women as providers of emotional support and care (Chan, 2000). A patriarchal state discourse bound by traditional definitions of what constituted a family nucleus (a "normal family" comprising a man and his wife) was also evident in the state's decision not to grant unmarried mothers eligibility for public housing (PuruShotam, 1998).

Unlike the First Wave, the women's movement in the Second Wave did not emerge from the ground up but was a reaction to the state's attempt to arrest declining birth rates and improve the "gene pool" through a Graduate Mother's Scheme³. Although it was scrapped within a year after its inception due to public outcry, many measures stayed in place. The Second Wave thus began when a group of educated, middle-class women formed the Association of Women for

¹ The Charter stated that monogamy is the only form of legal marriage regardless of the nature of marriage rites, and that women could sue for adultery and bigamy, and receive a hearing and justice under the law.

² Women did not receive medical benefits, had their job status reduced to that of temporary staff, and were denied pension when they married (Chan, 2000). Whilst medical benefits for male employees in the civil service were extended to his wife and children, the same were not extended to a female employee's family unless she was widowed, divorced or separated (PuruShotam, 1998).

³ The scheme provided procreation incentives for graduate mothers and disincentives for non-graduate mothers.

Action and Research (AWARE) in 1985 in response to the “intransigence of the government in response to protests against such gendered policies” (Doran & Jose, 2002, p.222).

However, its strategy moved from SCW’s contestation to one of conciliation. Limited resources from 1985 to 2010 led to ad hoc and “reactive” campaigns as AWARE responded to opportunities which arose whenever the state solicited feedback for issues and problems that it identified. In addition to being “primed” for issues foregrounded by state agenda, AWARE’s methods of advocacy demonstrated a palpable sensitivity to the state’s preferred mode of engagement, persuasion over confrontation. “In-private” engagement methods were chosen over overt confrontation, such as closed-door negotiations and close networking with relevant stakeholders in the government organizations and the public sector.

2. The Third Wave: Contentious Politics on an “Intelligent Island”

In the 1990s, the Singapore economy underwent a major shift when the state embarked on transforming the economy from a manufacturing economy to an innovation-based one. However, the promotion of Internet technologies for development and commerce was accompanied by state regulation. Although a complex set of rules and regulations was put in place to regulate discourse in cyberspace and promote the accountability on the part of content providers⁴, the government’s attempt to balance “*illiberal political interventions with market-oriented strategies for economic growth*” and the sheer volume of online content created loopholes (George, 2003). The Internet enabled members of the public to circumvent traditional regulatory constraints and contest dominant discourse in offline discussions (George, 2003; Ho, Baber & Khondker, 2002).

During this time, the “normal family” ideology continued to underpin state discourse. Women who did not fall within the model of a normal family continued to be marginalized by policies. For example, when explaining why unmarried mothers were not eligible for public housing, the government explained that removing the barrier implicitly accepts unmarried motherhood as part of the society. Across the globe, women are responding to increased opportunities for informal resistance and moral/material support by using Internet technologies to form groups (Gills, 2002). In spite of these promising developments, little is known about if and how the Internet has influenced the women’s movement in Singapore.

3. Women’s Groups on the World Wide Web

To examine how Internet technologies are used to advance alternative discourses, keyword searches were conducted to identify online women’s groups. Since this paper examines if and how the Internet reconstitutes the women’s movement in Singapore, websites belonging to officially-registered or traditional women’s organizations were excluded.

3.1. Alternative sexualities groups

The majority of the women-related websites are those formed by lesbian, gay, bisexual and transgender (LGBT) groups. These groups aim to foster linkages and promote networking opportunities amongst LGBT individuals, e.g. Sayoni, SAMBAL and SgGurls.

⁴ The two main pieces of legislation were the Internet Code of Practice and the Class License Scheme.

In addition to bringing together women who face similar challenges due to their sexual identities, some of these groups also engage in public education based on the belief that the main barrier to LBQT women's ability to integrate with the mainstream community is the public's perceptions concerning LGBT communities. One of these groups is the Singapore Queer-Straight Alliance (SinQSA) that is founded by three heterosexual youths to promote discussions of sexuality-based discrimination, harassment and violence. In addition, the group also organizes social events to encourage interaction and enhances mutual understanding between heterosexuals and LGBT communities. While most of the groups in this category exist primarily to build connections and provide community support for LBQT women, some groups such as Sayoni and Sisters in Solidarity (SIS) encourage their members to take specific actions such as signing petitions.

3.2. Professional advancement groups

The online search uncovered two professional advancement groups: Singapore Geek Girls and Secret {W} Business. Although open to all women, these groups appeal specifically to Singapore women who are interested in technology and are aspiring entrepreneurs. They promote social and professional networking through offline events, and publish event information on the websites. Besides expanding women's professional networks, these two groups also organize events to equip women with the knowledge and skills to pursue their professional goals.

3.3. Mothers' support groups

The third category comprised support groups for mothers and mothers-to-be. One of the largest groups is the New Mothers' Support Group Singapore (NMSG) which caters to mothers of young children. NMSG performs the function of community-building and serves as a resource site for information on pregnancy, childbirth, parenting and young children's development and nutrition.

Two groups in this category, SingleMotherhood.com and Singapore Support Group for the Divorced, target single mothers and divorced women. The first site operates as an online forum and provides a platform for single parents to share their problems and solicit advice from other single parents. On the other hand, the Singapore Support Group for the Divorced provides support and information resources for the divorced. The group also solicits experts to respond to posts, provides professional counseling services and organizes support group meetings four to five times a year.

3.4. Dating websites

The fourth category of sites comprise of dating websites where women join solely to meet other singles. Besides posting personal advertisements, visitors can contact one another via email, instant messenger and the forum. Unlike sites in the previous three categories, these sites do not provide any resources or information, except links to affiliated dating sites in and outside Singapore.

4. Conclusion: Contention or Continued Marginalization

One of the Internet's primary utilities accorded to women is the provision of a space for the forging of links with others who share a commonality in terms of sexual orientation, professional

interests or different stages of the life cycle (i.e. singlehood, parenthood and divorce). The women's groups mentioned in the above leverage one of the Internet's most fundamental affordance, that of connectivity. Women who are separated by ethnicity, race and socio-economic classes are able to converge online in to partake in forging a communal identity and in pursuing self-determination. This is an important contribution as the Singapore government till present times maintains a tight control over the establishment of civil society groups. A gay and lesbian advocacy group, People Like Us (PLU), was denied approval twice when members applied to the Registrar of Societies to be registered as a formal organization in 1997 and 2004 and no formal explanations were given for the rejection. The Internet enables PLU to connect with their members, organize meetings and discussions, thereby circumventing traditional gate-keeping structures and by-passing laws which require them to obtain permission for assembly in the real world (Gurak & Logie, 2003; Ho, Baber & Khondker, 2002).

Since its inception, the Internet has created new spaces for women who are excluded from mainstream discourse, particularly the LBQT community, single mothers and divorced women. Online LGBT groups extend support and personal affirmation to LGBT individuals who are marginalized in mainstream discourse and by policies that affirm heterosexuality as the normal and accepted lifestyle. As for single mothers and the divorced, the added attraction online sites hold for users is the ease of use and privacy as forums on the sites require membership.

However, it remains to be seen if Internet technologies will engender change for marginalized segments of the women's population in Singapore. This is because the effects of Internet technologies are limited to promoting identity politics and community-building amongst marginalized women. Currently, these online sites mediate the sharing of personal experiences, contributing to "*consciousness-raising*" which involves "*shifting the locus of problems from the private to the public sphere*" (Milwertz & Wei, 2008).

As cultural norms and values determining women's social position are tied to dominant patriarchal relations within a society, the rejection of unequal gender relations demands some form of organized political-social action (Gills, 2000). With the exception of Sayoni, SgGurls and SIS which have used Internet technologies to encourage members to participate in online petitions, the "non-instrumental" manner (Healy, 1997) in which the Internet is currently used by Singapore online women's groups exclude political action. Furthermore, the lack of discourse which explicitly challenges and questions hegemonic discourse put forth by the state and the mainstream media points to an absence of resistance. The contribution of Internet technologies in garnering collective action to advance the rights of women who fall outside the normal family model (i.e. LBQT communities, single mothers and divorced mothers) thus appears limited at present. "Atypical" women who do not belong to the normal family ideology continue to remain in the lurch when it comes to women's advancement.

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About the Author

Carol Soon (PhD)

Dr. Carol Soon is Research Fellow at the Institute of Policy Studies. She completed her Ph.D. in the National University of Singapore and her research interests include digital engagement, and how individuals and organizations leverage new media to engender political and social change. Her work has been published in peer-reviewed journals and her recent paper on political bloggers and collective identity has been accepted by the Journal of Computer-Mediated Communication for publication. From

August to December 2012, Dr. Soon was Visiting Research Fellow at the Asia Research Centre, Murdoch University, with support from the Australian Endeavour Award.

Workshops

Open Research: Data Management and Policies in the Austrian national context

Michela Vignoli, Ross King

*AIT Austrian Institute of Technology GmbH, Donau-City-Strasse 1, 1220 Wien
michela.vignoli.fl@ait.ac.at, ross.king@ait.ac.at*

Keywords: Open Access, Open Research Data, Policies, Data Management

1. Topic

The open accessibility of data is an important topic for the research culture of the 21st century. The growing amount of digitised content worldwide allows a facilitated and computer-aided consultation of data of interest for research – but only if access to the data is granted. Technologies for processing and storing digital data, or e-Infrastructures (Schroeder, 2012, p. 28), are developing very quickly. Libraries play an important role in the process of changing the ways researchers can access the data needed for their work, and they are highly involved in related discussions.

New developments in e-Research reinforce the demand for openly available research data online. Distributed teams of researchers cooperating on-line are more and more becoming part of an emerging research culture. Today's technologies enable global sharing of tools and resources by large user communities. Additionally, the high potential of Social Media Services is being recognised as new strategy for knowledge production (Nentwich & König, 2012). Trends in e-Research are headed towards a new level of research productivity (Schroeder, 2012, pp. 27-28).

Open Research, by which we mean open access to research data and publications, would strongly facilitate online cooperation, as well as traditional off-line research (European Commission, 2012, p. 3). In particular we would like to emphasise four aspects of Open Research:

- From a moral point of view, results from publicly-funded research should be made publicly available. In a European context, Open Access has the positive effect of helping to build a European “knowledge society” thanks to facilitated access to research findings (King & Jung, 2012, p. 358).
- From an economical point of view, availability of Open Data will lead to new economic opportunities for future business models (Vickery, 2011).

- From a political point of view, Europe should keep pace with Open Access developments in other countries, and seek for a global symmetry in this field. (European Economic and Social Committee, 2012, p. 5; European Commission, 2012, pp. 4-6)
- Open access provides an important increase in the return of investment in research as it enables re-use of such data in similar or even completely different settings as well as the combination of data sets from a variety of settings.

We advocate strong general policies in order to advance Open Access to research data. Such policies should of course provide a way to grant exceptions where they are needed, but a case-by-case approach is neither very feasible nor desirable if a common solution is the aim. Because the international trend toward Open Research is already well underway (as emphasised in the EU Horizon 2020 strategies, see European Commission, 2012), action at a national level should be undertaken as soon as possible.

We specifically suggest that the federal government of Austria should formulate policies with regard to Open Data, Data Management, and Research Conduct. Furthermore, research institutions in Austria should invest in e-infrastructure for Open Research. This investment and the on-going maintenance of the Open Research infrastructure should be financed through existing funding programmes, supported by new funding agency policies and requirements.

2. Description and Objectives of the Workshop

While we are aware that the subject is still under debate, we are starting with the assumption that Open Research is a desirable goal. The workshop should address the challenges of implementing Open Research on a political and technical level.

This workshop should bring together experts from Austria and the European Union in order to define national policies for Open Research. The objectives of the workshop are to

- Identify relevant national stakeholders
- Codify policy recommendations
- Explore technical solutions for policy implementation
- Explore political solutions for policy implementation

In order to support and prepare for these activities, we have started a public Wiki space dedicated to the topic (Austrian Open Research Wiki). We encourage all participants to contribute to this space before, during and after the workshop.

<http://list.scape-project.eu/confluence/display/AORW>

3. Relevance of the Workshop to the CeDEM

The international Conference for e-Democracy and Open Government brings together specialists for e-democracy, e-participation and Open Government from academia, politics, government and business. The topic of Open Science and Open Access is in particular addressed in one of the conference tracks.

Open Access refers to unrestricted access to government and research data and results. The development of policies supporting Open Access is a world-wide trend. The emerging support for Open Access by the European Commission in particular means that this trend must not be ignored by Austria.

The objectives of the workshop defined above will encourage relevant and up-to-date discussion on the topic, including the aspects of Open Science and Open Access devised in the Conference Program:

- The role of scholarly communication for democracies;
- Implications of open access for citizens, governments, research and universities;
- The impact of open access and transparency on e-participation.

In particular the policy recommendations that are planned to be codified during this workshop will contribute to the current discourse on Open Research, and will potentially provide a useful starting point for key Austrian policy makers.

4. Questions to be addressed during the Workshop

We would like to formulate clear policy recommendations that address the following Open Research questions.

- Legal aspects (e.g. contributors from different countries, where other copyright laws apply)
 - Licensing (different models), defining how the data can be used (attribution; re-use; transform/change)
- Data Management requirements for Research Institutions
- Accessibility requirements (requirements for metadata, indexing, etc.)
- Provenance requirements of Research Data
 - Proper attribution to author/owner
 - Versioning, tracking developments/results
- Economic shifts (who funds publication and preservation of online data)

Nearly all requirements have both political aspects and technical aspects. Political aspects should reflect how requirements are defined and enforced. Technical aspects should reflect how requirements are implemented. It is important to consider the political and technical aspects concurrently in order to avoid the definition of policies that cannot be feasibly implemented, monitored and enforced.

5. Format of the Workshop

The workshop will be divided in to three sections. The first section of the workshop will consist of an introduction to the topic and to the Wiki, followed by presentations, which will include

suggested policies. This section will close with a discussion on the presented aspects, in particular the policies.

During the second section of the workshop, the participants will split into breakout groups. One group will consider the technical aspects of the policy implementation; the other one will focus on the political implementation of the policies. The second part of the workshop will end with reports from the breakout groups.

Finally, all participants will discuss the results and define the next steps that should be taken in order to enhance and reinforce the codified policies. The workshop results will be documented in the Austrian Open Research Wiki, where they can be further developed and disseminated. The workshop organisers kindly invite all interested Open Access/Open Research experts to contribute to the Wiki space.

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About the Organisers

Michela Vignoli

Michela Vignoli graduated with honours in Celtic Studies at the University of Vienna in February 2011. After contributing to projects within the fields of linguistic and archaeology, most prominently to the

Lexicon Leponticum, she realigned her focus of interest to knowledge management and research in the digital era. Currently she works in the project management team of the SCAPE project at AIT.

Ross King

Ross King received his Ph.D. in physics from Stanford University. He is a Senior Scientist and Thematic Coordinator for Next Generation Content Management Systems at AIT. Dr. King is Chairman of the Board of the Open Planets Foundation and the Coordinator of the FP7 digital preservation project SCAPE.

Strategies for building and sustaining successful user-engagement

A model, tool box and check list for a one-off or cyclical process

Andy Williamson*, Morten Meyerhoff Nielsen**

* Future Digital, andy@futuredigital.eu

** Danish Agency for Digitisation, meyer@digst.dk

Abstract: *Active user engagement can take many forms. Whether for the design of new services, civic involvement and decision-making user-involvement are often seen as a linear, on-off process leading from A to B. But the world, technology or indeed user-needs is neither static nor monolithic. The user-engagement model presented allow for a one-off process on a single issue or decision, as well as be cyclical - or ever fractal and repeating - process and to recognise that there are a wide variety of methods and tools that can be used for civic engagement.*

The workshop presents, discusses and works with a model for linear and cyclical user-engagement, the strengths and weaknesses of various participatory tools, and a practical check list of do's and don'ts.

Keywords: Users, citizens, stakeholders, engagement, participation, tools, model, check list, Web2.0, social media, IT, ICT, service design, participatory design, cyclical process, conception, deliberation, decision, implementation, recommendations, evaluation, collaboration, agile policy

Active engagement with citizens, businesses and other stakeholders can take many forms. Whether for the design of new services, civic involvement and decision-making user-involvement are often seen as a linear, on-off process leading from A to B. But the world, technology or indeed user-needs is neither static nor monolithic. To be successful a user-engagement model must be able to account for both a one-off process on a single issue or decision, as well as be cyclical – or ever repeating – process and to recognise that there are a wide variety of methods and tools that can be used for civic engagement.

The purpose of the workshop is to present, discuss and work with a model for linear and cyclical user-engagement, the strengths and weaknesses of various participatory tools, and a practical check list of do's and don'ts.

1. The model

Five easy steps! That is the engagement model outlined in figure 1. Steps 2 and 3 are repeated until sufficient information is generated and consensus is reached, enabling a decision to be made and action taken. Decisions are implemented in step 4 and subsequently evaluated in step 5 to see the results achieved.

If the evaluation in step 5 reports success against pre-agreed criteria then the consultation and user-engagement process can be considered complete and the cycle ends.

Alternatively, if the results of step 5 indicate that the problem has not been satisfactorily resolved then can form the basis of a new problem statement and the process is reinitiated from step 1 – the process is now cyclical. The models is also fractal, it can be applied a many levels of a project and repeated within sub-levels.

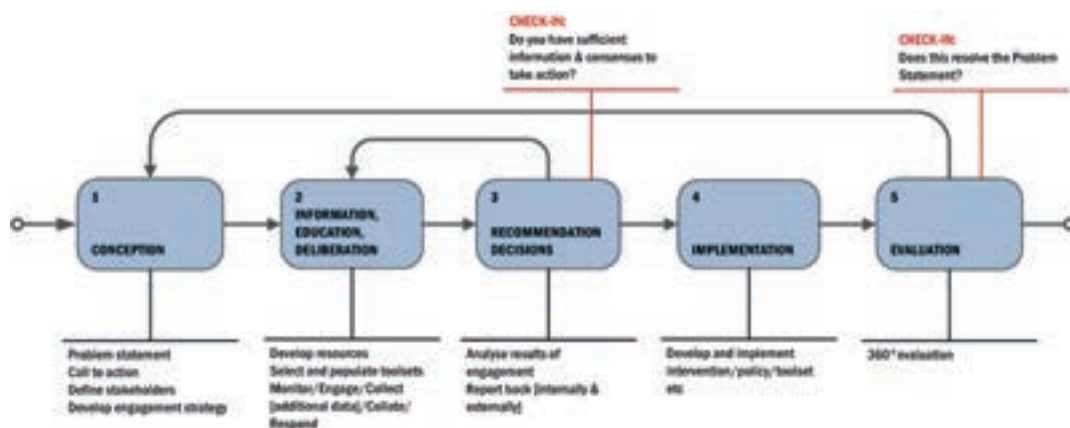


Figure 1: Engagement model (Williamson and Meyerhoff Nielsen, 2013)

2. The tools

Successful user-engagement not only requires a model (see figure 1, section 1), it also requires a variety of tools to able to ensure effective user input. There is a wide range of tools available to those undertaking user engagement and each has its own particular set of strengths and weaknesses, and each offers a variety of "tipping points" vis-à-vis their relevance, ability to reach a particular audience and create value for the authority when used to encourage active user-engagement.

To answer the central question of this paper, two types of tools are defined: Traditional tools and Web 2.0 tools, each of which will be outlined in below.

2.1 Traditional tools

Panels, focus-groups, user-testing, statistics, surveys, questionnaires, interviews or the use of personas are all tools used with various degrees by IT-developers and authorities when developing eGovernment services.

Table 1: Traditional tools and relevance for user-engagement (Source: borger.dk, 2010 adapted by Meyerhoff Nielsen)

Tool	Description	Advantages and disadvantages
Panels and focus groups	<p>Panels and focus group are both forms of qualitative research in which a group of people are asked about personal perceptions, opinions, beliefs and attitudes towards a product, service, concept, idea or the like.</p> <p>Questions in focus groups are asked in an interactive group setting where participants are free to talk with other group members. For panels questions can be asked in groups or on an individual basis.</p> <p>Examples: On/offline panels and focus groups and personas.</p>	<p>Advantages:</p> <ul style="list-style-type: none"> • Relatively easy to set-up and maintain • Online panels and personas have relative low maintenance costs • Explorative, validating, in-depth and representative esp. if questions are asked in group settings allowing for discussion • Can be used to survey attitudes, test content, structure, design and solutions before, during and after development • Can be carried out in-house and with relative frequency if so wished • Personas can function as a template for content and service development, design, internal communication (cross organisational, with contractors etc) avoiding misunderstandings and external promotion. <p>Disadvantages:</p> <ul style="list-style-type: none"> • Requires representative recruiting • Focus groups can be relatively costly and get off topic • If based panel participation is voluntary frequency should not be too high or there is a risk that volunteers drop out • Interviews can be expensive to carry out whether carried out in-house or by contractor • Often qualitative output • Personas risk limiting the focus on simplified characters and being outdated • Required in-house experience and skills
Tests	Tests carried out by users to test the user experience in relation to structure,	<p>Advantages:</p> <ul style="list-style-type: none"> • Validating and in-depth

	<p>functionality, look-and-feel of a given service or piece of content.</p> <p>Purpose is to collect feedback from the target or actual users to validate an issue or provide in depth information.</p> <p>Examples: think-aloud, try-it and other forms for user tests.</p>	<ul style="list-style-type: none"> • Can be made representative • Based on actual use and behaviour • Tests content, structure, design and solutions before, during and after development • Can be carried out in-house and with relative frequency if so wished • Can be done with high-frequency if data caption tools are in place <p>Disadvantages:</p> <ul style="list-style-type: none"> • Require representative recruiting • Can be costly • Mainly qualitative in output. • Risk of narrowed focus on testing rather than innovation
Mapping, statistics and analysis	<p>Service and heat maps utilise data to display areas of services or a webpage most frequently used or scanned by users.</p> <p>User statistics focus on the actual use of a given website, webpage or online services. Statistics collected could be in the form of number of visitors, number of webpages visited, length of visit, number of services activated and completed etc.</p> <p>Data is used to monitor actual use and identify strengths and weaknesses of a given webpage, its content, a service etc.</p> <p>Examples: Service and context mapping, heat-mapping, eye-tracking analysis of content and service use statistics.</p>	<p>Advantages:</p> <ul style="list-style-type: none"> • Explorative, validating, in-depth • Based on quantitative data and actual use and behaviour • Can be done in-house or by contractor <p>Disadvantages:</p> <ul style="list-style-type: none"> • Requires validated use and user data plus data on actual eService activations and transactions. Data caption system therefore a prerequisite
Surveys	<p>Surveys collect quantitative information about the participants' personal attitudes, opinions and habits set against their particular demographic. Surveys may be voluntary or</p>	<p>Advantages:</p> <ul style="list-style-type: none"> • Can be tailored to be explorative, validating, in-depth and or representative • Online surveys generally cheaper than

	<p>incentivised with the latter being considered more likely to catch a wider and more representative range of respondents compared to un-incentivised surveys.</p> <p>Examples: Personal, telephone and online surveys plus user-knowledge and satisfaction measures.</p>	<p>telephone or in person surveys</p> <ul style="list-style-type: none"> • Can be set to compliment and/or supplement other available data, or to measure user.-knowledge and satisfaction • Can be set to collect qualitative or quantitative input (latter with some limitations) • Can be done in-house or by contractor <p>Disadvantages:</p> <ul style="list-style-type: none"> • Can be expensive (esp. personal and telephone surveys and to measure user-knowledge and satisfaction) • Relative low frequency and low number of questions or quality and number of responses may fall
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2.2 Web2.0 tools

A number of Web 2.0, ie digital, tools with unique features, strengths and weaknesses are available for user-engagement. Web 2.0 tools can be divided into two specific categories corresponding to their target group and use: social and professional tools.

Typically Web 2.0 tools include a number of the following features and characteristics, referred to by Andrew McAfee under the SLATES abbreviation (Lancione, E, Meyerhoff Nielsen & Archmann, S, 2010):

- [S]earch: finding information through keyword search
- [L]inks: connecting information into a meaningful information ecosystem using the world wide web model and providing low-barrier social tools such as Facebook, Twitter and the like
- [A]uthoring: the ability to create and update content leads to the collaborative work of many rather than just a few web authors. In wikis, users may extend, undo and redo each other's work, while blogs, posts and the comments of individuals build up over time
- [T]ags: the categorisation of content by users adding short — usually one-word — descriptions to facilitate searches without dependence on pre-made categories. Collections of tags created by many users within a single system are often referred to as "folksonomies" i.e., folk taxonomies
- [E]xtensions: software making the web an application platform as well as a document server;
- [S]ignals: the use of syndication technology such as RSS feeds to notify users of content changes.

In addition, Web 2.0 allows for the identification and collection of quantitative and qualitative input, feedback and other information sources from primary and secondary users and from other stakeholders. The collected input subsequently forms the basis for the identification of various patterns related to the user-engagement model presented in figure 1 (section 1).

Qualitative sources for user-engagement include user input, user tests, questionnaires and surveys, voting, rating, commenting, wikis and blogs. Quantitative sources are user input, conversion rates for websites, statistics related to online self-service, site analysis, flow, eye and heat mapping, voting and rating.

Table 2 gives an overview of the social and professional networks, collaborative platforms, publication and feedback tools plus their respective strengths and weaknesses vis-à-vis user-engagement in the public sector.

Table 2: Web 2.0 tools and relevance for user-engagement (Source: Meyerhoff Nielsen, 2010)

Tool	Description	Advantages and disadvantages
Social and professional Networks	<p>An online service or platform built upon and reflecting the professional or social networks and relationships between people (e.g., interests or activities).</p> <p>A network generally consists of a representation of each user (often a profile), social ties and a broad range of services (e.g. e-mail, chat, messages, blog posts and content). It offers the users the opportunity to exchange ideas, activities, events and interests with members of a personal network.</p> <p>Examples: Facebook, MySpace, LinkedIn and Twitter.</p>	<p>Advantages:</p> <ul style="list-style-type: none"> • User and target audience is present • Informal tone, two-way dialogue and open to all • Input directly from users and stakeholders • Can be combined with various publications and feedback components as well as portal • Dialogue creates ideas and innovation • Good communication and PR channel • Independent, neutral platform <p>Disadvantages:</p> <ul style="list-style-type: none"> • Use and feedback is not guaranteed and the dialogue on social networks is often superficial and difficult to encourage a constructive debate • Alternative channel for debate and voting, opens another channel for communication • Added value and tipping point unknown • Not necessarily full control
Social and professional platforms	<p>An online collaborative platform, facilitating the cooperative and work processes that help more people to interact and share information to achieve a common goal and thus promote innovation.</p> <p>The internet makes it easier to</p>	<p>Advantages:</p> <ul style="list-style-type: none"> • Two-way dialogue and discussion forum • Input directly from users and stakeholders • Can be combined with various publishing and feedback components as well as a portal

	<p>disseminate and exchange information and knowledge as well as facilitates contributions from individuals. A crucial element of social and professional collaboration is that ideas occur everywhere and that individuals are able to share these ideas. Social cooperation corresponds to crowd sourcing, where individuals work together towards a common goal.</p> <p>Examples: Wikis like MediaWiki, DokuWiki, TikiWiki, Google page wiki, blogs like Wordpress or Blogger and collaborative office solutions as digitaliser.dk, Debategraph, Teamwork or Work Spot.</p>	<ul style="list-style-type: none"> • Dialogue creates ideas and innovation • Common platform, forum and resource <p>Disadvantages:</p> <ul style="list-style-type: none"> • Use and feedback is not guaranteed and can be difficult to encourage a constructive dialogue • Alternate channel • Added value unknown
Social publication	<p>An online service or platform that facilitates sharing, publication, changes, folksonomies, user creation and mash-up of content.</p> <p>Content may be in the form of video, images, text, etc.</p> <p>Examples: YouTube, Flickr, SlideShare, RSS feeds and Twitter</p>	<p>Advantages:</p> <ul style="list-style-type: none"> • Active update of user and stakeholder • Helps to maintain interest • Gives the user a "share" in the content and how it is used • Alternative tools for mediation and alternative to text - web accessibility • Compliment a platform with audio, pictures and text • Give users a choice of medium • Can be used on different networks and collaborative platforms and a portal <p>Disadvantages:</p> <ul style="list-style-type: none"> • Potential information overload • The value of user-generated content can have large fluctuations • Copyrights not always respected • Can be heavy/time-consuming material upload/access
Social and professional	<p>An online service or platform facilitating input from an audience through one or two-way</p>	<p>Advantages:</p> <ul style="list-style-type: none"> • Can be used on different networks and collaborative platforms and

feedback	<p>communication. Two forms of feedback exist: Quantitative forms like voting and rating and qualitative forms as commenting, discussion, surveys, wikis and blogs.</p> <p>Feedback types are often combined and are often found on website or as functional elements in different social and professional networks and collaborative platforms.</p> <p>Examples: Vote and debate on borger.dk or Debategraph, rating and commenting on Facebook or digitaliser.dk, surveys as survey monkey, pirate survey, free online surveys, blogs, wikis, Wikipedia's article feedback tool, various public solutions etc.</p>	<p>oman.om</p> <ul style="list-style-type: none"> • Two-way dialogue and discussion forum • Input directly from the users and stakeholders, facilitate inclusion and involvement <p>Disadvantages:</p> <ul style="list-style-type: none"> • Use and feedback is not guaranteed • Alternative method of user and stakeholder feedback • Added value and resource unknown
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3. The check list

In the context of this engagement model and the strengths and weaknesses of the various tools we can define a number of 'do's and don'ts' that face public authorities. Experiences in Australia (e.g. Australia 2020) Denmark (e.g. borger.dk), Germany (e.g. in Hamburg, Cologne and Freiburg), the Netherlands (e.g. in Amsterdam in relation to Schipol Airport). United Kingdom (e.g. ePetition initiatives for the Scottish Parliament, 10 Downing Street or UK Parliament) and elsewhere (Ismael, 2008) show that the added value of the Web 2.0-tools is optimised when:

- from the start it:
 - is made clear what the objectives, target audience and expectations are (and what is not expect)
 - Web 2.0-tools are selected for their user-friendliness, data collection optimizing and process facilitating characteristics (in relation to the target group)
 - is clear that the focus will be on the needs and interests of the target group and when stakeholders are involvement in the formulation of these
 - is decide how the input and feedback collected and how this is analysed and used
 - is made clear and transparent what the rule and guidelines for debate, voting and responsibilities are (often more important than the technology chosen to increase participation)
 - is supported by the host organisation, and politically

- continuously:
 - is focusing on audience needs and interests
 - is focusing on including and involving the target audience
 - is using a clear language, understood by the audience
 - is using two-way communication, listened, asked and replied (votes are not enough) to sustain audience interest and get their constructive feedback
 - is giving the opportunity to express anger and frustration
 - is making use of careful, independent and credible moderation
- and throughout the process:
 - is making use of evaluation and the target audience is asked to participate in this
 - is providing feedback on input and it is illustrated input will be used (and why it is not used)

Such experiences illustrate the importance of clearly defined model of engagement, objectives, communication, target groups, processes, organisation, tools, responsibilities and tools.

4. The workshop

Length

- 90 min

Agenda and format

- 0-5 min: Welcome and presentation of agenda (5 min)
- 6-25 min: Outline of the engagement model, incl. mapping of tools and outline of check list (20 min)
- 26-35 min: Participants paired in couples. Each pair given a specific topic to discuss ie the model, tools, check list – questions are distributed in writing (10 min)
- 36-65 min: Pairs discuss questions and prepare findings for debate – write them up on flip-overs (or indicate +/- if they agree/disagree with a point) (30 min)
- 66-90 min: Debate (25 min)

Workshop questions

What are the main strengths and weaknesses of the model? Can it be utilised for user-involvement in participatory service design? Does it account for democratic and political decision-making processes and allow for successful civic-engagement?

What are the strengths and weaknesses of the various participatory tools, traditional as Web2.0? What tools are appropriate to what steps of the engagement model?

What is on a check list? What are the do's and don'ts of civic engagement, user-need analyses and testing? What does it take to make the engagement model a success?

About the Organisers

Andy Williamson

Andy Williamson is the CEO of UK-based digital engagement consultancy Future Digital (futuresdigital.eu). He is an internationally recognised expert in the effective use of digital media for democratic engagement and policy. Andy successfully delivers projects across civil society, local and central government and with transnational organisations in a number of countries and is a well-known commentator and public speaker. Andy holds a PhD from Monash University, Australia and was previously Director of Digital Democracy at the Hansard Society and an adviser to the New Zealand Government.

Morten Meyerhoff Nielsen

Head of section at the Danish Agency for Digitisation (digst.dk) responsible for: Project management, strategy and business development of the national citizen portal (borger.dk); Performance management, key performance indicators and tools; Reuse of content, functionalities and components (Gov 2.0); Web2.0/social media. Other expertise incl: Evaluation of ICT projects, online services and portals; Userfriendly and personalised eServices; eParticipation and participatory design; ICT and IOP; ICT Awards; ICT in a development context. Morten is the author of various publications and a guest lecturer on related topics at the European Institute of Public Administration and the Maastricht School of Management. He is a jury member for the Swedish eGovernment Awards Guldlänken (since 2008) and Omani HM Sultan Qaboos Awards for Excellence in eGovernment (since 2010) and is currently assisting the Georgian Data Exchange Agency in the developing their national eGeorgia Strategy. Previous employers include the European Commission (DG Development), Center for the Development of Enterprise, European Institute of Public Administration, Danish Technological Institute and Denmark's National IT- and Telecom Agency.

E-infrastructures for open data

A workshop about existing open data e-infrastructures that aim at improving the provision and use of open data

Anneke Zuiderwijk*, Keith Jeffery**, Spiros Mouzakis***

* Anneke Zuiderwijk, Delft University of Technology, Faculty of Technology, Policy and Management, The Netherlands, a.m.g.zuiderwijk-vaneijk@tudelft.nl

** Keith Jeffery, euroCRIS, United Kingdom, keith.jeffery@keithgjefferyconsultants.co.uk

*** Spiros Mouzakis, National Technical University of Athens, Greece, smouzakis@epu.ntua.gr

Abstract: *The publication and reuse of public and private data is expected to lead to numerous advantages, including the stimulation of transparency, accountability, economic growth, innovation and citizen participation. But merely putting data on the internet without providing contextual information or linkage to other data does not result in the realization of these advantages. There is a need for e-infrastructures that aim at improving the provision and use of open data, as these infrastructures can stimulate the realization of the advantages of open data. The aim of this 90-minute workshop is to present e-infrastructures that aim at stimulating the provision and use of open data to obtain more insight in the differences between the infrastructures, to learn more about the possibilities of open data infrastructures for the (daily work of) participants and to discuss how the infrastructures can be improved. Advantages and disadvantages of existing e-infrastructures are discussed. One open data e-infrastructure, called the ENGAGE e-infrastructure, is discussed thoroughly to illustrate its architecture and its features. Participants are asked to provide their view on the presented open data e-Infrastructures. A laptop is recommended for this workshop, although it is not a prerequisite for participation.*

Keywords: Open data, open data infrastructure, advantages, disadvantages, comparative research, architecture, features

Acknowledgement: The authors would like to thank their colleagues of the ENGAGE project for their input for this workshop, although the views expressed are the views of the authors and not necessarily of the project. More information can be found at www.engage-project.eu and www.engagedata.eu.

1. Introduction

The publication and reuse of public and private data is expected to lead to numerous advantages, including the stimulation of transparency, accountability, economic growth, innovation and citizen participation (for instance, Blakemore & Craglia, 2006; European Commission, 2003, 2011; McDermott, 2010; Zhang, Dawes, & Sarkis, 2005). But merely putting data on the internet without providing contextual information or linkage to other data does not result in the realization of these advantages. There is a need for e-infrastructures that

aim at improving the provision and use of open data, as these infrastructures can stimulate the realization of the advantages of open data (Charalabidis, Ntanos, & Lampathaki, 2011; European_Union, 2010). During the first part of this workshop, a brief introduction is given to the field of open data and to open data infrastructures in general. The content of the workshop is outlined, to show participants what they can expect from the workshop.

2. Presentation of open data infrastructures

Several open data infrastructures are presented that aim at stimulating the provision and use of open data, including the European Commission Open data portal (European_Commission, 2012), Junar (Junar, 2009) and the ENGAGE open data platform (The_ENGAGE_project, 2013). The advantages and disadvantages for certain types of use of open data are highlighted, in this way providing insight in the differences between the infrastructures. Complementarity of open data infrastructures is also described. In this way, participants can learn more about the possibilities of open data infrastructures. For instance, they can learn how open data infrastructures can be used in their research.

3. Background and architecture of ENGAGE open data infrastructure

One of the open data infrastructures that is presented, namely the ENGAGE open data infrastructure, is highlighted, so that more detailed information about advantages and disadvantages of open data infrastructures can be provided to the workshop participants. This is done by providing more background information about the ENGAGE infrastructure and its architecture.

4. Live demonstration of ENGAGE

The possibilities that the ENGAGE open data infrastructure provides will be presented. The presentation focuses on features of the open data platform and a live demonstration. Subsequently, participants are asked to perform a number of scenarios on the ENGAGE open data infrastructure. The participants can use the scenarios to learn more about the possibilities of this platform. Participants are invited to participate in the discussion and to provide feedback on the ENGAGE open data infrastructure.

5. Discussion

The remainder of the workshop is dedicated to discussion, interaction and gathering ideas from the audience about open data e-infrastructures. The value of the ENGAGE e-infrastructure for researchers, civil servants, developers and other stakeholders is discussed. Examples of topics for discussion are “What is the value of the existing open data platform?” and “Which additional features do (potential) users of open data want open data platforms to have?” The feedback of the participants can be used for further development of and improvements on the ENGAGE open data infrastructure.

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About the Organisers

Anneke Zuiderwijk MSc

Is a researcher in the ICT section of the Faculty of Technology, Policy, and Management at Delft University of Technology, the Netherlands. Her research concentrates on open linked data. More specifically, her research is focused on the development of a socio-technical infrastructure that improves coordination of opening data by organizations and using these data by different types of users. Furthermore, Anneke performs research on open data at the Research and Documentation Centre (WODC) of the Dutch Ministry of Security and Justice. She is involved in the FP7 ENGAGE project (An Infrastructure for Open, Linked Governmental Data Provision Towards Research Communities and Citizens). Anneke can be contacted via a.m.g.zuiderwijk-vaneijk@tudelft.nl.

Prof. Dr. Keith Jeffery

Is now retired from the Civil Service and working as a consultant. Previously he was Director IT and International Strategy at STFC (Science and Technology Facilities Council). Keith previously had operational responsibility for IT with 360,000 users, 1100 servers and 140 staff. Keith holds 3 honorary visiting professorships, is a Fellow of the Geological Society of London and the British Computer Society, is a Chartered Engineer and Chartered IT Professional and an Honorary Fellow of the Irish Computer Society. Keith is currently president of ERCIM and was president of euroCRIS, and serves on international expert groups, conference boards and assessment panels.

Dr. Spiros Mouzakitīs

Is a research analyst for National Technical University of Athens (NTUA). He holds a diploma of Electrical and Computer Engineering from the National Technical University of Athens, and a PhD Degree in semantic

interoperability assessment of SMEs. He has nine years of industry experience in conception, analysis and implementation of information technology systems. His current research is focused on decision analysis in the field of eBusiness and eGovernment, including open governmental data, Semantic Web, as well as optimization systems and algorithms, risk management and semantic interoperability.

Evaluation of e-participation projects

The OurSpace evaluation model

Michael Sachs*, Judith Schoßböck**

* Danube University Krems, michael.sachs@donau-uni.ac.at

** Danube University Krems, judith.schossboeck@donau-uni.ac.at

Keywords: Evaluation, e-participation, OurSpace

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1. Topic

This workshop discusses evaluation of e-participation and what can be learned from successful but also from unsuccessful e-participation projects. Based on the insights gained from the OurSpace¹ e-participation project, the workshop critically reflects on indicators to measure success in e-participation as well as on the comparability of the lessons learned from different kinds of projects.

Many e-participation projects have been initiated and funded by the European Union as well as national and regional governments. Funded projects in the field of e-participation usually produce lessons learned or recommendations based on internal and/or external evaluation reports. In order to gain sustainable and comparable learning outcomes from projects, common indicators and measures for success should be integrated in e-participation evaluation methodologies. This workshop seeks to define key indicators for e-participation and possible measurements.

As part of the OurSpace project, an evaluation concept for the project is mandatory and must be applied in the evaluation reports. On the one hand, evaluation frameworks are designed individually for each project and existing evaluation approaches are adapted according to the project's focus. On the other hand, evaluations are based on the state of the art in current e-participation research. An introduction to the OurSpace project shows the relation of the project and evaluation framework and addresses the question what future e-participation projects can get out of the lessons learned from OurSpace.

¹ Cf. <http://www.ep-ourspace.eu/> & <http://www.joinourspace.eu/>

2. Description and Objectives of the Workshop

The OurSpace evaluation framework is based on a model and three layer approach suggested by Macintosh and Whyte (2008), but adapted to the needs of the project. It is one of the most elaborated in this field, consisting of different evaluation perspectives: The project perspective looks in detail at the specific aims of an e-participation exercise and to what extent the initiative meets its objectives. In addition to outcomes, this perspective looks at the quality of the process itself. The socio-technical perspective considers to what extent the tools that are used directly affect outcomes, i.e., help to achieve the objectives of the project. This involves studying the public take-up and usage, usefulness and acceptability of the tools with respect to users and processes. The democratic perspective considers the overarching principles and values of democracy and looks at the democratic criteria that the e-participation initiative is addressing. Here one of the most difficult aspects is to understand to what extent e-participation affects policy and helps to improve existing democratic processes and practices.

While presenting the present evaluation approaches in e-participation, participants are always welcome to provide their input and share their personal experience with the group. The workshop leaders will explain the evaluation model applied by the OurSpace project. They will explain how it was put together, explain the levels of the evaluation framework and give a more detailed example on the basis of one evaluation level and how indicators are measured.

On the basis of the three layer evaluation framework, the following evaluation level categories have been defined for the OurSpace project:

- political evaluation level,
- technical evaluation level, and
- social evaluation level.
- a methodological evaluation level comprises methodological approaches related to the effectiveness of the essential success factors of the platform.

The expected outcomes of the workshop are twofold. Firstly, the workshop organisers want to use the workshop to reflect with experts on the OurSpace evaluation approach and how future funded projects can benefit from best and worst practices. Secondly, it will be discussed if there should be a common baseline methodology for evaluation of e-participation projects and if this approach could be implemented in most e-participation projects. In this context, the definition and measurement of success will be of importance.

3. Relevance of the Workshop to the CeDEM

The CeDEM conference hosts several workshops that discuss the field of e-participation. While members of the OurSpace consortium had already held a workshop on engagement in 2012, they will be happy to participate in other sessions at CeDEM13 that focus on e-participation. In order to avoid any overlaps with other workshops, it was decided to present the OurSpace project in the context of one of the future project milestones: the final evaluation.

E-participation researchers emphasise the importance of systematic analyses of processes and outcomes against predefined criteria (Aichholzer and Westholm 2009). They make the assumption that “benefits to be gained from evaluation are manifold” (Aichholzer and Westholm 2009) e.g., identifying conditions and extent of success as well as deficits. E-participation evaluation models

provide a structured analysis model for estimating how far an e-participation project can help to enhance democracy.

E-participation projects thus need to develop a coherent evaluation framework, encompassing a range of perspectives. The workshop contributes to this topic in order to better understand the relevant factors and indicators for defining success in e-participation projects, independent from merely technological determinants or techno-deterministic approaches that lack a concrete framework. It will be discussed how outcomes of projects with different objectives can best be compared. As a result, an outline of a set of tools and indicators that can be applied to all such project evaluations should be defined and shared with all participants of the conference. The workshop will help to improve the OurSpace evaluation framework. Other e-participation researchers who need to evaluate existing projects can benefit from the outcomes.

4. Questions to be Addressed during the Workshop

The two main aspects that shall be discussed in this workshop focus on cross-project evaluation criteria and on the question on defining success in e-participation projects. A discussion about the relation of these two main entities shall lead to an outline for further discussion or maybe even to concrete outcomes and recommendations. The discussion will be guided by the following clusters of questions:

What aspects shall be integral part of evaluation methodologies for e-participation? Is it possible to answer this question in general or is it necessary to cluster and/or differentiate among e-participation projects? If the latter must be done, how shall e-participation projects be clustered? Is the presented approach in e-participation evaluation applicable to the project?

How can we measure success in e-participation projects? Do all e-participation projects have the same or similar objectives, and if yes, what are these objectives? What is preferably: qualitative or quantitative approaches to evaluation? What tools shall be used to evaluate such projects?

Can internal and external evaluation reports be treated equally and in what aspects do they differ?

6. Format of the Workshop

The workshop will consist of two parts: After introducing general approaches to e-participation evaluation, workshop leaders will present the evaluation approach applied to the OurSpace youth deliberation platform. Thereafter, the participants of the workshop will be asked to present their experience with evaluation models in order to get an overview about possible approaches.

Participants will be given a few minutes to get familiar with the OurSpace platform and are asked to register in order to fill in the survey that can thereafter be discussed. Therefore it is recommended to bring laptops to the workshop.

After deciding on the concrete questions that shall be addressed, a guided discussion, partly in small focus groups, shall generate results on the questions that will be addressed. In particular, participants will have the opportunity to discuss successful e-participation and the existing evaluation model adapted to the OurSpace platform. Further emphasis will be of the advantages and disadvantages of specific evaluation approaches, e.g. quantitative and qualitative methods and possibilities to measure the impact of projects.

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About the Organisers

Judith Schoßböck

is research fellow at the Centre for E-Governance at Danube University Krems, Austria. She is managing editor of the open access e-journal JeDEM (jedem.org) and member of the interdisciplinary internet research group of the University Vienna. Her research interests are eDemocracy, eParticipation, Open Government and digital activism.

Michael Sachs

is research fellow at the Centre for E-Governance, Danube University Krems. He studied at the University of Vienna and the University of Nottingham and received a master degree (magister philosophiae) in English and American Studies as well as in History and Political Education including secondary modern school accreditation in 2008. In 2009 he joined Danube University Krems where he works as project manager and tutor. He was manager of the Conference for E-Democracy and Open Government.

PhD Colloquium
(in collaboration with netPOL)

Liquid Democracy- Norm, Code and Developers of Democracy beyond Representation

Anja Adler

NRW School of Governance

Lotharstraße 53

47057 Duisburg

anja.adler@uni-due.de

Keywords: adhocracy, developers, civic consulting, code, e-democracy, liquid democracy, liquid feedback, norm, software

1. Topic & Research Aim

The hope for more internet-based civic online-engagement is often based on the assumption that special software is being developed to eliminate existing problems. Therefore, in contrast to most research on e-democracy and e-participation from communication and participation science, this project does not analyze conditions or reception of online participation, but instead aims to shed light on the modes of production from the perspective of political science. As exploratory research it seeks to provide some understanding and translation of the role of developers of internet-based participation and therefore analyzes the two software solutions Adhocracy (<http://adhocracy.de/>) and Liquid Feedback (<http://liquidfeedback.org/project/>) as the first two German attempts to put the theoretical concept of liquid democracy to political practice. Both software solutions originate from the theoretical concept of liquid democracy, a combination of elements from deliberate, direct and representative democracy enabling discourse and a more flexible decision-making process.

2. Research Questions

This dissertation project will discuss three research questions:

1. How is liquid democracy conceptualized in norm and realized in code by the two German organizations, Liquid Democracy e.V. and Interactive Democracy e.V.?
2. What kind of political actors are the developers of liquid democracy? What motivates political scientists, programmers and other supporters in both organizations to work on this topic? How do political scientists and programmers collaborate?

3. In what way do these processes influence political actors/the political system? Which institutions and/or actors are the main targets of this innovation? What are effects of these programming activities?

3. Theory and State of Research

Even though both software solutions are already being implemented by the established German political system, e.g. by the German Bundestag or the Pirate Party, little attention has been attributed to the concept of liquid democracy by political scientists. So far, only Bieber has provided an extensive definition (Bieber, 2012a). Few contributions from party change research have currently been published, but do not focus on liquid democracy in particular (Bieber, 2012b; Hanel & Marschall, 2012). A constitutive analysis and discussion of the theoretical concept (norm), practice as software (code and its uses) and of the organizations and individuals involved (developers) does not yet exist.

As basis for further discussion this project therefore seeks to formulate a definition based on alternative related theory from political science. A recent article by Nullmeier/Dietz serves as theoretical ground for an analysis of liquid democracy as civic consulting (Nullmeier & Dietz, 2011). Conceptualized as a new method of political consulting, processes, experts and participants of liquid democracy come into focus. As Schmidt argues, academic attention needs to be paid to the platform operators and software developers as „architects of new [public] communication spaces“ (Schmidt, 2012, p. 8). Even though they do not determine all options, they are the ones to govern actions for user. Assuming software-based participation will become more important in the future, it seems necessary for (political) scientists and practitioners alike to understand how this software comes into being.

Additionally, literature from the disciplines of law on the topic of open source (Benkler & Nissenbaum, 2006; Lessig, 1999; Noveck, 2009), political science on participation and deliberation, software science (Ensmenger, 2010; Wirdemann, 2011), as well as culture and media theory (Johnson, 2012; Mackenzie, 2006; Rushkoff, 2003a, 2003b, 2010) will be drawn on to develop a deeper understanding and better approach towards the concept of liquid democracy, programming as practice and the role of developers.

4. Methodology

To answer the first research question and develop a definition, the self-portrayals of both organizations available online will be analyzed with the help of a qualitative content analysis based on the theoretical groundwork. Additional semi-structured expert interviews with those actors present during the development of liquid democracy as norm and practice will help to complete knowledge on theoretical references. An approach towards the software through its descriptive documentation and personal experience will complement this Mixed-Method approach. As key focus of research, this project then seeks to formulate and test hypotheses on the role and motivations of the programmers. The methodology, still to be developed, will draw on ethnologic studies of software (Kitchin/Dodge, 2011; Rosenberg, 2008; Ullman, 2013). With the help of semi-structured expert interviews with programmers and possibly participatory observation at programming sprints, this dissertation hopes to approach the personalities of these "democracy developers" and their work.

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About the Author

Anja Adler

Anja Adler has been fellow of the PhD scholarship program at the NRW School of Governance at the University Duisburg-Essen since August 2012 and researches the political role of communication. Since December 2010 she has also been working as a freelancing communications and social media consultant for the third sector. After her studies of communication science and North American studies at the Free University Berlin, she spent almost three years working as communication manager at Stiftung Mercator and as trainee at Robert Bosch Foundation.

Exploring E-Voting for Participation

Vasilis Vlachokyriakos

Culture Lab, Newcastle University, UK, v.vlachokyriakos@ncl.ac.uk

Abstract: *Electronic voting is proposed in many countries as a means to increase voter turnout. There is a belief that facilitating access to the voting apparatus and increasing the security of voting systems will lead to an increase of participation. Whether this assumption is correct is questionable with a number of recent studies showing the opposite. The goal of this PhD is to explore whether and how technology can facilitate and increase participation in democracy by exploring a wide range of democratic practices from informal collective decision making instances to political elections. To achieve this, exploratory prototypes are developed that serve as technology probes to explore psychological and sociological constructs that drive participation.*

Keywords: decision making, e-voting, participation

Since its origins, voting has formed the bedrock of functioning democratic societies. Early voting methods, such as showing of hands or throwing colored rocks in jars (Ober, 1996), provided the social setting for a deliberative participatory democracy. On the other hand modern western constitutions permit participation and facilitate access to the voting apparatus but fail to motivate participation effectively (Fishkin, 1991). In the USA, the use of digital voting systems has recently been championed as a way to tackle dwindling participation in national elections by facilitating voting and providing multiple voting channels. According to a number of electoral commissions, e-voting and remote voting could be beneficial for the vote tallying, the reduction of election costs and the increase of the turnout (Electoral Commission UK, 2007). Unfortunately, the results of e-voting trials are not very promising. The UK electoral commission states (Electoral Commission UK, 2007) that before making new trials, there must be an electoral modernization framework in place with a clear vision and strategy that will outline how the issues of election transparency and public confidence on the voting systems will be addressed. In addition, recent research suggests that increasing the number of possible voting channels does not necessarily increase participation in voting processes. Indeed, interesting studies (Funk, 2008) show that remote voting could have negative effects on participation due to the lost ritual and the lost social pressure to vote. In this PhD, technology and the introduction of e-voting systems is explored as a way to increase participation and bridge the gap between the primordial democratic settings and modern requirements of large republics. Some of the key attributes of typical formal polls are revisited to explore how technology can facilitate participation and provoke deliberation.

1. Research approach

In order to explore motivators of participation, voting platforms will be developed to serve as technology probes (Hutchinson et al., 2003). Technology probes are a specific type of probes that combine three main goals: the collection of information about the use and the users of a technology in real world; the field-testing of the given technology; and inspiring users and designers to invent new technologies to support users' needs. As democratic practices can be found in a wide spectrum of formal and occasional to informal and everyday we intend to apply these technology probes in a number of different contexts to explore the psychological and sociological constructs that drive participation.

2. Research questions

- Can e-voting systems increase participation in elections? And if yes, what voting settings can facilitate this?
- How can technology bridge the gap between the modern representative democracies and primordial forms of participatory democracy?
- What are the democratic practices in everyday life and what can we learn from them?

3. Preliminary study

As a preliminary case study, we developed a voting platform designed to probe the motivators of participation through the provision of voting features that could be considered provocative in the context of a poll. We implemented the following innovative features alongside with more conventional voting functionality: votes cast were public; votes could be gifted; intermediate results were visible; users had multiple votes to cast across many polls; negative votes could be placed; votes could be revoked and recast to introduce strategic actions; and new nominations could be spontaneously added.

Staff and postgraduate students in our research institute voted on polls ranging from social activities to other spontaneous decisions that were required. Over a period of five weeks, a total of eight polls were created. From these eight polls, five were weekly scheduled polls about social activities and the remaining three were polls created by request. The duration of scheduled weekly polls varied from one to seven days in order to explore the effect that it may have on participation. System logs have been analyzed after the end of the study and questionnaires were distributed to participants and interviews were conducted to explore usability, privacy and how voting features affected their interactions.

4. Results summary

The goal of this study was to explore how configurations of an e-voting system could support participation in group decision making. Through the provision of voting features that could be considered provocative in the context of a poll, we explore motivators of participation. Like other studies (Carroll, Rosson, & Zhou, 2005; Taylor et al., 2012), our work demonstrated the impact of psycho-social processes such as efficacy and deliberation can have on participation. As expected, participants were most likely to take part in a poll when they felt their actions would have a measurable effect on the final result. Voters' self-efficacy, the collective efficacy of the group, and

the change that could be brought about by the result were the most influential environmental drivers of participation. This was facilitated by some of the system's features such as available preliminary results, revoking casted votes and multiple and disapproval voting that engaged participants with the polls.

Features of the system that allowed tactical voting resulted in diverse feelings of efficacy within the group. Some group members appeared industrious and strategic, trying to influence others, while others abstained from strategic voting. The uptake of strategic voting by some could suggest that such features could enhance engagement and participation, as they allow participants to change the outcome by influencing how others vote. However, issues highlighted by non-tactical voters show that further work is necessary to explore the balance between the provision of strategic voting and the sense of fairness. An interesting interplay exists between privacy and this sense of fairness, as while increasing self-efficacy through strategic voting could be important for participation, if the voting system provides too much power to change the final decision then participation is negatively impacted. Participant's perceived that somebody could use that power to undermine the result. However, as the system is configured so that voting acts are public, such unscrupulous acts become visible to the group and appear less likely.

Privacy concerns were not prominent in the study, even though users' choices were visible on the system. Clearly such concerns are contingent upon the context and familiarity of the group members. Further research is required to understand how manipulation of the design for privacy in the poll could lead to increased participation and greater engagement.

Future work is necessary to explore how decision making systems based upon e-voting can reasonably support deliberation; create the experience that voting is a process; allow elements of strategy; and can support the careful design of e-voting systems to encourage engagement and participation.

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About the Author

Vasilis Vlachokyriakos

Vasilis Vlachokyriakos is a second year PhD candidate based in Culture Lab, Newcastle University, UK. His PhD project explores how technology and electronic voting systems could increase participation in a wide range of democratic practices from informal collective decision making instances to political elections.



The Limits of Political Participation and Electronic Platforms

Jorge Aguirre-Sala

Universidad de Monterrey, Av. I. Morones Prieto 4500. San Pedro, Nuevo León, México, C.P.66238

jorge.francisco.aguirre@udem.edu.mx / jorgeaguirresala@hotmail.com

Keywords: citizen participation, political limits, correlation between limits, instruments and platforms.

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1. Topic

The contribution of electronic platforms to political participation.

2. Research Aim

Identify the types of political participation limits and determine which can be overcome with instruments and electronic platforms.

3. Research Questions

What are the types of political limitations of citizens? How could be overcome with using electronic platforms? Is there a correlation between forms of political participation and electronic platforms?

4. Theory and State of Research

The political limits of citizen participation are of two types: those imposed by the law of a State and outside law caused by lack of communication and solidarity. Both were backed by traditional media and Web 1.0. However, Web 2.0 and electronic platforms, in some cases, can break its limits.

5. Methodology

Shown are two tables: Table # 1 describing two types of limits political participation. Table # 2 shows differences between traditional media and new instruments and electronic platforms. The tables are compared to answer: What are the problems in Table # 1 that can be solved?

Table 1: limits political participation.

Limitations within the regime: legal framework	Limitations outside the regime: those belonging to autonomous society.
1. Questioned elections	2. Lack of trust towards laws and institutions
3. Lack of certainty, legality, impartiality and equality.	4. Lack of trust towards others
5. Authoritarian exercise of power	6. Lack of solidarity beyond family and friends
7. Discretionary decisions	8. Intolerance towards differences and plurality (in ideas, beliefs, identities)
9. Lack of transparency and accountability	10. Discrimination (by age, gender, sexual orientation, race, religion, and political ideas)
11. Faults in the checks system	12. Scarcity of philanthropic associations and groups
13. Faults of the judicial system: partiality, slowness, inequality	14. Absence of cooperation to solve collective problems
15. Parliament subject to party interests	16. Authoritarian practices within families, schools and enterprises
17. Absence of mechanisms to guarantee the exercise of rights	18. Absence of public, social discussion over collective matters
19. Absence of constitutional recognition to citizen's right to participate in public matters and discussions	20. Absence of independent, plural and open to society media.
21. Consultation and social participation mechanisms absent, insufficient, or lacking binding effect.	22. Social relations subordinated to maximize individual interests (cost-benefit)
23. Criminalization and judicial prosecution of social mobilizations and protests.	24. Appropriation of public goods and places by groups in political and economic power

Table 2: comparison between the Traditional Mass Media and the New Media

Traditional Mass Media (newspaper, cinema, radio, and tv)	New Media (facebook, twitter, e-mail, wikis, etc.)
Conditioned to market economy and plans of political re-election.	Caused by the free gifting of free software and content without expectations of return
Used solely by professionals and occasionally amateurs	Used by amateurs who see professionals as equals
High economic entry barriers	No or low entry barriers
The only protagonists are the broadcasters; only one speaks and many listen, only one appears and many watch	Real-time propagation of information transforms the receiver in a protagonist: everybody tweets or re-tweets, send, "uploads" for everybody to see
Strives to please voters, clients and consumers	Each user is a voter and potential part of the conversation
Require a public approval that subjects to censorship	Lacks censorship and its notability multiplies we blinks
Only emitters rate the medium and its contents	Interactive users generate usefulness, practice and value

Transmission process does not transform the content nor the medium	Participation generates a communication good that makes content, the medium, and users better.
Are only directed towards the public, as they are colonizers of the private sphere	Influence the audience and the medium itself because they elevate to the public sphere what was once private
Their use is only receptive	Their use is varied: Twitter: used in mobilizations Blogs: used as spaces for discussion Face book: diffusion and growing of movements Organized websites: collaboration, protection and organization

6. Preliminary Results / Results

We believe that almost all limits can be resolved. However, the limitations twelve, fourteen and sixteen demand higher education and civic issues. To find correlation between forms of political participation and electronic platforms, Table # 2, at the end, shows the variation of uses for twitter, blogs, facebook and websites.

7. Discussion

Limits eleven, thirteen and nineteen are not easily resolved. The problem nineteen implies a deep change in the most important laws of any nation. Media Rights traditionally are limited to free press and this is reduced by the interests of media owners and those in charge of the State.

However, the electronic platforms causes the appropriation of new rights (e-education generates users of e-government, e-voting, and e-citizen participation). Although the use of electronic platforms does not cause the recognition of new rights by law and also does not solve political conflicts, the influence of the Web in public decisions is becoming influential.

8. Conclusion

Indeed, Web 2.0 and e-government are not enough by themselves. Only continuous and widespread use of electronic platforms for more citizens can influence government decisions. Maybe we need to do a mix of platforms (twitter, blogs, facebook, web federated) to overcome the limits of political participation. But eventually something is true: the traditional media had assumed that we had democracy and looking for information, while today the new electronic platforms gives information because we seek democracy.

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About the Author

Jorge Aguirre-Sala

Philosophy professor at Universidad de Monterrey (UEM) in Mexico. Author of articles published in Spain, Germany, U.S.A., Mexico, Argentina, Brazil, Colombia and international journal in internet. Some of his most important works are: Contributions to the citizen Hermeneutic Project (ARSP-Stuttgart, 2012), and The Mediatic Citizenship (Perspectivas de la Comunicación-Chile, 2011) His life and academic works can be found in consigned works like 2000 Outstanding Intellectuals of 21 St. Century of The International Biographical Centre, Cambridge, England

Crowdsourcing for Social Change in the Global South:

Challenges and Possibilities

Buddhadeb Halder*

* PhD Student at the CIRSFD, University of Bologna, Via Galliera 3, Bologna, Italy, E-mail: Buddhadeb.halder@unibo.it

Abstract: *Crowdsourcing has been identified as one of the innovative digital ways to communicate with the citizens. Numbers of crowdsourcing initiatives have been taken place through the e-participation model to gather public opinion for decision-making purposes. On the other hand there are some examples of mobile-based crowdsourcing projects for pooling collective data, asking for a little help, crowd-creation, voting poll, crowd-funding etc. This study aims to develop a mobile-based crowdsourcing tool for public participation in decision-making process and propose a model for better and smart governance that would also potentially address the issue of the “digital divide”.*

Keywords: Crowdsourcing, Developing World, M-governance, Social Change, PeMobile

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1. Introduction

In July 2011, a group of 25 citizens presented a draft of the constitution to Iceland's parliament. This group of ordinary residents, compiled the document online with the help of hundreds of others ordinary residents. The constitution council posted the first draft in April on its website¹ and then let citizens post their comments via a Facebook Page².

Iceland may be at the top of using crowdsourcing to inform its new government, but it is not alone. Some volunteers at Stanford University also created a site³ where Egyptians could discuss their proposed constitution.

¹ See <http://stjornlagarad.is/> information obtained on 01/02/2012

² See <https://www.facebook.com/Stjornlagarad> Retrieved on 12/02/2012

The crowdsourcing platform is just one of the ways to involve citizens to ensure direct participation in social, political and economic decision making process. However, it is not possible for all citizens to participate in any decision making process online. Is there any chance that this might increase the digital divide between societies? How to bridge the gap, if so? Acknowledging the digital divide, would a combined effort of technical and offline participation enable as many citizens as possible to truly participate to help formulating some important government decisions that affects the day-to-day life of the citizens?

Against this background, the purpose of this research is to identify different challenges faced by governments in developing countries and find ways to overcome those challenges digitally. This research will also introduce a model of m-participation, which will gather and analyze voice of the "crowd" to overcome some crucial challenges for governments. This model will help governments and other organizations to empower common citizens for the sake of better and smart democracy.

The main purpose of this research is to identify the best way for optimal active participation of citizens in decision-making process. Through the utilisation and development of a range of participatory methodological tools and approaches, both online and offline this research aims to design and establish a sustainable digital active participation model that empowers as many citizens as possible by illustrating how people, with little or no technical expertise, can participate in any government decision-making process.

2. State of the Art and Beyond

As it is such a broad term, there are several different types of crowdsourcing. Huge literary works are available on using crowdsourcing for pooling collective data, asking for a little help, crowd-creation, voting poll, crowd-funding etc. Crowdsourcing could be used for different purpose starting from data gathering during emergency to information gathering from common mass to ensure active participation on decision making process. Some authors argue for crowdsourcing and believe crowdsourcing could be used for social change. Others argue that information gathered from crowd sourcing is biased and unreliable.

2.1. Academic Review

It looks the ethical, economic, and social implications of crowdsourcing are subject to wide debate. Douglas Rushkoff (2007), author and media critic, in an interview published in Wired News, expressed doubt about using the term "crowdsourcing" and its implications⁴. Jimmy Wales, co-founder of Wikipedia is also a vocal critic of the term.⁵ Some reports have focused on the negative effects of crowdsourcing on business owners, particularly in regard to how a crowdsourced project

³ See <http://www.wathiqah.com/> Retrieved on 18/01/2012

⁴ Cove, Sarah (2007-07-12). "What Does Crowdsourcing Really Mean?". *Wired News* (Assignment Zero). <http://www.wired.com/techbiz/media/news/2007/07/crowdsourcing?currentPage=1>. Retrieved 01-02-2012.

⁵ McNichol, Tom (2007-07-02). "The Wales Rules for Web 2.0". *Business 2.0*. http://money.cnn.com/galleries/2007/biz2/0702/gallery.wikia_rules.biz2/index.html. Retrieved on 01-01-2012. "I find the term 'crowdsourcing' incredibly irritating," Wales says. "Any company that thinks it's going to build a site by outsourcing all the work to its users not only disrespects the users but completely misunderstands what it should be doing. Your job is to provide a structure for your users to collaborate, and that takes a lot of work."

can sometimes end up costing a business more than a traditionally outsourced project.⁶ There were several instances when mainstream researchers could not rely on information gathered via crowdsourcing.⁷ In an article in October 2010, on MobileActive.org, Paul Currian posed the question, "If all You Have is a Hammer, How Useful is Humanitarian Crowdsourcing"? Paul argued that people do not need more information but better information and he argued that Haiti deployment by Ushahidi was a failure initiative to add value to disaster response.⁸ However, Robert Kirkpatrick (2010), Director of the United Nations Global Pulse program thinks:

*"...organisations may chose not to view the reports. Or they may choose to view them and then dismiss them as not actionable. Or they may choose to act upon them. Regardless, they will be held accountable for these decisions. The game has changed. We need to develop policies, processes and tools to deal with this information, because it isn't going away."*⁹

It has been observed that after the initiative of crowdsourcing the next constitution of Iceland, some other initiatives took place in different parts of the world. One of the important initiatives was to discuss proposed new Egyptian constitution on an online platform,¹⁰ a new crowdsourcing site that launched in June 2011. However some critics even pointed out that this might increase the digital divide in the society. Daren C. Brabham(2008) believes *"the crowd is more likely to be majority white, middle or upper-class, male, college-educated, and with high-speed Internet connections in the home."*¹¹

Patrick Meier (2011), in his PhD dissertation titled "Do 'Liberation Technologies' change the balance of power between repressive states and Civil Society?" tried to find the answer of an important question whether new technologies empower repressive regimes at the expense of civil society or vice versa? However, he has identified that the new technologies do not change the overall power balance significantly.¹²

2.2. Practical Review

As I have mentioned about analyzing some real world examples of "crowdsourcing" initiatives, let us see some examples. The first known example of using mobile for participation is from Finland in 2004-2005 where Mobile Participation has been used in City Planning and Management (Lahti P., Kangasojä J. and Huovila P. (eds.) (2006). In July 2011, a group of 25 citizens presented a draft of the constitution to Iceland's parliament. This group of ordinary residents, compiled the document online with the help of hundreds of others ordinary residents. In USA, "Rock the Vote" campaign helped approximately 120,000 people to register for vote in San Francisco in 2004

⁶ <http://en.wikipedia.org/wiki/Crowdsourcing> Retrieved on 23/01/2012

⁷ During 'Arab spring' this applicant created two crowdmaps using Ushahidi platform. One of them was on Saudi Arabia: <http://amnestysaudiarabia.crowdmap.com>. However, some researchers and campaigners at Amnesty International did not want to use information gathered from the crowd. They could not rely on the information gathered via crowdsourcing.

⁸ See <http://mobileactive.org/how-useful-humanitarian-crowdsourcing?page=1> Retrieved on 12/01/2012

⁹ See <http://mobileactive.org/how-useful-humanitarian-crowdsourcing?page=1> Retrieved on 12/01/2012

¹⁰ See www.wathiqah.com Retrieved on 21/01/2012

¹¹ Daren C. Brabham. (2008). "Moving the Crowd at iStockphoto: The Composition of the Crowd and Motivations for Participation in a Crowdsourcing Application", *First Monday*, 13(6), available online at <http://www.uic.edu/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/2159/1969>.

¹² Meier, Patrick (2011), Do "Liberation Technologies" Change the Balance of Power Between Repressive States and Civil Society? Available at <http://irevolution.net/dissertation/> Retrieved on 14/01/2012

election. The campaign also helped to increase voter registration and turnout during the 2008 US presidential election as well (Stein, M & Verclas, K 2007). Citizens in China and the Philippines can actively send text messages to members of their legislatures. In the Republic of Korea, casting of ballots via mobile phone by over 70% of 300,000 voters in the October 2007 poll for the presidential candidate for the United New Democratic Party. The Party has selected its chair in 2012 by using mobile voting. During the 2006 Presidential Election in Venezuela nearly 8 million voters used SMS to find their polling station. There are some other examples of “direct active participation”. Ushahidi used mobile phones to report violence following the 2007 presidential election in Kenya (Jeffery 2011); The Nairobi People's Settlement Network and Pakistani civil society organisations and activists used FrontlineSMS (an SMS-based system) to co-ordinate flash-mobs, peace rallies and candlelight vigils etc. The Women of Uganda Network's used social networking tools such as websites, email, SMS and mobile phones to reduce violence against women. Recently on 16th December 2012, after the horrific rape incident in Delhi, India, the “Justice Verma Committee” was constituted by the Government of India to look into possible amendments of the Criminal Law to provide for quicker trial and enhanced punishment for criminals committing sexual assault of extreme nature against women. Then the Committee called for suggestions from the general public, social activists and stake-holders to be sent to the Committee by emails, post and fax. In response to that call, the Committee received around 80,000 responses.

2.3. The GAP

While analyzing the above-mentioned government and non-government initiatives of e-participation and m-participation, some basic characteristics have been identified. These initiatives clearly showed different types of mobile uses for different purposes that were really result-oriented. Firstly, mobile devices had been used mainly either for sending information to citizens or to receive information from citizens as SMS. (Limited to 160 characters). Secondly, voice collected from the common “Crowd” via mobile was not used in the decision-making process for social change. Thirdly, almost all initiatives were only one-offs. No communication or very little communication had been made after the post project period. So far we have experience of several crowdsourcing initiatives through e-participation model to gather public opinion for policy-making and decision-making purpose. There are also mobile-based digital tools for economic crowdsourcing, mobile based tool to report during crisis etc. There was no initiative to involve citizens to consult issues broadly during decision-making process by using mobile devices.

The research will be concentrated on “crowdsourcing” and will try to identify whether “crowdsourcing” really helps in providing good governance to social justice and, if so, how to do that in ways that engage as many people as possible. By doing this research we are aiming to develop a mobile based crowdsourcing tool for “Public Participation” in the policy-making and decision-making process that also would potentially address the issue of the “digital divide”.

3. Innovation: The Model

Inspired by the idea of developing a sustainable digital active participation model, I had to acknowledge the issue of the “digital divide” first. Acknowledging the digital divide, the next obvious question came into notice was that how to bridge the digital gap? The answer was: yes, with the help of mobile devices we could bridge the gap and only mobile can ensure the highest level of citizen participation in any planning process to have a real impact in the society. In this

part we will discuss about a simple user-friendly mobile phone/mobile device with the pre-installed “applications for better and smart governance”. We can give a name for this particular mobile device. Let us call it “Peoples’ Mobile” (PeMobile).

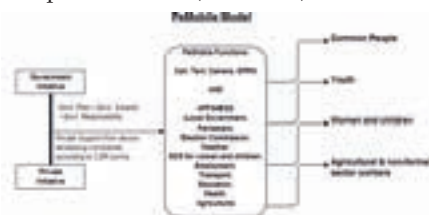


Figure 1: M-participation model for democratic practice

“PeMobile” will have some basic functions like making and receiving calls, sending and receiving texts i.e. SMS, taking photographs i.e. camera and identifying the “PeMobile” carrier’s location i.e. GPRS. Different pre-installed mobile applications (mobile apps) will enable “PeMobile” carriers to practice their basic rights being anywhere, even on the street. Several mobile “applications for better and smart governance” -APPS4BSG (eg. Parliament Apps, Transport Apps, Health Apps, SOS for women in danger etc.) would be mainly public sector focused and pre-installed on each “PeMobile” device and ideally, all information will be available for citizens in local language(s).

3.1. Functions for APPS4BSG (Applications for Better and Smart Governance)

In this section, I would like to comment on the functions of APPS4BSG. This “APPS4BSG” device will also allow citizens to participate in any local and national level policy-making process. The APPS4BSG will function in different steps. Step 1: Citizen sends SMS/types comments on the Apps; Step 2: Apps collects information from the virtual world (optional); Step 3: At the back-end of the apps, a Knowledge based system/Inference Engine/Expert system will analyze collected comments; Step 4: It produces the result in an understandable format; Step 5: Policy makers will use the result for further action (produce new laws, repair road etc.)



Figure 2: Architecture of ‘APPS4BSG’

3.2. Basic Principles of “PeMobile” Model

Governments should play a huge role in developing this kind of service for better and smart governance to secure wider citizens participation. The initiative has to come from governments as ideally, “PeMobile” would be used for better services to its’ own citizens. An ideal “PeMobile” Project would be government aided. As citizens are paying tax, government would provide up to 100% financial support (the financial support has to be defined according to the family income) to the family of the “PeMobile” owner and at the same time government has to ensure that every family owns at least one “PeMobile”.

4. Conclusion and Future Work

Earlier in this paper, I explored how mobile technology could be used for democratic practice through the m-participation model. From the model, I found that to achieve the ultimate goal of a real democratic world in the era of Information Technology, we have to solve some issues related to Legal, User Generated Contents, Identification and Security, Cultural resistance, etc.

As m-participation is a huge shift from c-participation, a big number of people still believe that visiting an office is better than doing something via mobile devices. So, governments have to overcome this challenge as well.

To conclude, I must stress that the developing world should take necessary steps to ensure m-governance system for each of their citizens without delay so that governments could be in touch with citizens at all time.

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About the Author

Buddhadeb Halder

Buddhadeb Halder is currently doing a PhD in Law, Science and Technology under the Erasmus Mundus Programme. Prior to this he worked as an Online Communities Officer in the Activism Unit at the International Secretariat of Amnesty International. He was responsible for managing a bi-lingual website and Activism Centre of Amnesty International, multi-cultural and multi-lingual online campaigning communities on different Social Networking Sites, developing different campaign strategies, developing online capacity building projects for activists from countries where Amnesty International does not have any sections/structures. Prior to this he worked as campaign coordinator, researcher and project manager in different human rights organizations in India.

Halder has previously led various workshops e-campaigning, popular mobilisation e and activists. Audience feedback has been positive.

Politische Kommunikation bei Wahlkämpfen zum Europäischen Parlament

Der Einsatz von Social Media bei Wahlkämpfen am Beispiel der Niederösterreichischen Landtagwahlen 2013

Gerda Füricht-Fiegl

Gerda.fuericht-fiegl@donau-uni.ac.at

Abstract: *Bei Wahlkämpfen auf nationaler Ebene kommen moderne Techniken und Strategien des Kampagnenmanagements zum Einsatz. EU-Wahlkämpfe werden demgegenüber oft als „Wahlen zweiter Wahl“ wahrgenommen. Es gilt die Gründe dafür zu beforschen. Einzubeziehende Größen sind einerseits die Europäische Öffentlichkeit, die politische Kommunikation und Kampagnenplanung bei Wahlkämpfen sowie die Rolle der Medien. In dieser kurzen wissenschaftlichen Arbeit liegt der Fokus auf dem Einsatz der Medien - im Besonderen der Social Media.*

Keywords: Wahlkampf, Social Media, EU-Wahlkampf, Politische Kommunikation, Politische Kampagnen, Europäische Öffentlichkeit

Die Wahlkämpfe zum Europäischen Parlament werden von den EU-Bürgern oftmals als „Wahl zweiter Wahl“ wahrgenommen. Gründe für die geringe Aufmerksamkeit und Apathie, mit der die Bürger der Europäischen Union insgesamt und den EU-Wahlen im Besonderen begegnen, sind in der wissenschaftlichen Literatur vielschichtig dargestellt.

1. Europäische Öffentlichkeit

Tenscher sieht für die stiefmütterliche Behandlung europäischer Wahlkämpfe unterschiedliche Gründe – angefangen vom mangelnden Interesse der Bevölkerung an europäischen Themen über ein Prominenzdefizit europäischer Politiker bis hin zu mangelndem Interesse der Parteien. (Tenscher, 2005, S. 15). Eine Argumentation die sich irgendwann im Kreis dreht und in der Wähler, Parteien und Massenmedien feststecken. Der Kern um den es sich zu handeln scheint, lässt sich mit Involvierung wohl am besten umschreiben. Es geht darum, das Interesse an europäischen Problemen und Ereignissen und damit den Grad der Involvierung seitens der Wählerschaft zu heben und damit sukzessive eine europäische Öffentlichkeit auszubilden (Tenscher, 2005, S. 16).

Derzeit liegt allerdings für den politischen Beobachter die Vermutung nahe, dass europäische Rahmenbedingungen und Spezifika kaum Berücksichtigung bei der EU-Wahlkampagnen-Konzeptionierung und Durchführung finden. Vor allem nationale Themen wie auch PolitikerInnen werden in den EU-Wahlkämpfen in den Mittelpunkt gerückt. Wenn jedoch eine

europäische Öffentlichkeit ein erstrebenswertes Ziel darstellt, scheint es wenig sinnvoll die Mechanismen der politischen Kommunikation bei nationalen Wahlkämpfen 1:1 auf EU-Wahlkämpfe anzuwenden.

Das Forschungsinteresse gilt den Möglichkeiten einer Übertragung von Mechanismen nationaler, politischer Kampagnen auf europäische Ebene.

Die Forschungsfrage lautet:

Welche Mechanismen der politischen Kommunikation bei nationalen Wahlkämpfen – am Beispiel der Nationalratswahlen in Österreich 2013 - sind auf Wahlkämpfe zum Europäischen Parlament anwendbar bzw. welche Mechanismen kommen ausschließlich auf europäischer Ebene zur Anwendung?

Subfrage: Welche Lehren lassen sich aus dem Einsatz von Social Media beim Wahlkampf zu den Niederösterreichischen Landtagswahlen im März 2013 für den EU-Wahlkampf 2014 ziehen

2. Politische Kommunikation bei Wahlkämpfen

Wahlkampagnen sind wichtige Spezialfälle der politischen Kommunikation. Die Abläufe von Kampagnen folgen dramaturgischen Regeln die durch strukturelle und kulturelle Rahmenbedingungen festgelegt sind. Kampagne bezeichnete ursprünglich die Zeit, die ein Heer im Feld verbrachte. Diese militärischen Wurzeln verweisen auf Frontstellung und damit die Grundidee: Mittels begrenzter Ressourcen in einem begrenzten Zeitraum ein hindernisbehaftetes und meist kontroverses Ziel zu erreichen. Kampagnen sind somit dreifach konzentriert: sachlich, zeitlich und sozial. Wahlkämpfe zeichnen sich ebenso durch eine klare Zielsetzung aus und sie werden begleitet von einer höheren Aufmerksamkeit durch Medien und Bevölkerung.

Vor allem in Wahlkämpfen gilt es, mit verschiedenen Kommunikationsinstrumenten dem gesteigerten Aktivierungsbedarf entgegenzutreten. Wahlwerbende Parteien haben sich in den letzten Jahren immer mehr den Techniken und Strategien des modernen Kampagnenmanagement geöffnet. Der Aufbau von Wahlkampagnen ist dabei dem von klassischen PR-Kampagnen sehr ähnlich.

Es geht darum,

- das Ziel festzustecken
- eine Strategie zu entwickeln
- die Zielgruppe mit demoskopischen Mitteln klar zu definieren
- die Botschaft zu entwickeln
- die Umsetzung zu planen und immer wieder zu evaluieren (oftmals mit demoskopischen Mitteln)

Ziel ist es, möglichst viele Wählerstimmen zu bekommen und das steigende Kontingent parteiabstinenter WählerInnen zur Stimmabgabe für die eigene Partei / Person zu bewegen. Bei aller Notwendigkeit innerparteilicher Mobilisierung gelingt dies nur über die Massenmedien. Sie

sind in Wahlkampfzeiten mehr noch als außerhalb von Wahlen die zentrale Plattform der Politikdarstellung. In diesem Zusammenspiel von Politik und Medien sprechen Jarren und Donges von einem Tausch Information gegen Publizität (Jarren/Donges, 2006, S.25).

3. Rolle der Medien

Nachdem wie bereits in der Einleitung erwähnt, EU-Wahlen von den BürgerInnen als zweitrangige nationale Nebenwahlen wahrgenommen werden, werden sie „auf eben solche Art und Weise auch von den Massenmedien behandelt und den Wählern präsentiert.“ (Tenscher, 2005, S. 12) Gerade den Medien, von Print über Rundfunk bis zu den Social Media, kommt in Wahlkampfzeiten eine zentrale Rolle zu. Oder wie Thomas Hofer formuliert: „Wir leben heute in einer Mediendemokratie, politische Prozesse und Ereignisse werden beinahe ausschließlich über die Kanäle der Massenmedien abgeführt“ (Hofer, 2005, S 12). Für Ulrich Sarcinelli wird unter dem Phänomen der Medialisierung - oder auch Mediatisierung genannt - der Politik dreierlei verstanden:

- (1) *Die wachsende Verschmelzung von Medienwirklichkeit und politischer wie sozialer Wirklichkeit,*
- (2) *die zunehmende Wahrnehmung von Politik im Wege medienvermittelter Erfahrung sowie*
- (3) *die Ausrichtung politischen Handelns und Verhaltens an den Gesetzmäßigkeiten des Mediensystems. (Sarcinelli, 1998, S 678)*

In den klassischen Massenmedien wie Print, Rundfunk und TV übernehmen Journalisten die Rolle der Gatekeeper und konstruieren damit die Wirklichkeit – oder wie Luhmann sagt: „Was wir über unsere Gesellschaft, ja über die Welt, in der wir leben, wissen, wissen wir durch die Massenmedien“ (Luhmann, 2009, S. 9). Diese Gatekeeper-Rolle hat allerdings in den Social Media keine Bedeutung.

3.1. Social Media in der politischen Kommunikation

In den Social Media kann jede/r online Ideen, Content, Gedanken austauschen und Beziehungen herstellen. Social Media unterscheiden sich von den Massenmedien dadurch, dass jede/r Social-Media-Content erstellen, kommentieren und erweitern kann. Zwar ändern sich durch die Social Media die Rollen in der öffentlichen Kommunikation bis zu einem gewissen Grad, welche Relevanz sie ganz generell im Bereich der politischen Kommunikation haben, gilt es zu erforschen. Ein Beitrag dazu liefert diese Kurzanalyse zum Einsatz der Social Media im Wahlkampf zu den Niederösterreichischen Landtagswahlen im März 2013.

4. Fallbeispiel: Wahlkampf bei den Niederösterreichischen Landtagswahlen 2013

Wahlkämpfe spielen sich heute vor dem Hintergrund abnehmender ideologischer Gegensätze, der Zunahme der Wechselwähler und einer steigenden Bedeutung von Massenmedien ab. Wachsende Mobilität, stark unterschiedliche Lebensentwürfe (klassische Familie, Singlehaushalte..) führen auch zu einer Abnahme der Konflikte zwischen Klassen. Damit wird es schwieriger, den unterschiedlichsten Interessen eine Stimme zu geben bzw. klar einer Partei zuzuordnen. Ein weiteres zu berücksichtigendes Phänomen ist das sinkende Vertrauen in die politischen Parteien und PolitikerInnen. Die in den Medien oft zitierte „Politikverdrossenheit“ ist vor allem bei jungen

Menschen zu spüren und es gelingt den demokratischen Parteien nur unzureichend, sich als attraktiver Ort für soziales und politisches Engagement zu präsentieren.

Vor diesem Hintergrund fanden am 3. März 2013 die Niederösterreichischen Landtagswahlen statt. Alle wahlwerbenden Parteien setzten in ihren Wahlkampagnen – neben anderen Kommunikationsmaßnahmen – auch auf online-Kommunikation bzw. Social Media. Der Einsatz der Social Media – konkret Facebook, Twitter, flickr – wurde untersucht. Gegenstand der Social Media-Kurzanalyse waren all jene Parteien, die in ganz Niederösterreich (nicht nur in einzelnen Bezirken) kandidierten.

Kriterien	ÖVP	SPÖ	FPÖ	Grüne	Team Stronach
Genutzte Kanäle ¹	alle	alle	Ausschließlich Homepage – bei anderen Kanälen: Verlinkung mit Bundespartei	alle	Alle außer flickr
Personalisierung Spitzenkandidat/in	Völlige Fokussierung; Partei tritt in den Hintergrund (Seitenname, Fotos)	Weniger klar ausgeprägt	Klare Fokussierung	Klare Fokussierung	Klare Fokussierung auf Parteichef Bundespartei (kein NÖ-Kandidat)
Likes auf facebook (Stand 27.2.2013)	9.200	2.825	-	577	8.198
Botschaft / Inhalt	Eine klare kurze Kernbotschaft (ein Landeshauptmann für alle)	Mehrere Botschaften	Kurze Kernbotschaft („Mut zur Heimat“ - wurde schon im Wahlkampf davor verwendet)	Eine Hauptbotschaft („Saubere Politik“), mehrere Subbotschaften	Mehrere Botschaften

¹ Analysiert wurden folgende Kanäle: Homepages der Parteien sowie der SpitzenkandidatInnen, facebook, twitter, flickr

Specials extra für Social Media	- Erwinize me-App - Reime für Erwin	Gewinnspiel – auch über andere Kanäle	-	-	Best of Frank (Sager des Parteichefs)
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Tabelle 1: Beobachtungszeitraum: 15.2.2013 bis 3.3. 2013 (Start Wahlkampf ÖVP und Team Stronach bis zum Wahltag)

Auf Basis dieser Kurzanalyse kann in einem weiteren Schritt der Social Media-Auftritt der einzelnen wahlwerbenden Parteien interpretiert werden und mit Erkenntnissen aus anderen Wahlkämpfen verglichen werden. Dieses Paper liefert dazu den Einstieg.

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About the Author

Gerda Füricht-Fiegl

Wissenschaftliche Mitarbeiterin / Lehrgangsleiterin am Departement Wissens- und Kommunikationsmanagement der Donau-Universität Krems. Langjährige praktische Erfahrung im Bereich der politischen Kommunikation (Fokus EU). Master-Studium “PR und Integrierte Kommunikation” an der Donau-Universität Krems. Dozentin zu den Themen politische Kommunikation und Politisches System EU. Seit Februar 2013: Doktoratsstudium von netPOL im Fachbereich Politikwissenschaft.

Die Reputation von Partei-Vorsitzenden in Mitgliederparteien

Twitter-Analyse am Beispiel SPÖ und ÖVP von Jänner-April 2013

Rosemarie Nowak

Rosemarie.nowak@donau-uni.ac.at

Abstract: Der Trend zur Personalisierung hält an, sowohl in der Wirtschaft als auch in der Politik. Die persönliche Positionierung wird wesentlich durch die eigene Reputation beeinflusst. Diese wird organisationsintern, über die Interne Kommunikation vermittelt, da es nicht möglich ist, zu einer großen Personengruppe persönliche Beziehungen aufzubauen. Twitter ist ein Soziales Medium, über das potenziell auch Partei-Mitglieder angesprochen werden. Daher wurde in einer Kurzanalyse die Häufigkeit der Nennung der Partei-Vorsitzenden der ÖVP und SPÖ analysiert.

Keywords: Parteivorsitzende, Reputation, Mitgliederparteien, Twitter

Der Trend zur Personalisierung ist in vielen Lebensbereichen festzustellen. In der Politik ist diese Entwicklung bereits seit längerer Zeit zu konstatieren (vgl. Pelinka/Rosenberger 2003: 157). Auf Wahlplaketen sind in der Regel die SpitzenpolitikerInnen abgebildet, durch deren Person eine ganze Partei und deren inhaltliche Forderungen repräsentiert wird.

Auch im Wirtschaftsleben nimmt die Personalisierung ständig zu. Während sich Produkte und Dienstleistungen einander in ihren Eigenschaften und in der angebotenen Qualität kontinuierlich annähern, versuchen Unternehmen sich über ihre Reputation zu differenzieren. Ausschlaggebend für das Vertrauen des Marktes in ein Unternehmen ist nach Lies (2003: 135f) die „Reputation, die das soziale Umfeld eines Akteurs signalisiert.“ Für Nies (2003: 112) ist jede/r MitarbeiterIn und jede/r ManagerIn für die Reputation des Unternehmens verantwortlich. Insbesondere erhält der/die CEO ein spezielles Gewicht, ein Unternehmen zu repräsentieren.

Eine ähnliche Konzentration auf den/die CEO kann in der Internen Kommunikation beobachtet werden. Schick (2010: 70) geht davon aus, dass alle MitarbeiterInnen auf ihre direkten Vorgesetzten blicken, aber auch auf die oberen Ränge. Sie erwarten Vorbilder, „im eigenen Verhalten und bei der Steuerung des Verhaltens anderer.“ (ebd.)

1. Die Bedeutung Vorsitzender in der Internen Kommunikation innerhalb Mitglieder-Parteien

Um in der Wirtschaft die eigenen MitarbeiterInnen zu motivieren, ihre Loyalität zum Unternehmen zu stärken und das Vertrauen in den CEO zu erhöhen, wird Interne

Kommunikation durchgeführt und laufend verbessert. Diese Thematik wurde wissenschaftliche bereits eingehend untersucht und es ist einige Ratgeberliteratur wie Schick (2010) oder Fallosch (2007) erschienen, als auch Sammelbände mit Erfahrungsberichten aus der Praxis, wie Dörfel (2008) oder Klöfer/Nies (2003), publiziert worden.

Zur Internen Kommunikation in politischen Parteien finden sich bei erster Recherche zwar einige Werke, welche die Partei-Mitglieder ins Zentrum stellen, die zumeist den Mitgliederschwund thematisieren (vgl. Scholte 2011; Marcinkowski/Pfetsch 2009), jedoch keine wissenschaftlich breiter verortete Untersuchungen. Hier kann das Spannungsfeld abgeleitet werden, wie sich die Interne Kommunikation in politischen Parteien gestaltet und inwiefern die in Unternehmen und Organisationen identifizierten Muster für diese Parteien zutreffen. Mit Bezug auf die Vorsitzenden ergeben sich für das Dissertationsvorhaben folgende Forschungsfragen:

- Welche Bedeutung nehmen Vorsitzende in der Internen Kommunikation innerhalb Mitglieder-Parteien im deutschen Sprachraum ein?

Subfragen:

- Wie wirkt sich die Vorsitzenden-Reputation in der Internen Kommunikation innerhalb Mitglieder-Parteien im deutschen Sprachraum aus?
- Welche Bedeutung haben Vorsitzende in Bezug auf die Interne Kommunikation in Change-Prozessen innerhalb Mitglieder-Parteien?

1.1. Partei-Vorsitzenden und die Interne Kommunikation

Partei-Vorsitzende streben in der Regel sowohl extern wie intern an, Wahlen zu gewinnen. Als Führungspersönlichkeiten haben sie den Willen zum Gestalten, was wiederum nur in Zusammenarbeit mit anderen Personen möglich ist, die ihnen ihren Willen unterordnen, um ein Ziel zu erreichen, bzw. ihren Willen an eine andere Person zumindest temporär abgeben. Max Weber (1976: 28) definierte in diesem Zusammenhang Herrschaft als „die Chance, für einen Befehl bestimmten Inhalts bei angebbaren Personen Gehorsam zu finden.“ Etwas zeitgemäßer geht Eisenegger (2009: 15) mit der Thematik um, indem er argumentiert, dass die Macht, welche der Obrigkeit übertragen wird, von den Untergebenen als legitim anerkannt werden muss.

In demokratischen Gesellschaften werden Parteivorsitzende von Parteimitgliedern gewählt. Diese Wahlen finden periodisch statt und es ist genau geregelt, welche Funktion eine Person ausüben muss, um an dieser Wahl teilzunehmen. (vgl. beispielsweise ÖVP 2013: 14-16; SPÖ 2012: 14ff.).

Die effektivste Art und Weise, mit Mitgliedern in Kontakt zu treten, eine Beziehung und Vertrauen aufzubauen, Meinungen zu beeinflussen und sich auszutauschen, ist das persönliche Gespräch. In der Realität treffen Parteivorsitzende die Mitglieder, auch jene die ihre Wahl entscheiden, weit häufiger bei Parteiversammlungen bzw. bei Massenveranstaltungen, bei denen persönliche Gespräche kaum möglich sind. Dieser Personenkreis ist sicherlich zu groß, um zu allen Wahlberechtigten eine persönliche Beziehung aufzubauen. Daher wird es analog der Muster in großen Unternehmen auch in Mitglieder-Parteien nötig sein, Interne Kommunikation durchzuführen.

1.2. Reputation von Parteivorsitzenden

Mit einer geringen oder ohne persönliche Beziehung, gewinnt die Reputation des Parteivorsitzenden an Bedeutung. Ein CEO eines Technologiekonzerns hat die Thematik in diese Worte gefasst: „Tausende Mitarbeiter kennen mich nur über meinen Ruf. In diesem sehr konkreten Sinn ist meine Reputation alles.“ (Langen/Wreschniok 2008: 232) Die Reputation der Parteivorsitzenden beeinflusst wesentlich, welche Meinung die Partei-Mitglieder von ihnen haben und dem Gedanken folgend auch, ob sie ihn/sie wieder wählen.

Eisenegger (2009: 11ff.) untergliedert Reputation in drei Ausprägungen. *Funktionale* Reputation ist an Kompetenz und Erfolg geknüpft. Die sachlichen Errungenschaften und messbaren Ergebnisse stehen im Vordergrund. Bei der *sozialen* Reputation kommt es darauf an, wie Personen soziale Normen und Werte beachten und wie ihr ethisches Verständnis gestaltet ist. Die soziale Reputation wiegt laut Eisenegger in der öffentlichen Meinung schwerer als die funktionale Reputation. Die *expressive* Reputation beinhaltet, welch attraktives, unterscheidbares Profil eine Person aufweist. Personen mit einer positiven expressiven Reputation wirken faszinierend, sympathisch und einzigartig.

2. Kurzanalyse Reputation von Partei-Vorsitzenden auf Twitter

Twitter ist einer der beliebtesten Sozialen Medien, um mit der Öffentlichkeit auf schnellem Wege in Kontakt zu treten. Obwohl, wie Filzmaier (2011: 62) untersucht hat, die Partei-Mitglieder immer älter werden und die Anzahl der Partei-Mitglieder prinzipiell sinkt¹, kann angenommen werden, dass sich politische Parteien via Twitter sowohl an externe Wähler wie an ihre eigenen Partei-Mitglieder wenden, um Informationen rasch zu transportieren und den Kontakt aufrecht zu erhalten.

In einer Kurzanalyse wurde als Annäherung an das Thema untersucht, in wie vielen Tweets Partei-Vorsitzende der ÖVP und der SPÖ von Jänner bis inkl. April 2013 namentlich im Kurztext von ihrer eigenen Partei via Twitter genannt wurden. Wie in Abbildung 1 zu sehen ist wurde der Parteivorsitzende der ÖVP beinahe in jedem zweiten Tweet in der Überschrift erwähnt, wohingegen der Erwährungsgrad bei der SPÖ nicht einmal ein Drittel erreicht.

	Anzahl Follower per 7.5.2013	Anzahl Tweets	Erwähnung Parteivorsitzende	in Prozent
ÖVP/Spindelegger	1687	229	110	48
SPÖ/Faymann	2891	157	44	28

Tabelle 1: Erwähnung Partei-Vorsitzende auf Twitter 01-04/2013 (eigene Darstellung 2013, Daten entnommen aus: Twitter SPÖ 2013 und Twitter ÖVP 2013)

Ursprünglich hätte auch die Twitter-Seite der FPÖ untersucht werden sollen. Es findet sich jedoch kein Twitter-Button auf der FPÖ-Homepage (vgl. FPÖ 2013). Die gefundene Twitter-Seite kann nicht als offizielle Partei-Seite eingestuft werden, da diese hinsichtlich ihrer Systematik anders aufgebaut ist. Strache scheint selbst zu posten und einige seiner Parteikollegen sind

¹ Filzmaier hat diese Tendenzen für Deutschland untersucht. Es kann davor ausgegangen werden, dass sich die Entwicklung in Österreich ähnlich verhält.

ebenfalls sehr aktiv, sodass die Anzahl der Tweets für eine Kurzanalyse zu hoch war. In einem überblicksmäßigen Eindruck kann festgestellt werden, dass Strache überproportional gelistet wird. (vgl. FPÖ 2013a)

Ein Ergebnis der Kurzuntersuchung ist, dass die Inhalte der Tweets nicht eindeutig den Reputationsausprägungen nach Eisenegger (2009ff.) zugeordnet werden können. Warum es bei den Nennungen zwischen ÖVP und SPÖ einen derart große Unterschied gibt, könnte Gegenstand weiterer Forschung sein.

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About the Author

Rosemarie Nowak

Arbeitet als Lehrgangsleiterin für PR-Programme an der Donau-Universität Krems. Hat Politikwissenschaft und eine Fächerkombination aus Soziologie und Geschichte an der Universität Wien studiert. Seit dem SS 2013 absolviert sie ein Dissertationsstudium im Fachbereich Politikwissenschaft im Rahmen von netPOL.

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