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Editorial



Editorial

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Welcome to CeDEM16! The conference series began in 2007, and throughout these years we have not really rested. As 2016 marks 10 years of conferences, we begin this editorial with a brief history of changes and our ambition to improve.

Conference topics have changed in the last 10 years, reflecting changing patterns, ideas and issues in society. The first conferences (2007, 2008) looked for answers and solutions for problems in and with E-Democracy, citizen participation, and democratic processes. By 2009, the conference had broadened thematically and become a place for the exchange of theoretical knowledge, research and practice in several fields, including E-Government, E-Voting, online deliberation and consultation. Whilst these fields were seen as having the potential to enhance and revive democratic systems, they came with a warning that ill-advised projects may cause more damage than bring benefits. 2010 considered new issues that can by now be considered as “standards”: transparency, openness, flexibility, and collaboration. It also became clear that the focus of theory, research, and practice needs to go beyond national boundaries.

From then onwards, the conference was characterised by several major changes. In 2011, the conference name was changed to CeDEM, Conference for E-Democracy and Open Government; we collaborated with the Competence Center for Electronic Voting (E-Voting.CC), we accepted new formats (short papers known as “Reflections”) and became a multi-track conference. This resulted in an overwhelming number of submissions. In 2012 CeDEM was extended to 3 days and given a twin sibling, the CeDEM Asia conference, held for the first time in Singapore - together the conferences attract participants from all over the world. By 2013, it became clear that in order to understand large-scale societal issues it is important to remember that the “small is beautiful (too)”, and that contradictions and different aims are important contributions and drive innovation. CEDEM13 offered more informal (CeDEM Open Space) and formal (PhD Colloquium) opportunities to discuss new processes, ethical and legal aspects, the ripples and currents in society. The Best Paper Award was presented for the first time in 2014 to an Italian trio of authors. By 2015, CeDEM had become a “large” conference, but the Track Director’s meeting concluded that the aim should be more quality. The peer-review and the 50% rejection rate remain, but 2016 is marked by a Technical Co-Sponsorship with the IEEE Computer Society, so that peer-reviewed full papers are now published with IEEE.

The papers here are the proceedings published with the Edition Donau-Universität, and they contain the Reflections, PhD papers, and workshops, and reveal the wide range of issues in the

fields of E-Democracy and open government. The CeDEM Reflections allow authors the freedom to appraise, describe and even speculate on topics without the tight corset of the double-blind review used for the full papers. This year sees authors describe and implement innovative research methods and approaches, such as coding to study online visual communication (e.g. Instagram) in political decision making (Russmann and Svensson) or intelligent storytelling as a method to engage citizens in E-Participation (Laurita, Monteleone, and Zottoli). Other methods are brokering, to connect young people with politicians (McAleer et al.) or the use of multiple online identification methods (Sachs et al.) to support E-Participation. The “kampong spirit” (i.e., “village spirit”) is adopted as a way of understanding technology’s potential to transform the individual, society and nation (Soon). Authors of the Reflection papers discuss dimensions of political participation, such as the E-Participation Ladder (Krabina) and cross-government collaboration (Dungga et al.). The Reflections also present experiences in E-Participation in Austria (Reichl et al.) and E-Government in the Russian Federation (Burov et al.). Lampoltshammer and Höchtl focus on the development and evaluation of mechanisms that measure, monitor, and improve data quality of open data, whilst Laurita, Iiritano and Zottoli present the tool Open Data Explorer (ODE) that facilitates the identification and reuse of data sets.

The PhD students’ research work presented at the CeDEM16 Colloquium reveals new ideas in the use of technology in e-democracy and e-participation, such as the employment of online spaces by governments to enhance citizen participation (Panjatan), the mechanisms for strengthening social participation in virtual environments (Galdino de Magalhães), the role of government transparency and government data for the public to increase government accountability (Khan), but also its impact, e.g., the political parties’ use of ICT on representatives (Haberer). PhD students also present research on political participation that focuses on a particular user group, such as students (Wolf), or the use of the psychological concept of “Sense of Community” (O’Brien). The role of media is investigated by analysing the closed features of social media to study civic engagement (Rohman), or by considering the ethics and codes of conduct in online science journalism (Bräutigam).

The Open Space and the workshops at CeDEM offer participants the opportunity to discuss and test in depth some of the issues presented at the conference. Workshop topics include the role of Open Data in virtual research environments (Zuiderwijk et al.), ways of encouraging citizens to use Open Data (Molinari et al), Open Access in publishing (Lampoltshammer et al.), and the use of plain language in public text and public communication (Lutz). Participants are invited to join workshops on Participatory Budgeting (De Cindio and Stortone), virtual commons (Rhydderch et al.), as well as speed dating (but with smart contracts, Kolain and Wirth) and community organisation in technological ecosystems (Paulin).

These 10 years with the associated changes and improvements have been accompanied by experts, keynotes, authors, participants, Programme Committee Members, Track Directors, reviewers and Danube University Staff. We hope you have enjoyed these 10 years as much as we have, and look forward to the next decade!

Enjoy CeDEM16!

Reflections



How to Study Instagram? Reflections on Coding Visual Communication Online

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Abstract: Instagram is a social media platform centered on sharing pictures. The question is how to study this platform based on visual communication? In this short reflection we discuss parts of a codebook we developed for the study of Swedish political parties' use of Instagram during the 2014 election campaign. We believe that variables such as perspective, broadcasting, mobilization, personalization, interactivity, privatization, reciprocity, and negative vs. positive tonality are useful for studying other organizations' (businesses as well as non-profit) practices of visual communication online.

Keywords: coding, Instagram, interactivity, visual online communication

1. Introduction

The hype around digital communication platforms started more than a decade ago. Since then, the use and expected effects of social media platforms in the communication of business, politics, public authorities, NGOs, and NPOs have been studied extensively in different contexts. Until today the majority of studies focus on Facebook and Twitter. We direct our reflection on Instagram, a social media platform on the rise that is centered on sharing pictures. With Instagram, organizations can engage people such as stakeholders and voters, communicate with them and foster participation. The question is how to study this platform? In this short methodological reflection piece we discuss some variables we developed for the study of Swedish political parties' use of Instagram during the 2014 election campaign. But before attending to the variables, a short history of Instagram.

Instagram was launched in October 2010 and since then has gained increasing popularity. In December 2014 Instagram had over 300 million users worldwide (Fiegerman, 2014); outperforming the often-researched platform of Twitter (Knibbs, 2014). Although Twitter seems to be the platform that has caught most of the attention among communication scholars (e.g., Jackson & Lilleker, 2011), today, Instagram is used more often than Twitter. In Sweden about 28% of the population aged 12 and older use Instagram regularly and 17% of them even on a daily basis (compared to 23% of the population aged 12 and older using Twitter regularly and only 6% on a daily basis, see Findahl, 2014). Hence, we need to add this platform to the social media ecology in our studies of organizations online.

Regarding the question of how to study Instagram, previous studies on social media such as Facebook and Twitter can be helpful. But Instagram is image-centered whereas Twitter and Facebook are more text-centered. Hence, we argue that we also need “new” theoretical and empirical approaches. First and foremost, we can draw on research in the field of visual communication. Studies in the field of visual communication have highlighted that pictures are more effective than text in gaining viewers’ attention and they “have a powerful impact by increasing viewers’ attention and retention” (Fahmy, Bock, & Wanta, 2014, p. 133). The examination of Instagram thus seems to be of great importance for business and political communication. Analytical approaches on images (in the field of political communication) show that images “can have rhetorical impact and make persuasive arguments to viewers” (Schill, 2012, p. 122). Images may serve as an agenda setting function, dramatize policy, aid in emotional appeals and also help to build a candidate’s or brand’s image, create identification and connect to societal symbols (Schill, 2012). Images that also use text may be even more effective in communicating messages (Schill, 2012). Hence, online communication processes change substantially with images.

2. Method

We believe that the variables we have developed are apt for studying how corporate as well as political actors are using Instagram. Variables in the codebook center around broadcasting (whether Instagram is used as a tool to spread information), mobilization (whether Instagram is used to mobilize stakeholders (e.g., voters and customers) by an explicit “call to action”), image management (whether Instagram is used to spread a particular picture of the organization), personalization (to what extent is a message personalized), hybridity (in what ways offline and (other) online communication instruments are invoked on Instagram) and interactivity (whether Instagram is used to engage in two-way interaction with stakeholders).

We will explain these variables below, but first a short note on the vocabulary. Instagram is a platform that centered on uploading and sharing pictures that may or may not be textually tagged with a so-called caption and that followers may or may not comment on. User roles on Instagram are divided into posters and followers. We have delineated postings from posts: A posting is only the information provided by the poster (i.e., picture with or without caption) and a post may also include comments and likes from followers.

2.1. Perspective

First we want to code from which *perspective* the picture is taken: Is it an official picture of an organizational actor (e.g., the top candidate) or a snap shot (i.e., the user can take the perspective of the person that took the picture). So we code for (*rather*) *official context* or (*rather*) *snap shot/selfie context* and *not applicable* if neither applies.

2.2. Broadcasting

In order to understand the strategic use of Instagram its *broadcasting* function has to be considered. Whether social media is used in an interactive or broadcasting manner has been the subject of much debate. Most studies in political communication have demonstrated that political actors do not respond to messages posted to them on social media (e.g., Sweetser and Lariscy, 2008). In Sweden, political actors primarily used Twitter to broadcast information during the previous national elections in 2010 (Svensson, 2011). Hence, the question that arises is whether Instagram – just as other social media – is primarily used to spread information?

The variable broadcasting refers to postings that transmit information on opinions, stances, statements and performances to a dispersed audience. It is about giving information that does not expect a response. Postings are used as a broadcasting instrument if the distribution of information is in the center. Hence, the coding scheme differentiates between (*rather*) *broadcasting* is dominating the posting, it is (*rather*) *not broadcasting* or if it is not clearly distinguishable the posting is coded as *balanced/ambivalent*.

2.3. Mobilization

The use of social media is not just about spreading information, organizations also want to mobilize people to vote for a party, to buy a product or to join an event for example. In the field of political communication, Vaccari (2013) among others notes that one of the main campaign functions of the Internet is to mobilize supporters. The question thus arises whether organizations use Instagram to mobilize their stakeholders or not.

The variable mobilization refers to a “call for action”. Postings are mobilizing, if they convey an activating, dynamizing and involving character such as an invitation to citizens to interact, to take part in a survey, movement or rally, to follow a politician, or to go to the ballot. Postings are coded as (*rather*) *mobilizing* when more than 50% of the elements in the posting have a mobilizing character and as (*rather*) *not mobilizing* when less than 50% of the elements have a mobilizing character. Again, if this is not clearly distinguishable the posting is coded as *balanced/ambivalent*.

2.4. Image Management

An organization also seeks to manage its impression, image or brand. Here Goffman’s (1959, *The Presentation of Self in Everyday Life*) work on how individuals seek to manage what impression they give to others has been influential. In political communication a study from the US and the UK showed how digital media were used as front regions for political actors presenting themselves to the electorate (Stanyer, 2008). Simply by being online politicians are conveying the message that they are up-to-date (Jackson and Lilleker, 2011). Organizations thus turn to social media to present an attractive image. In politics this is related to the much discussed trend of personalization to which social media use has also been linked to. Research has shown that campaigns increasingly focus upon the personality of top candidates as the “communication of messages requires a messenger” (Plasser, 2009: 25). Specifically, offering a glimpse of private moments of a politician

can help the voter to identify with her/him. Thus, the question arises whether Instagram is used to manage a *professional* or *personal image*, and whether *top candidates/celebrities* are highlighted or *not*.

2.4.1. Personalization

Here it is of interest whether one (or more) single person(s) are appearing as primary carriers/referring objects of the picture; then the picture is identified and coded as (*rather*) *personalized/individualized* or many people and other images than people are appearing as primary carriers/referring objects of the picture; then the picture is identified and coded as (*rather*) *not personalized*. Again, if this is not clearly distinguishable we code *balanced/ambivalent*.

2.4.2. Celebrities

For every picture it is recorded if it includes a famous person such as a top politician or a business leader. If a person of public interest (celebrity) can be identified we code *celebrity visible*. If this is not the case we code *not visible*. If a celebrity is visible in the picture the *name* of the identified celebrity is also coded.

2.4.3. Privatization

If a person is visible in the picture it is coded in what context she/he is predominantly displayed. We differentiate between professional context (giving a speech/press conference, shaking hands, at a rally, etc.) and private context (family, hobbies, personal matters, etc.). In case the picture is focusing predominantly on the professional context of a person we code (*rather*) *professional context* and (*rather*) *privatized context* when a private and personal context dominates. If this is not clearly distinguishable we code *balanced/ambivalent* and if no person is visible in the picture the *coding requirements are not met*.

2.5. Hybridity

Social media platforms have been conceived of as providing opportunities for organizations to communicate (i.e., primarily spreading information) without having to rely on traditional media outlets (e.g., Jackson and Lilleker, 2011). However, research has shown that social media are used to amplify messages that emanate on other platforms (not seldom the mass media; see Svensson, 2011). The discussion of such hybrid forms of communication gained resonance in the field with Chadwick's 2013 book on the hybrid media system (*The Hybrid Media System. Politics and Power.*): The question thus arises whether we can discern such hybrid uses when it comes to Instagram?

So, we examined whether in the organization's Instagram posting a directly recognizable and therefore explicit reference to other communication platforms is established. We distinguish between traditional communication platforms and new media. Hence, the coding scheme differentiates between *explicit "traditional communication instrument" reference in the picture recognizable*; for example, if a newspaper article or a picture of a campaign poster is posted, and *explicit "new media" reference in the picture recognizable* such as hashtags and calls to share pictures. If

neither applies we code *no explicit reference to other communication platforms in the picture recognizable*.

2.6. Interactivity

One of the main attractions of social media platforms is their affordance of interactivity. They have been hailed for empowering citizens, providing more and better government information, for enabling online public debate, and bringing more participation to decision-making processes (van Dijk, 2001). Interactivity is studied in captions and comments (if present).

2.6.1. Content of Captions and Comments by the Poster

The content of all captions and comments is coded by three different categories to quantify the extent to which the posting is actually contributing to an exchange of substantive/essential messages (information): a) *emoticons only*, b) *postings with intrinsic value*, and c) *postings without intrinsic value*. a) Emoticons only applies to postings that display an emotion. b) Postings with intrinsic value give relevant and substantive information as they focus on (public) issues. Often they indicate a statement, an opinion and/or an idea or latest news on upcoming actions or events. c) Postings without intrinsic value display trivia/nonsense or they only include a plain encouragement; for example for a politician such a “go for it” or “you are the best”.

2.6.2. Negative versus Positive Tonality

Here it is coded, if the posting (posts and comments) is predominantly of negative or positive tonality. The message can be of text or just an emoticon. Controversies, critique, conflicts, failures, attacks, pessimistic outlooks, negative smileys, etc. are seen as negative tonality and they are coded as *rather negative tonality*. This complies with the tonality in sense of “bad news/information”. The finding of consensus, the solution of problems, optimistic outlooks and evaluations, success, and smileys, etc. are categorized as positive tonality and “good news/information” and they are coded as *rather positive tonality*. Here we do not read sentiments into the posting. We just consider what is written at face value. Postings that are neither of negative nor positive tonality are coded as *neutral/ambivalent*.

2.6.3. Reciprocity

Here it is coded how the poster reacts on comments from followers; for example, by answering questions, highlighting statements of stakeholders, and giving more information on the discussed issue. We code whether the reaction is *related to comment* or *not related to comment*. Comments by followers are measured and coded in the same manner as with the poster (see 2.1. to 2.6.3.).

3. Concluding Remarks

To conclude, we used these variables (among others) when studying political parties use of Instagram during the election campaign in Sweden in 2014. Coding was conducted by three

coders. Inter-coder percentage agreement for each of these items falls within the acceptable range, with the vast majority at or above 83% (*holsti*). Hence, we know that these variables work. However, they can always be developed further.

References

- Fahmy, S., Bock, M. A., & Wanta, W. (2014). *Visual Communication Theory and Research. A Mass Communication Perspective*. New York, NY: Palgrave Macmillan.
- Fiegerman, S. (2014). Instagram tops 300 million active users, likely bigger than Twitter. *mashable.com*. Retrieved from <http://mashable.com/2014/12/10/instagram-300-million-users/>
- Findahl O. (2014). *Svenskarna och Internet (The Swedes and the Internet)*. Report for .SE. Stockholm: Stiftelsen för Internetinfrastruktur. Available at: <http://www.soi2014.se/> (accessed 8 March 2015).
- Jackson N., & Lilleker D. (2011). Microblogging, Constituency Service and Impression Management: UK MPs and the Use of Twitter. *The Journal of Legislative Studies*, 17(1), 86–105.
- Knibbs, K. (2014, January 21). Instagram is growing faster than Twitter, Facebook and Pinterest combined. *Digital trends*. Retrieved from <http://www.digitaltrends.com/social-media/instagram-is-growing-faster-than-twitter-facebook-and-pinterest-combined-in-2013>
- Plasser, F. (2009). Political Consulting Worldwide. In D.W. Johnson (Ed.), *The Routledge Handbook of Political Management* (pp.24-41). New York: Routledge.
- Schill, D. (2012). The Visual Image and the Political Image: A Review of Visual Communication Research in the Field of Political Communication. *Review of Communication*, 12(2), 118–142.
- Stanyer, J. (2008). Elected Representatives, Online Self-preservation and the Personal Vote: Party, Personality and Webstyles in the United States and the United Kingdom. *Information, Communication and Society*, 11(30), 414–432.
- Svensson, J. (2011). Nina on the Net - A study of a politician campaigning on social networking sites. *The Central European Journal of Communication*, 2(8), 190-206.
- Sweetser, K.D. & Lariscy, R.W. (2008). Candidates Make Good Friends: An Analysis of Candidates' Uses of Facebook. *International Journal of Strategic Communication*, 2(3), 175–198.
- Vaccari, C (2013). From echo chamber to persuasive device? Rethinking the role of the Inter-net in campaigns. *New Media & Society*, 15(1), 109–127.
- van Dijk, J. (2001). Models of Democracy and Concepts of Communication. In K. Hacker & J. van Dijk (Eds.), *Digital Democracy. Issues of Theory and Practice* (pp. 30-53). London: Sage.

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Intelligent Storytelling for Enabling Citizens in Society's Participation

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Abstract: Despite the increasing availability of data, very few people are able to interpret and make an effective use of data representations. The general lack of statistical literacy is a critical factor in order to empower the citizen's active participation in government decision-making and, generally, in society development. Contestina, an open source software tool, aims to help people to understand insights hidden in the data. The tool can be defined as an interactive storytelling builder, which, using metadata, graphs, and figures, enables people with different expertise levels to understand the phenomenon of interest and analyze it with a critical eye. Moreover, Contestina can assist the users to gain knowledge about data sources and to evaluate their quality.

Keywords: E-democracy, statistical literacy, active citizenship, metadata, storytelling.

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1. Introduction

Nowadays we live in a world awash with data. The knowledge of numerical concepts is a crucial competence to understand what this data can tell us. The increased availability of statistics means that everyone is becoming a potential consumer of information, but "*what is out information worth, even if it is constantly mentioned in TV news and newspapers, if many people do not even understand the meaning of the figures?*" (UNECE, 2012).

The principal aim of official statistics is to inform people about the development of economy and society, so to fulfill this mission it is essential to cooperate with educational community, to train them in understanding figures, and think in a quantitative way. Actually, the vast majority of people are not skilled to really understand the insights from data. This lack of statistical literacy and more general the limited ability to reason and to apply simple numerical concepts is an issue to deal with in order to enable citizens to participate fully in society.

Education plays an important role in providing people with the knowledge, the capacities, and the skills needed to comprehend this fundamental information. The ability of evaluating in a critical way the information presented and, as a consequence, the impact on their own lives, is fundamental to effective citizenship. A well-educated population is central to social and economic well-being of regions evaluating, the variety in regional economic structures and performance is crucial knowledge for initiating development that could increase national growth (Jern, 2013).

In latest years, the proliferation of ICTs has led to an increase in electronic participation (e-participation) of citizens in political activities, determining a significant development in e-democracy (Nikolopoulos *et al.*, 2010). E-democracy is defined as being about the use of Internet technologies to support the engagement of citizens with day-to-day governmental activities and decision-making, as opposed to periodic voting in traditional representative democracy (Cruickshanc *et al.*, 2014). The local level is particularly promising in this sense, because of the proximity between administrations and citizens. Policy makers may lean on citizens if they have a good knowledge of regional dynamics. This will probably lead to more effective interventions. Informed people can control more closely decision-making processes and their effects, urging policy makers to take responsibility for the decisions taken. Consequently, this might represent a brake to corruption and to funding inconclusive projects.

Probably, publishing data through a digital story, with emphasis on visualization and metadata, has a potential to transform conditions and structures for learning. The innovative representations by means of storytelling could draw users into exciting reflections and sometimes to a change of perspective. The transition from a cold, and most of the time not well documented representation of data, to a visual narrative (storytelling) where data, facts and figures are presented in a logical and clear manner would allow even the so-called general users to significantly improve their understanding of complex phenomena and of the origin of the data used to delineate them.

In this reflection, the software tool *Contestina* is presented. This tool aims to improve statistical literacy by enabling users with different expertise levels to better interpret data and use it to make informed decisions. The user is guided through the process of understanding data, metadata, facts and figures by a reasoning agent that builds a narrative that dynamically adapts to the need-to-know by integrating relevant elements for an immediate comprehension of the phenomenon of interest. An initial application of *Contestina* was realized under the project "Socioeconomic decision support system. SINSE", which aimed to define a Business Intelligence environment by means of SpagoBI software applied to the official data sources on the foreign trading activity of Italian firms.

2. Empowering Citizens Using Storytelling

The storytelling practice is one of the most ancient in the world, it is relied on the use of words and actions to describe the elements of a story and, at the same time, encouraging listener's imagination. All through history, storytelling has been utilized to pass information, because of its meaning-making process (Razmi *et al.*, 2014).

Data storytelling consists in communicating underlying meaning by telling a story around data (or by enabling users to play with the data and find their own stories). It is a powerful way of making statistics more accessible to a broader audience. Stories can be told in the traditional way, through narrative text, or they can be conveyed in a more visual manner - through infographics and charts that organize the data in such a way that the significance is immediately apparent. Data visualizations have the potential to provide an unique means of highlighting new patterns in statistics, helping people to look at the world in a different way (Fazio *et al.*, 2015). The storytelling, supplied with descriptive metadata, is placed in the hands of users, such as decision-makers, pupils, journalists, and citizens in general, like a sort of guide for an interactive learning experience. The proposed storytelling technology could advance research critical to collaboration and dissemination of digital media and facilitates a leap in understanding by the public, enabling them to appreciate how statistical indicators may influence our society (Jern, 2013).

Contestina facilitates the comprehension of statistical information for non-expert readers thanks to the availability of metadata and figures joined together in the story. Publishing official statistics through an assisted content creator (an important component of *Contestina* digital storytelling), with emphasis on a dynamic statistics data visualization, represents a key advantage of this effective method by which to explore statistical data.

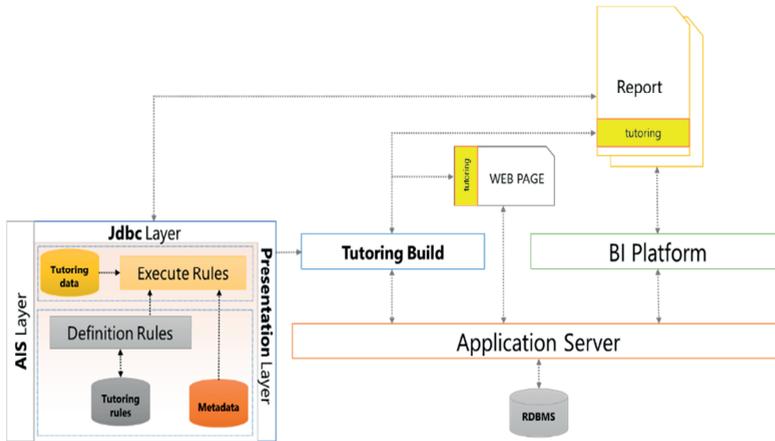
3. Contestina's Approach

The concept of information is intended like a group of data modeled by external factors through a well-defined and unchangeable logic. Our tool aims to redefine this Informatics Construct by considering information as an evolving entity that can fit to users' need-to-know. Storytelling is the milestone of the system and relies on a reasoning mechanism that automatically builds the analysis scenario according to the parameters chosen by the users. Many visualization tools need to be used together with license fee specific business intelligence (BI) software. *Contestina* is a platform completely independent from other BI suites, does not expect other software installation, and only a database management system is required (Figure 1). The architecture of the platform allows the modeling of a certain analysis scenario, through a set of semantic rules. The analysis scenario is one of the possible configurations of the system. It depends on the answers to two basic questions:

- How did the system come to this specific configuration?¹
- When is the user visualizing the information?

Contestina analyses these questions and proposes the appropriate answers.

¹ The configuration is the concrete realization of the analysis scenario, so it depends on users' needs.

Figure 1: *Contestina Platform*

3.1. Analysis Scenario Definition

Contestina's principal purpose is to interactively represent the analysis scenario and the obtained results, through the creation, beside the BI reports, of external web pages where users can find descriptive metadata, and the definition of areas containing information and hints (tutoring islands). The Analysis Scenario Definition is realized in seven phases:

- *Unconditional and conditional rules definition (Grammar):* The first are independent by the scenario (e.g., Visualizing report title), the second depends on the scenario (e.g., Visualize the table only if the [condition1] is verified). Both rules define the grammar.
- *Visibility and reference rules definition:* The visibility defines when some results can be shown, the reference indicates that some object refer to others.
- *Template definition:* The template represents the graphical layout of the tutoring island.
- *Relationship between report and template:* Each template must be associated with one or more reports.

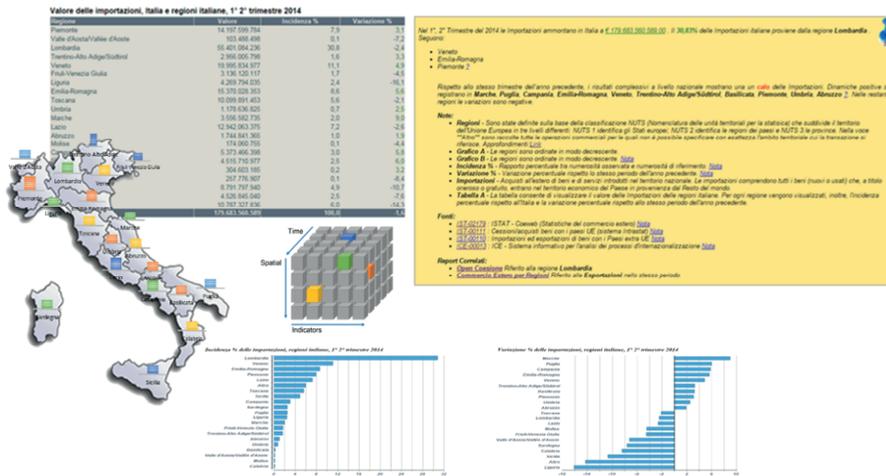
The Analytical Information Subsystem (AIS) layer produces the tutoring area, which represents the analysis scenario and the obtained results. The complete snapshot defined in this layer is composed by other two areas: A graph area, where histograms, bar plots and pie charts are used to customize data visualization, and a table area where the figures are displayed. There are some interactive features that support an analytical reasoning process, such as tooltips, brushing and highlight. It also suggests analyzing other reports in order to have a complete picture of the phenomenon. We can say that *Contestina* helps the users to interact with the story that the data have to tell. A metadata set is positioned exactly where it is useful so it can facilitate users in interpreting the topic. In the tutoring area, there are also links that allow users to navigate other web pages where they can find additional information (for example, the data source's web site). The tutoring area construction takes place through a three stages process:

- in the first step, a "static" description of the available reports is made;

- in the second step, there is the definition of tutoring rules that leads the system to build the information contained in the tutoring island;
- in the last phase, tutoring rules are executed and the areas are generated.

Contestina defines both the logical models and the graphical representations of data. The system does not rely on the analysis environment that hosts it. As a consequence, it results are used for the analytical process independent from the technologies.

Figure 2: *Contestina* Final View



4. Conclusions

We are presenting a flexible and adaptable software tool to differently-skilled audiences that allows the publication of snapshots together with descriptive text. Each report is provided by an active storytelling where figures and respective metadata are displayed. Users are guided in the reasoning process for easily gathering insights from the data. Future works are in the direction of using *Contestina* to facilitate the understanding of territorial policy by citizens. According to the new European Cohesion Policy, the attention of the evaluation activity will be mainly focused on the obtained results. For example in this context, *Contestina* tutoring system could make it easier to monitor if Regional Operational Programmes (ROP) are reaching the declared targets. For each action it could visualize the historical series of the connected result indicators together with the baseline and the target values. Moreover, *Contestina* could be also used to help citizens in exploring Open Data Portals, guiding non-expert users in selecting and interpreting the right data sets. *Contestina* storytelling tool might be a valid contact point between government and the governed in the e-democracy era.

References

- Cruickshank, P., & Ryan, B., & Smith, F., C. (2014) 'Hyperlocal E-participation'? Evaluating Online Activity by Scottish Community Councils, Conference for E-democracy and Open Government, 21-23 May 2014, Danube University Krems, Austria. Retrieved December 20, 2015, from http://www.donau-uni.ac.at/imperia/md/content/department/gpa/zeg/bilder/cedem/cedem14/cedem14_proceedings.pdf.
- Fazio, D., & Scrivens, K., & Calza, M.G. (2015), The potential of Web 2.0 communities for statistics, New Techniques and Technologies for Statistics (NTTS) Conference, 9-13 March 2015, Eurostat, Brussels, Belgium. 10.2901/EUROSTAT.C2015.001. Retrieved March 2016 from http://www.webcosi.eu/images/2015/03/NTTS2015_Webcosi.pdf
- Jern, M. (2013). Statistical Storytelling Using HTML5 Interactive Visualization, New Techniques and Technologies for Statistics (NTTS) Conference, 5-7 March 2013, Eurostat, Brussels, Belgium. DOI: 10.2901/Eurostat.C2013.001. Retrieved March 2016 from https://ec.europa.eu/eurostat/cros/sites/crosportal/files/NTTS2013fullPaper_61.pdf
- Nikolopoulos, K., & Spirakis, G., & Spiraki, C. (2010). The impact of electronic government on democracy: E-democracy through e-participation. *Electronic Government an International Journal*, 01/2010; 7(1), 75-88.
- Razmi, M., & Pourali, S., & Nozad, S. (2014), Digital Storytelling in EFL Classroom (oral presentation of the story): A Pathway to Improve Oral Production, *Procedia-Social and Behavioral Science*, N° 98, 1541-1544.
- United Nations Economic Commission for Europe (2012), Making data meaningful. Part 4: A guide to improving statistical literacy. United Nation, Geneva. Retrieved March, 2016, from https://www.unecp.org/fileadmin/DAM/stats/documents/writing/Making_Data_Meaningful_Part_4_for_Web.pdf

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Towards High-Speed Democracy: Lessons from the Austrian “Digital Change and Politics” Initiative

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Abstract: The parliamentary initiative “Digital Change and Politics” (DC&P), which has been initiated in summer 2015 by the president of the Austrian Federal Council, aims at providing a systematic overview about the impact of the current and future Internet evolution on political decision making. To this end, comprehensive input from a Web based participation platform has been combined with several parliamentary instruments. In this paper, the underlying general approach and the used mechanisms are critically reflected, important lessons learned are summarized, conclusions for the democratic potential of the Internet are discussed, and a set of recommendations for improving future e-participation platforms is provided.

Keywords: E-participation, Green Book, Liquid Democracy, Austrian Federal Council, Enquete

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1. Introduction

Twenty-five years after the invention of the World Wide Web and the introduction of the Internet as a global information infrastructure, the rapidly increasing level of digitization has led to a new economy of immaterial products and services. Moreover, the advent of the Internet of Things (IoT) as well as the increasing degree of user mobility is about to create a new industry with novel value chains and networks as well as new forms of logistics (Linnhoff-Popien et al. 2015). As a consequence, this digital change will have fundamentally impact future society as a whole and thus inevitably will become a central topic in the political discussion, while, at the same time, also

providing the new tools, mechanisms and platforms for conducting such a discussion at all (Klug et al. 2010).

In order to explore the consequences of digitization on tomorrow's working environments, quality of life, society, politics and democracy, in July 2015 the Austrian Federal Council has started a parliamentary initiative, which to compiling a state of the art report. The resulting "Green Book" (Kovar et al. 2015) provides a comprehensive overview on potential legal and political changes required for being able to use the opportunities of digital change, and has become subject of a parliamentary enquiry ("Enquete") held at the Federal Council in Vienna on Nov 18, 2015.

While the idea of using Internet-based tools and platforms for supporting such a process is not new, this specific initiative is nevertheless remarkable in terms of political innovativeness. Specifically, the deliberative bottom up process was complemented with a parliamentary decision-making process, thus linking the crowdsourcing process directly to formal parliamentary proceedings, followed by a legislative resolution¹. According to this, the Austrian government is now obliged to use the collection of ideas developed in the public participation process as a basis for the coming Austrian digital agenda. From a political point of view, the Federal Council, which acts often in the shadow of the national council and the national government, took steps towards an independently operating dialog-orientated parliamentary platform, in line with the findings of the Austrian parliament's Enquete Commission on strengthening of democracy held in spring 2015².

The remainder of the paper is structured as follows: Section 2 briefly summarizes the "Digital Change and Politics" (DC&P) initiative. Section 3 analyzes key challenges and experiences. This results in a set of recommendations, which are presented in Section 4 and thus conclude the paper.

2. Digital Change and Politics

The supporters of the parliamentary initiative DC&P, first and foremost the president of the Federal Council, have been guided by a prior motivation: In times of declining voter turnout and rising disenchantment with politics, more and more people want to actively participate in politics, but outside of elections and party organizations. This new form of democracy may be characterized by the interaction of representative and direct democracy as well as deliberative elements. In this context, based on the digital transformation, new and supra-regional participation models can be developed, which are also able to cope with the increasing speed of political decision-making, which altogether represents a huge opportunity for democracy and parliamentarianism.

¹ Resolution motion 217/A(E)-BR/2015, see https://www.parlament.gv.at/PAKT/VHG/BR/A-BR/A-BR_00217/index.shtml (last accessed: Jan 7, 2016)

² Committee Report 791 d.B. XXV. GP page 9, see https://www.parlament.gv.at/PAKT/VHG/XXV/I/I_00791/index.shtml (last accessed: Jan 7, 2016)

Hence, based on a call of the president of the Federal Council, a public brainstorming has been started, using the online platform www.besserentscheiden.at³ as primary tool and focusing on two introductory questions, (1) which political and/or legal actions were required from the legislation body with respect to the ongoing digital transformation, and (2) which important related aspects were lacking appropriate public discussion. Within eight weeks, more than 200 statements, 100 comments and more than 1000 votes were posted on the platform, complemented by a small number of physical meetings between a representative board of invited experts from politics, industry, academia, social partners and NGOs.

The participants of the consultation were informed by a broad public information campaign as well as by invitation and word of mouth. Their answers to the introductory questions may be summarized as follows: political decisions makers are seen in charge of a great variety of political questions, ranging from education, science, social and economic affairs, taxation, and telecommunications up to regulations for data security, data protection and copyright. Many statements were also dedicated to governance and democracy aspects, including the need for evidence-based and quick political decisions in an era of fast transformation. All in all, the national legislation has been attributed a huge scope of political actions of urgent need; for further details see Kovar et al. (2015).

Based on these replies, an editorial team delivered the draft of a “Green Book”, which has been published online. Subsequently, all participants were invited to give feedback, before the finalized Green Book was handed over to the president of the Federal Council according to §25 of the rules of procedures of the Federal Council, and forwarded to the parliamentary enquiry. During this one day Enquete, a broad range of experts, Members of Parliaments and representatives of the Federal Government and State Governments as well as interest groups delivered their opinions, before the Federal Council took its final decision in a subsequent committee meeting and plenary session.

3. Challenges and Experiences

As described above, the DC&P initiative has been conceived as a broad attempt to make use of the democratic potential of the Internet, based on its many-to-many communications structure as well as fundamental principles like openness, simplicity, user participation, consensus finding and non-hierarchical organization, which increase the opportunities for political information, discussion and participation. Based on Jacoby et al. (2015), we will now discuss some of the resulting challenges.

3.1. Principles of Efficient Internet-Based Participation

Participatory web-platforms today vary widely with regard to the implementation of procedural decision-making strategies and the frontend representation of these processes. However, besides

³ For further details, see <http://www.besserentscheiden.at> (last accessed: Dec 29, 2015)

the linking of such platforms to political, social or economic institutions, the layout and procedural structure of the decision and consensus processes shape them into specific instruments and have key impact on the output quality – ideally a deliberatively generated consensus based on a broad discourse within the relevant electorate. Together with the compliance to a basic set of democratic norms, this determines efficiency, effectiveness and acceptance of a platform, and thus is of key influence on its democratic potential as a (semi-)permanent add-on to national policy-making.

However, most current such platforms show severe deficits in this regard, either lacking a basic structure (aside from a thematic index), or using complicated mechanisms that only attract the attention of a few politically very interested people. For instance, the decision-making process in the Austrian *discuto* or the German *Adhocracy* platforms is rather open and simplistic: Initiatives can be introduced and are open to be discussed, edited and voted upon for the duration of the action-based meta-initiative. This can be valuable for the generation of a single document, but it will not be possible to cope with the load arising from high public participation. Moreover, both platforms allow for simple list-attribute based filtering, but do not implement a broad strategy for structuring a discourse based on its implicit filtering procedural evaluation⁴.

As a noteworthy counterexample, LiquidFeedback⁵ provides a ready implementation of the basic ideas of Liquid Democracy⁶, based on a process consisting of four phases (admission/discussion/examination/voting), which allows the implicit filtering of initiatives that lack support and the contrasting of contrary points of view. Note that, in contrast, the *discuto* platform used in the DC&P initiative, offers a joint discussion and voting step, aiming at the collaborative generation of a single document. Moreover, LiquidFeedback implementations often exhibit a level of complexity which we consider unnecessary for a functionally effective participation process.

Since there is no standard model aside from a basic dichotomous decision or an open discussion with no predetermined limit, new approaches to structure and (re-)invent web-based participation are required. In order to gain sufficient public interest, an intuitive design that structures initiatives and content for easy access and participation is of key importance, together with an efficient structure of the decision-making process, which allows the effective generation of political output.

⁴ See <https://www.discuto.io/de> and <https://adhocracy.de/> (last accessed Dec 29, 2015) for details.

⁵ <http://liquidfeedback.org/> (last accessed Dec 29, 2015). This software is used e.g. for the Liquid Friesland platform (<https://www.liquid-friesland.de/> last accessed: Dec 29, 2015) as well as for running the German Pirate Party (“Die Piraten”), to mention but a few application contexts.

⁶ Note, however, that we deliberately refrain from discussing the delegative principle that imbues this participative form, as its focus lies solely on the decision making process and its structuring influence, with uncertain effect on long-term participation. Instead, we will focus on concepts and ideas that target direct participation, without delegative or representative influences.

3.2. Technical Challenges and Platform Requirements

Taking a participatory platform to the web is linked to complex security challenges, in order to avoid possible manipulation. Typically, platforms avoid using unique authentications, as they are hard to use by non-specialists. Moreover, as data protection has become more and more important, it is increasingly difficult to convince people to give away private data. Instead, users prefer to stay anonymous, which immediately leads to the question of how to guarantee authenticity of the expressed opinions. Any participative system will have to offer convincing solutions for these issues.

In addition, encryption algorithms are necessary to encrypt and identify a document that is sent over the Internet, as well as the use of electronic signatures that are unique to the sender and render documents legally valid. Asymmetric encryption precludes the change of a document on its way from sender to receiver, unfortunately along with a certain level of complexity to be mastered.

Another problem, the so-called “bandwagon effect” (Klug et al. 2010), is due to the tendency of people to choose what others already have chosen, instead of considering the entire spectrum of options. In our case, this self-reinforcement may result in users going mostly for one of the prevalent opinions (be it positive or negative). For instance, the American *Open Government* initiative suffered from this problem: As soon as opinions were visible for public voting, only a small portion of the ideas received most votes. This problem can only be overcome through an intuitive user interface that provides a representative and unbiased overview of all opinions in the system. Hence, we envisage an interface that does not exhibit the current voting status and at the same time presents a well-balanced set of ideas to the user who thus can easily deliver an unbiased vote.

Last but not least, there is increasing evidence that, especially amongst the young generation, large parts of political discussions take also place in social media, like for instance Twitter, Facebook or WhatsApp. Together with the strong general trend towards using mobile equipment, especially smartphones, this will lead to a set of additional technical challenges, mainly affecting the design of the mobile platform, in order to allow for the clear arrangement of the user input, comments, votes, decisions and further key functionalities on a potentially small screen.

3.3. Stakeholder Experiences: The User/Coordinator/Decision Maker Perspectives

This section summarizes some of the experiences made with the used e-participation platform. As a matter of democracy, universal and intuitive access to such an online platform should be a primary goal, in order to lower the general entrance barrier for the participants. It is important to use a layout which is kept as simple as possible and reflects the look-and-feel of well-known social media sites. From a usability perspective, an easy and simple functional design prevents the user from overflow with (potentially unstructured) information. Another issue, which may significantly affect user experience, concerns appropriate search functions and efficient data filtering mechanisms, in order to allow the user to focus on what s/he is interested in.

From a coordinator's perspective, evolved methods or mechanisms for an effective facilitation of the online participation process would be useful, including for instance an agile content design for clustering of arguments in the ongoing discussion. Particularly in brainstorming processes with a large number of statements, functions for efficient analysis have huge time-saving potential. Such features can also support the interpretation and exhibit blind spots of the deliberative discussion.

Finally, from the pragmatic perspective of decision-making, practical experience shows that there is no reason to be sceptical about the use of available online tools or to wait until advanced applications will be ready for operation. Instead, the development of tools for political discussions, the growth of practical experience and the acceptance by the public should go hand in hand.

4. Conclusions and Outlook

Based on what has been said so far, we have come up with the following recommendations:

- Participative platforms should be structured along a 3-phase model (selection/discussion/decision) plus thematic index, while core elements may be based on the LiquidFeedback software. This synthesis achieves a good balance between simple discussion/voting platforms and more complex phase models, and allows tracking of the discussion and understanding its results.
- Self-reinforcement should be avoided. To this end, all ideas, proposals and comments have to be treated equally. By hiding the voting results to the public (at least in the early stages), users are prevented from relying on the opinions of other users.
- In order to guarantee the security, to get valid results and to keep the users' trust, good encryption schemes have to be employed. Moreover, users have to register before participating, without being scared off by requesting too much personal information for the registration.
- It is essential to make participative platforms usable on smartphones and connecting them with relevant social networks in order to increase accessibility to everyone.

These recommendations are the subject of further investigation in the project PNYXNET.AT⁷ currently running at the University of Vienna, which aims at implementing and evaluating a platform prototype for innovative forms of e-participation. The project starts with an extensive-requirements analysis of the different stakeholders, followed by an interaction design phase for corresponding personas and scenarios. The subsequent proof of concept implementation focuses on mobile applications and usable security aspects. Finally, a user trial will evaluate the prototype and demonstrate achievements and advantages of the resulting innovative e-participation platform.

⁷ The "Pnyx" is a small rocky hill less than 1 km away from the Acropolis which served as official meeting place of the democratic assembly in ancient Athens during the "Golden Age" in the 5th century B.C.

References

- Jacoby, G., Gfäller, P., Berck, S. (2015). Demokratische Partizipation und Digitaler Wandel. Technical Report COSY-TR-15/01, Cooperative Systems Research Group, University of Vienna, December 2015.
- Klug, T, Lokaiczky, R., Meyer, M., Steinmetz, R. (2010): E-Partizipation 2.0. Handlungsempfehlungen für Meinungsbildung im Web 2.0. ISPRAT Final Report, TU Darmstadt, 30.01.2010.
- Kovar, A., Leo, H., Fernsebner-Kokert, B. (2015). Grünbuch Digitaler Wandel und Politik. Available online at:
https://www.parlament.gv.at/ZUSD/PDF/Gruenbuch_Digitaler_Wandel_und_Politik_20151111.pdf.
Last accessed: Dec 29, 2015.
- Linnhoff-Popien, C., Zaddach, M., Grahl, A. (2015): Marktplätze im Umbruch. Springer-Verlag Berlin.

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ADEQUATe - Analytics and Data Enrichment to Improve the Quality of Open Data

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Abstract: Over the past decade, open data became an important economic resources and therefore rapidly found their way into data warehouses and data management systems of companies and organizations world-wide. Yet providing these data and the associated data curation still presents a challenging task for all involved stakeholders. The ADEQUATe project therefore aims to develop and evaluate mechanisms to measure, monitor, and improve data quality of open data. In specific, statistical and algorithmic methods, data linkage, as well as crowdsourcing approaches will be employed to boost data quality. The combined outcomes of the project will lead to a Quality Monitoring and Evaluation Framework that is deployed in two real-world us-cases (namely data.gv.at and opendataportal.at) for evaluation and refinements, following a user- and data-driven development approach.

Keywords: Open data, data quality, quality metrics, data enrichment, crowd sourcing

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1. Introduction

Over the past decade, open data became an important economic resource and therefore rapidly found their way into data warehouses and data management systems of companies and organizations world-wide. Yet providing these data and the associated data curation still presents a challenging task for all involved stakeholders. But not only the economy sector faces challenges regarding open data, the public sector does as well. Due to legal binding such as the PSI directive¹, governmental bodies in Europe face challenges for publishing open data to foster transparency and economy in the European market. In this course, the ADEQUATe project identifies two main critical issues that have to be overcome in order to unleash the full potential of open data in the

¹ <https://ec.europa.eu/digital-agenda/en/european-legislation-reuse-public-sector-information>

before-mentioned domains: i) existing overall quality issues regarding data and the associated meta data, and ii) the missing interoperability between existing data sources.

In order to solve these main challenges, the project pursues a data and community-driven working approach, consisting of these three main steps: i) constant data quality monitoring of the two use-case portals, ii) (semi-) automated identification of potential quality issues via smart algorithms and community-based input, and iii) the application of semantically-enabled Web technologies to convert legacy data towards linked data.

2. Publishing and Consuming Open Data

Currently, two major frameworks position themselves world-wide for publishing and hosting Open data: the commercial portal Socrata² and the open source framework CKAN³. Both systems provide a content management system to search within the hosted datasets, as well as an API for external services to connect to the platform. Furthermore, both systems offer possibilities for extensions and plugins to improve the overall connectivity and productivity.

The Socrata system positions itself as a cloud-based Software-as-a-Service (SaaS) platform regarding data publishing and visualization. The largest platform installations can be found in the US, specifically in New York, Austin, or Maryland. The most prominent feature that comes with Socrata is its rich API environment.

CKAN is used by over 100 public installations, covering application fields such as European governmental portals, but also in countries of North and South America, and the Middle East. One of the biggest strengths of CKAN is its open architecture, which enables the integration of community-contributed extensions, the connection to external CMs, provision of an environment for linked data, as well as the option to serve as a meta portal by providing a unified view onto other CKAN portals.

While the commercial and the community world does not always “play well together”, there exists many examples where CKAN data portals have been successfully integrated into publicly endorsed open data installations and monitoring solutions, which has already been demonstrated by projects towards the monitoring of data quality, e.g. the Open Data Institute⁴, or Fraunhofer FOKUS⁵.

Data Quality assessment and methodologies towards the improvement of data quality can be found throughout various research areas such as information systems, data warehouses, databases, and (linked) data pools. Quality metrics and techniques for measuring (meta) data

² <https://www.socrata.com>

³ <http://ckan.org>

⁴ <http://theodi.org/blog/how-important-is-open-data-quality>

⁵ http://open-data.fokus.fraunhofer.de/?page_id=125

quality have been developed to keep pace with the ever increasing amount and complexity of associated tasks (Zhu et al., 2014). In general, existing approaches can be divided into four steps: i) defining the metrics, ii) measuring the quality of data sets according to these metrics, iii) analyze the outcomes, and iv) finally reveal possible improvement scenarios with optional feedback loops. Out of these research works, numerous quality assessment methodologies for Linked Data have arisen (Hogan et al., 2012). For example, Kontokostas et al. (2014) present an approach emerging from test-driven software development towards test-driven Linked Data quality evaluation. The core idea behind this concept is to provide test cases via defined SPARQL queries, similar to unit tests in software development. This enables a high level of flexibility in terms of adapting to various metrics as required and, at the same time, provide an integrity check as all necessary attributes have to be available in order to complete the test.

Besides unit-testing-related approaches, there exist movements towards minimal information models. These RDF-based models enable automated conformance evaluation of data objects or Web service based on pre-defined evaluation criteria (Gamble et al., 2012).

Another research direction is focusing on data repositories, e.g. CKAN, and the challenge of identifying suitable technologies for data quality improvements (Kučera et al., 2013). One option for the improvement of data consistency regarding meta data comes in form of controlled vocabularies. This is an important step as at the moment, portals can and do define own, non-standardized meta data keys (Gamble et al., 2012).

One of the main challenges associated with data quality metrics is the high rate of human involvement, which presents an obstacle regarding distributed large-scaled systems. Yet, first steps have already been taken, using a rule-based system for automated quality monitoring (Cappiello et al., 2005). This monitoring system is based on a two-way approach by performing necessary assessment and refinement actions automatically and demanding for human interaction where necessary. Comparable to this approach is the rsine framework⁶ for real-time quality checks in Semantic Web environments, originating from the EU project LOD2 (Mader et al., 2014).

3. Open Issues and Challenges in ADEQUATE

The overall availability of open data continually rises as does its business and economical value. Forecasts state open data will boost the US economy in several sectors by \$3 trillion⁷. At the same time, forecasts predict for the European realm a GDP increase of € 200 billion until the end of the current decade⁸. Yet, open data still faces quality issues regarding the data themselves and the

⁶ <https://github.com/rsine/rsine>

⁷ http://www.mckinsey.com/~media/McKinsey/Business%20Functions/Business%20Technology/Our%20Insights/Open%20data%20Unlocking%20innovation%20and%20performance%20with%20liquid%20information/MGI_Open_data_FullReport_Oct2013.ashx

⁸ <https://www.microsoft.com/global/eu/RenderingAssets/pdf/2014%20Jan%2028%20EMEA%20Big%20and%20Open%20Data%20Report%20-%20Final%20Report.pdf>

associated meta-data. The two main problems are i) the overall quality issues, and ii) the limited or missing interoperability of the data. Based on these problems, the authors identify the following challenges within the ADEQUATE project:

Challenge 1: To establish sustainable quality metrics for open data

The importance of measuring quality of data was already identified and pursued by other research projects (e.g., the OpenDataMonitor⁹). Yet, the heterogeneity of data producers, data sources, and data consumers require the metrics integrated in open data portals to be specifically tailored towards stakeholder needs. While there exist metrics, which are meeting standard requirements of open data sets, others have to be created or adapted to meet expectations in present scenarios. For example, the absence of geoinformation in a geo-tagged data set should definitely affect its quality ranking, while it does not make sense to include this metric in non-geoinformation data sets, as it would falsify the overall quality ranking. Once suitable metrics were identified and implemented, the overall quality score across these metrics has to be monitored to counter decreasing quality trends in time.

Challenge 2: To automatically improve (meta) data quality

While in a perfect world, all necessary data and associated meta data would be already in place during the upload of the data set to the portal, reality looks different. As it is not economically reasonable to perform cleaning and enrichment procedures manually, flexible and generic algorithms have to be implemented for an automated correction of affected data sets. While context-related information can be acquired with relatively low effort (e.g., the file extension or the language of the content), missing or erroneous provenance information is hard to correct or recreate e.g., via crosschecks with other similar data sets or collating associated time-value series. While temporal information within and related to a particular data set can help to improve the overall quality of the data set itself and – if possible – of associated data sets as well, dealing with the heterogeneous structures of the data sets is non-trivial. To set a step into the right direction, the ADEQUATE project aims at the improvement of CSV files in terms of syntax clearing, encoding, and data fusion (unification).

Challenge 3: To understand CSV-based data sources

Due to the high grade of diversity regarding data providers and data processing chains, understanding the inherent structure and logic over several “versions of CSV dialects” is challenging. For example, CSV can be manually exported from spreadsheet software such as Excel and features multiple tables or descriptive information inside the CSV file, which invalidates the original syntax proposed by the standard. Furthermore, organization-related internal meta data descriptors are often hardly useable without suitable “meta-meta” data for their description, which can render the entire data set challenging to be usable by external data users. Finally, uploaded

⁹ <http://opendatamonitor.eu/frontend/web/index.php?r=dashboard%2Findex>

CSV files are usually way larger than other forms, e.g., Web tables, which can negatively impact processing algorithms in terms of computational resources and timely availability.

Challenge 4: To engage the community to cooperate

While sophisticated algorithms can technically and semantically maintain and improve the quality of (meta) data, there are limits due to the lack of expert and domain knowledge, which can be brought into the quality improvement process by the potential users and contributors to open data platforms. To set the foundation for a sustainable and vibrant open data platform, user needs and requirements have to be incorporated from the very beginning. The ADEQUATe project will achieve this setting, via crowd-sourcing approaches to receive direct feedback from the community. This is even more important as reviews have revealed (Prieto-Martín et al., 2011) that projects ignoring these inputs do fail in generating public impact.

4. Outlook

The requirements elicitation process is well under way and will be finished by end of March 2016. During that course, more than 100 users filled out the online survey¹⁰ and 120 people participated during the focus groups which were organized around meetings of Cooperation OGD Austria¹¹, Hackathons and Barcamps. The next step will be to categorize the input and distil the most frequent requirements and mentioned impediments to data quality. This input will be fused into the architectural blueprint which will guide the subsequent implementation of the data improvement and monitoring framework. As the ADEQUATe project puts its focus on CKAN, many of the to be developed and integrated data quality components will be made available as plugins for this open software stack. Of ongoing and intense discussion are the various possibilities to include the end users into the data quality improvement process. Results of past participation projects will provide guidance on promising participatory elements which will be provided by the projects community portal. Participation in a user-friendly way to actually improving data quality, either by uploading changed datasets according to a fork-and-push model as provided by the Dat-project¹² or by publishing data transformation steps as recorded by OpenRefine¹³, are still under intense discussion. The community platform will also serve as a test-bed to determine unobtrusive, promising quality improvement methodologies and processes which will be implemented on the authoritative Austrian data portals data.gv.at and opendataportal.at.

¹⁰ <http://odsurvey.ai.wu.ac.at/index.php/637325?lang=de>

¹¹ <https://www.data.gv.at/infos/cooperation-ogd-oesterreich/> Cooperation OGD Austria is a think tank operated by open data portal operators in Austria and includes academia and business representatives to maximize

¹² <http://dat-data.com/>

¹³ <http://openrefine.org/>

References

- Cappiello, C., Francalanci, C., & Pernici, B. (2005). A self-monitoring system to satisfy data quality requirements. In *On the Move to Meaningful Internet Systems 2005: CoopIS, DOA, and ODBASE* (pp. 1535-1552). Springer Berlin Heidelberg.
- Gamble, M., Goble, C., Klyne, G., & Zhao, J. (2012, October). Mim: A minimum information model vocabulary and framework for scientific linked data. In *E-Science (e-Science), 2012 IEEE 8th International Conference on* (pp. 1-8). IEEE.
- Hogan, A., Umbrich, J., Harth, A., Cyganiak, R., Polleres, A., & Decker, S. (2012). An empirical survey of linked data conformance. *Web Semantics: Science, Services and Agents on the World Wide Web*, 14, 14-44.
- Kontokostas, D., Westphal, P., Auer, S., Hellmann, S., Lehmann, J., Cornelissen, R., & Zaveri, A. (2014, April). Test-driven evaluation of linked data quality. In *Proceedings of the 23rd international conference on World Wide Web* (pp. 747-758). ACM.
- Kučera, J., Chlapek, D., & Nečaský, M. (2013). Open government data catalogs: Current approaches and quality perspective. In *Technology-enabled innovation for democracy, government and governance* (pp. 152-166). Springer Berlin Heidelberg.
- Mader, C., Martin, M., & Stadler, C. (2014). Facilitating the exploration and visualization of linked data. In *Linked Open Data--Creating Knowledge Out of Interlinked Data* (pp. 90-107). Springer International Publishing.
- Prieto-Martín, P., de Marcos, L., & Martínez, J. J. (2011). The e-(R) evolution will not be funded. *European Journal of ePractice*, 15, 62-89.
- Zhu, H., Madnick, S. E., Lee, Y. W., & Wang, R. Y. (2014). *Data and Information Quality Research: Its Evolution and Future*.

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Data Quality Issue: The Open Data Explorer Solution

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Abstract: The increase of the massive network-connected devices has brought to the development of a current named data revolution. This movement, based on knowledge sharing through the paradigm of open data, led to the boost of open government data initiatives. The process is accompanied by a number of critical issues, some of them related to data quality, that are preventing their effective reuse. Starting with an accurate analysis of the operational and methodological literature, the authors emphasize the lack of accurate metadata that can be also be used to gather useful information about the data lifecycle from the web. Open Data Explorer (ODE) was born as a possible solution for the mentioned flaw. The portal interfaces with the platform dati.gov.it, the Italian open government data catalogue. ODE is an open source tool that facilitates the identification of quality data sets making their reuse easier for statistical purposes.

Keywords: data revolution, open data, data quality, dataset search engine, open data explorer

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1. Introduction

The world is witnessing a significant transformation, facilitated by technology and digital media, and fueled by data and information (Open Data Charter, 2015). New technologies are leading to an exponential increase in the volume and type of data available, creating unprecedented possibilities for informing and transforming society (Independent Expert Advisory Group, 2014). The so-called data revolution movement identified *open government data* as an enabler for mobilising its impressive potential.

Data is considered to be “open” if it can be downloaded in a machine readable format and reused without any legal restrictions. Today again, the majority of published data is intended only to be read as a stand-alone documents, not reusable for other goals. When data is made widely available and easy to use, the benefits can be significant: It can help streamline government

services, stimulate economic opportunities, encourage innovation, improve public safety, and reduce poverty (World Bank, 2016).

As the advantages of the broader impact of open data on population and additional useful options are discovered, governments and institutions worldwide are eager to launch new initiatives or expand the existing ones. Today there are about 250 governments at national, subnational and city levels and almost 50 developed and developing countries which have launched several open data projects (World Bank, 2016). There are also different entities engaged in the activity related to open data, such as the United Nations, which has formed different groups of experts in order to define standards and methods enabling data use in the fight against social inequality and poverty. Recently, various studies have confirmed that opening data by public bodies might provide stakeholders with a growing economy by stimulating innovation and obtaining new insights by creating new ways of understanding problems and interpreting data. The most impressive example of business around open data is Enigma, an American company, which has developed a search engine of public datasets that allows users to find datasets by theme or using other filters (Public), to uncover hidden insights in data (Signals), and to harmonize datasets in a unique database layer for powered analytics (Abstract).

Despite the growing dimension of the phenomenon and its potential, open data also entails a number of barriers. The most common ones are: the complexity of handling the data, the use of open data and participation in the open data process, the legislation, the information quality, and the technical level. Barriers are related both to data providers (resulting in not wishing to publicize the data) and data users (Janssen *et al*, 2012). The main challenges in this sense refer to:

- **Data quality:** The quality issue is today at the center of the international debate, a sufficient level of data quality is one of the preconditions for an effective open data reuse.
- **Dataset retrieval:** Many Government agencies are funding web sites focused on the search of open data sets (e.g., Agency for Digital Italy funded *dati.gov.it*), but, unfortunately, these search engines have some weak points that do not support users in finding the right data in a simple and fast manner.

In few words, there is a real *Data Jungle*. Users need an *Explorer* platform, helpful to discover data sets of interest in the shortest possible time, and to enrich the existing metadata through web intelligence techniques aiming to improve data quality. In this reflection we describe *Open Data Explorer (ODE)* a data sets search engine developed in the SINSE+ project¹ that aims to acquire and index open government data sets; to evaluate the quality of data sets; to make possible very quick and easy searches of data sets, showing for each one a number of quality indicators useful to establish if the dataset might be used for a particular analysis.

¹ SINSE+ "Reasoning and tutoring system for big amount of data" is a research project funded by Calabria Region, under the Innovation Pole ICT Calabria Strategic Agenda's - ROP Calabria RSEF 2007/2013, Axe I, Intervention line 1.1.1.2.

2. The Data Quality Issue

The main goal of disclosing data is getting some new insight from it, for example, new visualizations that offer interesting analysis patterns, correlation among different data sets for knowledge discovery, etc. Low data quality can negatively affect the potential of open government data by making its reuse difficult or even impossible. The problem of data quality is even more urgent in the recent years: More and more governments are opening their data on specially designed open data portals, following the path set out by the *Freedom of Information Act* by US President Obama. These worthy initiatives could be frustrated by the lack of guidelines, which effectively ensure a high level of quality (Vetrò *et al.*, 2014).

Many international organizations have worked to address this gap, with the aim to reduce the likelihood of collecting wrong or useless information. For example, the European Union members have recently defined a specification named DCAT – Application profile for data portals in Europe (DCAT-AP), which relies on the Data Catalogue Vocabulary (DCAT) built by the World Wide Web Consortium (W3C). Nevertheless, the metadata set defined is not sufficient to evaluate the real reusability of open data for statistical purposes. Despite such important steps forward, a crucial mental leap has to be made. Several factors can influence the quality level of a dataset, starting from the data collection method until to the way in which it is published. Keeping track of all phases of the data lifecycle is essential to assess the dataset quality. Authorities as part of official statistics had been working for decades in order to define classifications for ranking the data production process. One of the most important results achieved in this sense is the Generic Statistical Business Process Model (GSBPM). The GSBPM defined by United Economic Commission for Europe (UNECE) experts can be applied for integrating data and metadata standards, as a template for the data production process in order to provide a sound framework to process quality assessment and quality improvement (UNECE, 2013). Therefore, it is evident that rather than searching for new standards, it seems necessary to enhance the efforts already made and make them cross each other in order to obtain a methodology that brings together best practice, internationally accepted standard, and definition in statistics including those of the United Nations Fundamental Principles of Official Statistics (World Bank, 2016).

The open government data quality issue has become more preminent since the G8 countries adopted, for the first time, an “Open Data Charter”, which recognizes the importance of releasing high quality open data.

Researchers and open data experts are involved in defining formulas and dimension useful for assessing open data quality. One of the first attempt to address the problem is due to Tim Berners-Lee, the pioneer in the campaign for opening public sector data, who defined a deployment ranking method based on the formats used for publishing data. The 5-star schema assess specifically only one of the aspects which influence open data reuse, so also a five stars dataset could show low quality (e.g., missing data, poor metadata, etc.). In 2008, the International Standard Organization (ISO) has defined the ISO/ICE 25012, a set of 63 metrics for assessing data

quality. In 2012 Auer, Maurino, Pietrobon, Rula, and Zaveri have defined a set of 18 quality dimensions and 69 metrics useful for assessing quality for both open data and linked open data². In 2014, Atz has worked on a metric, the “*Tau of data*”, for measuring the timeliness of a data catalogue. During the same year, Vetrò and his working group led an exploratory analysis about Italian open government data quality, in which they defined a set of useful metrics for this purpose (Vetrò *et al.*, 2014).

Many authors agree in considering data quality closely linked to the users’ purposes, also known as *fitness of use*. Consequently, users play a leading role in the definition of data quality (Auer *et al.*, 2012).

Although quality can be considered an ambiguous concept, what it means in the context of data has been well defined for some time. Eurostat provides a set of six quality dimensions that originally defined statistical data, but can also be applied to many other types of data: relevance (data meet current and potential users’ needs), accuracy and reliability (data are free of errors arising from various factors), timeliness and punctuality (frequency in data updates), accessibility and clarity (the degree in which data are explained by metadata), comparability (across time and domains), coherence (data comport to recognized definitions and methodologies) (World Bank, 2016).

Even today, the data quality issue is at the centre of the international debate. Currently there is no a proven, a common, and a unique methodology for this purpose.

2.1. The Open Data Explorer Assessment Framework

Our research activity relies on in-depth analysis about the open data portal *dati.gov.it*. The emerged situation is quite varied both for what concerns the quantity and the quality of data published. For assessing the quality level of the open data sets published on the portal, we have identified some dimensions of interest:

- 1) source reliability: The evaluation relies on a text mining algorithm for verifying the presence of terms related to a statistical lexicon. The search is realized on the field “Title” and “Description” of the metadata set;
- 2) author reliability: The assessment is based, as above, on a text mining algorithm for searching words useful for attesting the paternity of the dataset to a statistical office and, for this reason., guarantor of the data quality. The search refers to metadata fields: “Author” or “Publisher”;
- 3) statistical terminology: A web scraping tool is used for searching the presence of terms belonging to a statistical glossary, in the web page accessible through the published URL;
- 4) timely update: The data sets refresh rates;
- 5) analysis of dataset content: The evaluation concerned with the number of missing values, the presence of statistical terminology in variables denominations, etc..

² For some measure the extension to open data in not possible (URIs evaluation, etc).

As a result of the analysis of these dimensions, a number of diamonds (from one to three) is attributed to the data sets in order to assess their statistical reusability. Open Data Explorer is based on a social platform, where users are able to share search patterns or interesting data sets, improve data quality from the bottom and so effectively exploit the potential of open government data.

3. Conclusions

Nowadays Open government data could be used to define new and incisive sustainable policies, but for exploiting its potential an high quality level is needed. Open Data Explorer (ODE) is a social network platform that offers a very powerful dataset search interface. The quality evaluation framework implemented in the platform takes in account both the metadata, enriched through text mining analysis, and the dataset content, and combines the domain-specific glossary with statistical measurement to attribute a *diamond-based* rank. By combining the knowledge-sharing derived from a social network with a very easy and quick search interface, ODE represents a significant improvement in the sector of open data searching. The development of an open data community is the starting point of a strategy not based only on technological aspects, which aims to join the opportunities of open data with the accuracy of statistical analysis. This research job is a partial attempt towards objective, reproducible and scientifically based quality assessment framework of disclosed data sets on the Italian open data portal. There are several limitations that affected the validity of the analysis: i) The number of the dataset involved in the research is limited, because of the time and effort required to enlarge the analysis. For this reason, the “health” of the analyzed ones cannot be generalized to the entire collection of the open government data sets; ii) The selected dimensions and metrics, might not properly represent the quality aspects. It is necessary to realize a rigorous validation in this sense and also for what concerns the statistical significance of the obtained results.

References

- Atz, U. (2014). The Tau of Data: A New Metric to Assess the Timeliness of Data in Catalogues. Conference for E-democracy and Open Government, 21-23 May 2014, Danube University Krem, Austria. Retrieved March 2016, from http://www.donau-uni.ac.at/imperia/md/content/departement/gpa/zeg/bilder/cedem/cedem14/cedem14_proceedings.pdf
- Auer, S., & Lehmann, J., & Pietrobon, R., & Maurino, A., & Rula, A., & Zaveri, A. (2012). Quality Assessment for Linked Data: a survey, a Systematic Literature Review and a Conceptual Framework. *Semantic Web – Interoperability, Usability, Applicability*, 7(1), 63-93. Retrieved March, 2016 from <http://www.semantic-web-journal.net/system/files/swj682.pdf>
- Independent Expert Advisory Group (2014). A world that Count: Mobilising the Data Revolution for Sustainable Development. Retrieved March, 2016, from <http://www.undatarevolution.org>
- Janssen, M., & Charalabidis, Y., & Zuiderwijk, A. (2012). Benefits, Adoption Barriers and Myths of Open Data and Open Government. *Information Systems Management (ISM)*, vol. 29, no.4, pp. 258-268, Taylor &

Francys online. Retrieved March, 2016, from
<http://www.tandfonline.com/doi/abs/10.1080/10580530.2012.716740>

Open Data Charter (2015), Principles. Retrieved March 2016, from <http://opendatacharter.net/principles/#>

UNECE (2013). Generic Statistical Business Process Model. Retrieved March, 2016, from
<http://www1.unece.org/stat/platform/display/GSBPM/GSBPM+v5.0>

Vetro', A., Torchiano, & M., Orozco, C., M., & Procaccianti, G., & Iemma, R., & Morando, F. (2014). An Exploratory Empirical Assessment of Italian Open Government Data Quality. With an eye to enabling linked open data. Politecnico di Torino, Department of Control and Computer Engineering. SoftEng. Retrieved March, 2016, from http://softeng.polito.it/reports/Softeng_TechReport_2014.pdf

World Bank (2016), Open Data in 60 seconds. Retrieved March, 2016, from
<http://opendatatoolkit.worldbank.org/en/open-data-in-60-seconds.html>

World Bank (2016), Supply and quality of Data. Retrieved March, 2016 from
<http://opendatatoolkit.worldbank.org/en/supply.html>

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The Open Region as an Instrument of Improvement of the Public Administration at the Regional Level in the Russian Federation

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Abstract: The paper presents the analysis of the experience of e-government in the Russian Federation, stated significant barriers and prospects for development of the regional segment of the process. The introduction of information-analytical system "e-Region - Rostov region" is considered as the central element of infrastructure of e-government in the region.

Keywords: open government, citizen participation, public services provision, e-services portal, «Open region» project.

1. Introduction

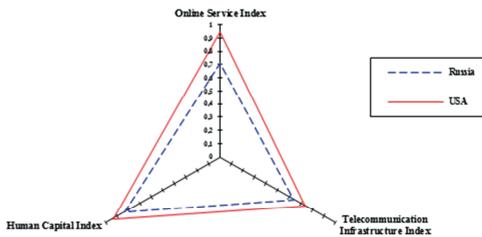
Nowadays information and communication technologies determine the progress of the world community and the level of competitiveness of individual economies, so the government pays more attention to their effective development. With the introduction of information technologies in the sphere of public services; the time for documents' collection is reduced, but the quality of services provided is increased.

In Russia, the state governance system is also in the global trends. Rapid progress of the information society, relying on its development on the broad introduction of e-government elements, as an innovative way "government's use of technology, particularly web-based Internet applications to enhance the access to and delivery of government information and service to citizens, business partners, employees, other agencies, and government entities" (Layne and Lee, 2001, p. 123).

As one of the indicators of successful work in this direction, experts consider the country's position in various international rankings. The most widespread in the expert's community is the rating of e-government development (The UN Global E-Government Development Index EGDI), published by the UN once in two years. In 2014 Russia had the 27-th place among 193 members of the UN, it was reached in the previous ranking, when the growth was 32 positions (UN Department of Economic and Social Affairs, 2014).

It is significant that the assessment of the e-government development level will be more objective when macroeconomic indicators of the country's development will be taken, when we will include the size of the territory and population. We consider that comparative costs for the creation and development of e-government will be higher for a big country than for a small one. The Further analysis of Russia positions and the leader of this rating, according to the characteristics – the United States, will allow mark the perspective directions of development of e-government in Russia (see Figure 1).

Figure 1: The Comparative Analysis of Russia and the USA Positions in the Ranking EGDI



The government of the Russian Federation possessing modern telecommunications infrastructure must use existing technologies for the provision of public services. It is useful when the level of human's capital development in the country is quite high.

At the same time, it is necessary to notice the positive work that was done by government agencies for the implementation of mechanisms and principles of Open government in the context of implementation since the 2012 pilot project "Open Ministry". We should note that the majority of the portals have open data sets, and also the use of functionality of social networks and tools for electronic consultation. This fact proves that in the Russian Federation, state authorities are in the process of determining new tasks for the units, providing two-way communication with citizens, public relations and other structures (Bershanskaya L. et al, 2014).

2. The Conceptual Characteristics of the Project "Open Region" in the Russian Federation

The basic Russian approach in the direction of the information and communication technologies is the unification of information resources, the creation of a single portal in each region, whose function is the interaction with citizens in the provision of various service-oriented services. This is

dictated by the concept of “open government”, initiated by the Government of the Russian Federation in early 2012¹.

European experience confirmed the accuracy of the chosen direction, proving in practice that the consolidation of the IT-environment and the effective management of the information resources are the key to the attainment of the e-Government objectives of open governments and the delivery of high quality services (Svård S. P and Joshi, 2015).

Another important direction is the implementation of principles of open government. Information transparency is also one of the important directions of work within the system “open government”.

For the successful implementation of open government at the regional level in the context of the project “Open region” is the development and implementation of a system of measures, which include as general principles of public administration the specifics of the concrete region of the Russian Federation².

The project’s mission is to increase society’s trust in the authorities of the regional and municipal levels, provided by the traditional principles in the international practice:

- 1) The openness/transparency of the authorities and the free exchange of information between the state and civil society.
- 2) The involvement of civil society in the development of the system of state administration and improving the efficiency of public authorities. The civil society has the opportunity to control the authorities.
- 3) The availability/the quality of government-provided services, as well as the orientation of the authorities on a constant search and introduction of new (innovative) solutions.

One of the perspective tools of communication with citizens can be a project “Budget for citizens”, implemented at the site “Open government” in order to strengthen the involvement of society in the process of governance, financial literacy of the population, social control over public expenditure (R. Bolgov et al, 2015). Subsequently, the Federal experience is planned for the distribution at the regional and municipal budgets so that citizens would be informed and could influence the process of allocation of public finances.

Nowadays 17 regions of Russia are implementing pilot projects. In addition, 11 regions of Russia and 3 of the municipality joined the initiative to promote open government.

¹ The implementation of “Open government” system is carried out at the federal, regional («Open region») and departmental (“Open ministry”) levels.

² Official website of “Open government”. The project “Open region” [Electronic resource]. Retrieved 09.01.2016 from <http://opengov.ru>

3. The Research Method

The main research method issues in the implementation of open government projects at the regional level and was in the form of a questionnaire of experts distributed as a survey. This allowed for objectively evaluating existing processes and creating a basic list of key contradictions, and possible ways of overcoming them. A specialized questionnaire was developed (consisting of 16 questions) and is used in a survey of 408 heads of municipalities of the Rostov region, taking part in courses of qualification improvement on a theme "Bases of work of the head of local authorities on dealing with local issues", held on the basis of the Ranepa southern-Russian Institute in October-November 2013.

In connection with the chosen method, the focus was not on the analysis of statistical indicators of data on the presence or absence of specific electronic services, but on the estimates and opinions of leaders of local governments, solving the problems associated with the development and implementation of open government at the local level.

The study analyzes the opinions of the expert's community about the positive and negative effects of ICT introduction in government, the estimates concerning prospects of development of open government in a separately taken subject of the Russian Federation and problems impeding its implementation. The holding of the expert survey by the selected methodology allowed making recommendations and adjustments to the policy in the field of information technologies development and implementation of the project "Open region", and proceeded the development of information-analytical system "Open region – Rostov region".

4. The Regional Preconditions and Practical Examples of the Implementation of the Project "Open Region"

One of the main objectives of this original research is to analyze problems and assess prospects for the development of the project "Open region" at the regional level in the framework of the modern stage. As an example, the development of regional e-government in Russia selected the information process with significant economic and human potential of the region – Rostov region. Rostov region is in sixth place in a rating of the Russian Federation regions on the level of implementation of e-government, published the electronic magazine "Gosmanagement", occupying a leading position in the southern Federal district³.

According to the service "Monitoring of government websites"⁴ the official government portal of the Rostov region occupies a leading place in the final rating of the sites of regional authorities

³ The rating of the Russian Federation regions on the level of implementation of E-government [Electronic resource] // Electronic magazine "Gosmanagement". Retrieved 09.01.2016 from <http://www.gosman.ru>.

⁴ The information system "Monitoring of government web sites" developed by the Ministry of Economic Development of the Russian Federation in 2011 and is designed to assess the

(second place as of December 2015)⁵. At the same time this requires some refinement section of the portal on the principles of openness, where the results of the work of the regional government in the field of open data are not present. Thus, according to the criterion of "Open data (expert)" regional portal is the 52nd place in the General rating of the Russian Federation regions.

Moreover, we note that the number of services that the residents of the Rostov region can be obtained in electronic form via the Internet is constantly increasing. Currently through the regional portal of public and municipal services of the Rostov area residents have the opportunity to receive 140 of the most popular and socially important services in electronic form (34 of 106 state and municipal (typed) services)⁶.

At the same time according to the rating of a single portal of public and municipal services⁷, prepared by the Ministry of communications and mass communications of the Russian Federation, the Rostov region is located on the 34th place among all subjects of the Russian Federation. Thus, the proportion of citizens using the portal services to obtain public services in electronic form is only 3% of the total population of the region. This low result can be defined as low availability of broadband Internet and the insufficient efforts of regional authorities to promote the opportunities of the portal.

Findings from an analysis of statistical indices of functioning of the regional infrastructure of e-government, are confirmed in the results of the expert survey. Upon completion of the survey was the list of barriers in implementing e-government concept in the Rostov region according to their degree of relevance. For example, the most pressing and significant problems the heads of local authorities took:

- the insufficient turnout, the lack of demand for e-services, low computer literacy among the population;
- the absence of economic mechanisms and legal regulations of interaction of subjects of the municipality in a single information space;
- the incompatibility of the formats and protocols of information exchange;
- the lack of a unified regional platform for hosting popular sets of state and municipal data in open access;
- the low level of skills in the field of information technology.

openness of information about the activities of public authorities and availability of state information resources for the citizens.

⁵ Monitoring of government websites [Electronic resource]. Retrieved 09.01.2016 from <https://gosmonitor.ru>.

⁶ The regional website of public and municipal services of the Rostov region [Electronic resource]. Retrieved 09.01.2016 from <http://61.gosuslugi.ru/pgu>.

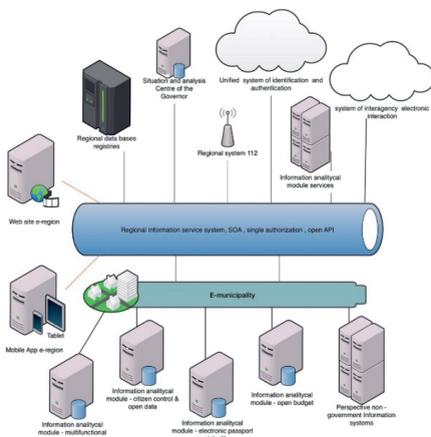
⁷ The rating of Common Government Services Portal of Russian Federation [Electronic resource] // Official portal of the Ministry of Telecom and Mass Communications of the Russian Federation. Retrieved 09.01.2016 from www.minsvyaz.ru.

The high relevance and the social importance of the problems of implementing the system of regional e-government, as well as the results of the expert survey allowed the group of experts South-Russian Institute (a branch of Russian presidential Academy of national economy and public administration) to begin work on the development and implementation of information-analytical system “Open region – Rostov region” (certificate of Rospatent on the state registration of computer programs No. 2015619070 from 24.08.2015).

As the main structural elements of the information-analytical system “Open region – Rostov region” are the following subsystems (see Figure 2):

- provide interactive, open and effective dialogue between executive authorities, citizens and business “Public control”;
- the organization of the process of providing state and municipal services, execution of functions, implementation of interdepartmental electronic interaction and the provision of the portal clear information on how to obtain service in the Rostov region – “Services and interagency cooperation”;
- ensuring transparency of formation and execution of budget for residents of the region and specific municipalities – “Open budget”;
- the association of information registers in electronic form and automate the collection, processing and reporting data for municipal management, increase the investment attractiveness of the municipality and the region as a whole, as well as the preparation of regulatory reporting for transmission at the regional level – “The Electronic passport of the municipality”;
- the formation of regional conditions to obtain the maximum political, economic and social effect of the use of open government data – “Open data”.

Figure 2: The Information-Analytical System “Open Region”



The main purpose of the development and implementation of information-analytical system “Open region” are:

- the development of an integrated technological platform for the creation of new social services for citizens and organizations of Rostov region;

- the formation of a socially oriented information space, providing citizens with the ability to effectively solve issues arising in specific life situations;
- increasing loyalty of a population to an electronic way of interaction with regional bodies of executive power and bodies of local self-government;
- improving the quality of statistical information by receiving information from citizens and its further updating;
- increasing openness of information and transparency of activities of the regional bodies of state power and bodies of local self-government.

The module “Public control” (certificate of Rospatent on the state registration of computer programs No. 2015616547 from 15.06.2015) allows you to send appeals to the authorities, to track the stages of processing and to evaluate the quality of work submitted. The text of the letter can attach photos/videos to provide an exact address of the problems on a map.

Information system is a set of applications: applications for the citizens – a web portal that all users can access the Internet at the following address <http://nk61.ru/> and the mobile application “Public control” for the operating systems iOS and Android, as well as the application of “Cabinet authority” for the employees of the authorities interacting with citizens.

During test work of the portal more than 200 problems of citizens were solved. Taking into account the fact that in the test period users were given the opportunity of filing appeals only on a limited range of issues, and given the complete lack of activities to promote the portal among the population, successful implementation of one of the modules of information-analytical system “Open region – Rostov region”, indicates a potentially high degree of readiness and willingness of citizens to use modern tools of interaction with the authorities.

5. Conclusion

Currently one of the most discussed topics is the issue of openness and accessibility to government. Information openness of bodies of state and municipal authorities means transparency of decisions and actions of government, equal access of all citizens to information on government structures, the ability to search, receive and disseminate information in the field of political-power relations.

Considered in the study example of the development of the project “Open region” in the Rostov region shows that increased accessibility for users of information and services electronically, as well as the quality meet the needs and interests of citizens remains a priority for effective development authorities at the regional level. Development of uniform services for all regions of the Russian Federation including methodical recommendations and standards implementation of e-government, a clear formulation of priorities for the establishment of this process within the accepted concepts of development are the necessary conditions for the qualitative improvement of the socio-economic situation of the country.

References

- Bershadskaya L., Chugunov A., Filatova O., Trutnev D. (2014) E-Governance and E-Participation Services: an Analysis of Discussions in Russian Social Media. CeDEM14. Proceedings of the International Conference for E-Democracy and Open Government. 21-22 May 2014, Danube University Krems, Austria.
- Bolgov R., Chugunov A., Karachay V., Misnikov Y. (2015) In a Search for Open Budget Effects: The Context of Russia. Innovation and the Public Sector. Vol.22: Electronic Government and Electronic Participation. Joint Proceedings of Ongoing Research, PhD Papers, Posters and Workshops of IFIP EGOV and ePart 2015. E. Tambouris et al. (Eds.) IOS Press, 2015.
- Capgemini, IDC, Sogeti, IS-practice and Indigov, RAND Europe, DTI (2014). Delivering on the European Advantage? How European governments can and should benefit from innovative public services. eGovernment Benchmark, Final insight report, Luxembourg, Publication office of the European Union, May 2014.
- Layne, Karen and Lee, Jungwoo. (2001). Developing fully functional E-government: A four stage model. Government Information Quarterly 18, 122-136.
- Svärd.P and Joshi.S. (2015). Prerequisites to e-Government Development and Open Government: The Case of Three Municipalities. CeDem15. Conference for E-Democracy and Open Government. 20-22 May 2015, Danube University Krems, Austria.
- UN Department of Economic and Social Affairs (2014). UN e-Government Survey 2014: e-Government for the Future we Want. United Nations, New York.

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The Use of Universal Personal Identifiers in Collaborative Government

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Abstract: The use of universal personal identifiers (UPI) in collaborative government is a controversial issue. Its capacity to accurately link personal data sets across sectors, gives rise to privacy concerns around sensitive data registered in government databases. However, unique identifiers are a necessary precondition to ensure the quality of the data in identification as well as in the data-matching processes. This reflection highlights the inherent conflict between data quality and unlinkability, both requirements for privacy, drawing from findings based on an explorative research on data-matching practices in Switzerland, and on the experiences of countries that have a system with an UPI in use.

Keywords: collaborative government, Unique Personal Identifier, privacy

1. Introduction

Universal personal identifiers (UPI) are a key enabler for collaborative government, especially, but not exclusively, in the e-government context. Some countries, refrain from putting an UPI into use, because of privacy concerns (WP13, 2007). Data protection requires data sets, especially data containing personal information, to be unlinkable. The inherent capability of UPIs to link records held in separate databases, gives rise to discussions surrounding the protection of sensitive data kept in governmental registries. But data protection does not only encompass the aspect of unlinkability. Hansen et al. (2015) have identified six aspects that need to be considered in engineering to secure privacy: Confidentiality, Integrity, Availability, Unlinkability, Transparency, Intervenability. The authors present these aspects as protection goals for engineering, a scheme that help visualize potential or factual conflicts between them. A good understanding of the conflicts is seen as necessary for developing an adequate and a balanced risk analysis model.

The unlinkability requirement has gained even higher importance in the big data era (Estermann, Jarchow 2015). Nevertheless, the fact that it is, for example, possible to uniquely identify individuals with a 90% probability, based on credit card records (Montjoye et al. 2015), is an indication that privacy cannot be secured solely through anonymization.

This contribution highlights the conflict between the protection goals unlinkability and integrity, and reflects on the perceptions of UPIs in relation to privacy. The presented considerations and findings emerged from a report commissioned by the Swiss Conference on

Information Technology¹ in 2015 (Dungga et al.). The report specifically refers to the Swiss social security number² (SSN) that was introduced in 2008. The SSN was initially conceived as an UPI, but its use has been restrictively regulated at the end, due to privacy concerns. The actual legal provision demands a new legal basis for every systematic use of the SSN, at federal or cantonal level (Hefti and Dungga 2016).

2. Methodology

The aim of the research conducted was to uncover the risks arising from the absence of an UPI and investigate on the experiences of countries using an UPI. To identify the risks, an explorative approach has been chosen that included an analysis of existing regulations, position papers or initiatives associated with the use of the Swiss Social Security Number (SSN) as an UPI, and interviews with civil servants overseeing projects or domains highly exposed to collaborative government issues. In all, five interviews were conducted, shedding light on the current situation in the value-added tax sector, the property sector, the road traffic sector and the criminal registry. The questions that guided the interviews focused on the current identification process, current data integration process, detriments of the current processes. To find out about the strategies countries using an UPI have implemented or mean to implement, a review of official documents and a number of interviews took place. Three interviews were conducted with civil servants from the interior ministries of the Netherlands, Spain and Denmark, and one interview with a representative of the Independent Council of Digital Security in Denmark. The questions that mainly guided the research were:

- 1) What are the main privacy concerns?
- 2) What provisions have been installed to secure privacy?

3. Selected Findings

The findings discussed in this section illustrate the difficulties public authorities face, when no common UPI is available, as well as the implications of it. How privacy can still be secured, even in the presence of an UPI, is illustrated in the last part of this section.

¹ Assembly of cantonal ICT representatives, more information on www.sik.ch.

² The SSN qualifies as UPI in many ways. Not only is it assigned to the totality of the resident population in right after birth or after moving into Switzerland, it is also already widely spread (health-insurance-card, employers and employees, other state contributions), and the quality of the registered data is ensured by embedding in a well-functioning numbering-system. In addition, the SSN consists of 13 digits, randomly generated, and therefore not referable to any personal information of the number holder. More information on <http://www.zas.admin.ch/org/00721/00758/index.html?lang=de>

3.1. Identification and Data Matching Practices in Swiss Collaborative Government

Data integration in collaborative government in Switzerland mainly uses data matching processes, thus the challenge lies in accurately linking records from several decentralized databases to the same entity. The research findings show, that in the majority of cases, identification and data matching processes in Swiss collaborative government take place manually. Switzerland lacks an attribute that can unambiguously point to a natural person for identification and data integration purposes. The absence of central registries in specific sectors, render the tracking of entities impossible. And, even where context-based identifiers exist, data matching is still a problem.

Identification and data matching is usually conducted by a clerk performing the task, whereby his judgement is based on a number of attributes. The most commonly used attributes are given name, surname, birthdate, place of origin, and information about parents. This is the case in value-added tax administration³ and the criminal registry. The commonly used attributes can point to two or several different persons at the same time. This is, for example, the case when two entities share the same given name, surname, and birthdate. In the absence of additional attributes, there is no clear way to distinguish the two. Also, other than the birthdate, the commonly used attributes to identify a person can change, e.g., they can vary over time. Given names usually change at the moment of marriage or divorce. Neither is place of origin a fix value.

Land or ship registration in Switzerland is organized at communal, and respectively cantonal, level. As a result, identical matters are handled in a multitude of registries, following distinct registration rules. In the event of an accident, finding the ship owner puts public authorities in front of a laborious and difficult challenge. Investigation of one person's land assets on a national scale is just as challenging an assignment.

In some sectors, context-driven identifiers have been introduced. Context-driven identifiers are assigned to a specific group of persons, depending on the purpose of identification. For example, in Switzerland a Global Location Number is assigned to all medical specialists, or a FABER-ID is assigned to all valid holders of a driving license. The transportation sector, for example, operates with the FABER-ID, a personal identifier assigned by the Federal Roads Office (FEDRO) to all owners of a driver's license. This solution helps in solving the majority of identification problems within the sector. Nevertheless, context-driven solutions face limitations even within the sector. A limitation can be displayed through the example of the administration of training personnel. The association for vehicle services (asa, associations des services des automobiles) is in charge of providing mandatory training for drivers. Training personnel, sometimes do not own a driver's license. In this case, this public administration is confronted with the same difficulties as any other sector in its identification process. Difficulties also arise when communicating with public authorities who are not using the FABER-ID in their registries. In the context of vehicle tax

³ The value-added tax administration faces difficulties in identifying individual enterprises with outstanding positions. The database registers enterprises, and it is possible that an individual, whose former business bankrupted, starts a new business. Data integration within the same data base without an identifier becomes a real challenge.

collection, the cantonal public administration in charge uses addresses provided by population registries. Since FABER-ID is not stored in population registries, vehicle tax collection authorities face the same difficulties in matching the data correctly as any other sector.

3.2. Privacy Risks as a Result of the Absence of an UPI

The research findings indicate that the absence of an UPI is not only warding off risks, but also implicates risks. The inability to distinctly identify persons, can lead to confusion that puts privacy at risk, facilitates identity fraud and, as in the ship-accident-case, poses public security at risk.

The current identification and data matching processes pose privacy at risk. Manual processes being highly prone to errors can easily cause confusion of persons. The inability to correctly identify persons, can lead to false identification and danger of confusion. In the case of confusion, for example, in tax collection or in the issuance of an excerpt of a criminal record, an unauthorized party gets insight to sensitive data of another person. The described situation displays a breach in data protection, ironically the exact reason why a unique identifier has not yet been installed in Switzerland already. Therefore, having a distinctive attribute to clearly identify citizens can bring substantial enhancements in data quality, and prevent privacy breaches as a result.

The inability of public authorities to correctly identify a person facilitates unauthorized persons to claim another identity. In such scenarios a subject commits identity fraud to get access to a clean excerpt on criminal records or debt registry. Such action qualifies as identity fraud. Identity fraud and identity theft are currently a major threat.

When data are shared with another public administration, both parties must be certain the data set refers to the same entity. This form of data integration takes place, for example, when criminal records are taken into account in recruitment or promotion processes in the military, in naturalisation processes, or when the exchange of information needs to take place promptly in order to prevent crime, such as information in relation to gun use or cases of paedophilia. Needless to say, in some cases, inaccurate data matching can have serious aftermath for the individual person concerned.

In the absence of a central register, finding data without a common attribute able to distinguish correctly one data set from another is, in some cases, an impossible undertaking. In combination with the fact, that different registries show different quality and timeliness of their data, finding or matching the right person can, in cases, become an ambitious endeavour. In this case, an UPI becomes the main identifying attribute to make way for interoperability.

3.3. Privacy in Countries Using an UPI

The experiences of countries using an UPI show paths to secure privacy, even when an UPI is in place. In addition to legal provisions, user consent or confidential guard of the number, as well as choices in system architecture and regulations around the authentication process are in effect.

The results of the research seem to confirm that privacy perceptions around the use of an UPI vary substantially by country. The use of an UPI has a long history and is strongly accepted in Spain, and in Denmark. In the Netherlands, the use of an UPI was introduced recently in order to explicitly augment accuracy and reliability of data within government processes and to protect privacy through the prevention of identity fraud. As a result, different privacy provisions apply. The usage of the UPI in the Netherlands and in Spain is strictly limited for the public sector; the usage in Denmark is open for public and private sector. While Spain ensures privacy through user consent, the Netherlands has chosen the way to treat the number with high confidentiality to secure privacy. In Denmark privacy and security concerns are addressed through choices in system architecture and regulations around the processes of authentication. Here, the UPI is perceived as a personal attribute, similar to name and birth date; it allow for identifying a person, but is not of a sensitive nature per se. A system architecture, where sensitive data is contained in decentralized databases and the registry containing identifying attributes kept with minimal information, is seen as privacy and security enhancing. Also, Spain and Denmark advocate the concept of the number not being used as sole attribute for authentication purposes.

4. Conclusions for Switzerland and Reflections on Future Work

This contribution has shown that data integrity is just as important a privacy feature as unlinkability, and that the absence of an UPI puts data integrity at stake. In the Swiss case, politicians and privacy advocates need to understand the inherent conflict between these two privacy features in order to take the necessary measures to, not only enable collaborative government, but more importantly, to remediate the impacts of the current situation. Future work will need to deepen knowledge on how to ensure unlinkability, irrespective of the use of an UPI.

References

- Dungga, Angelina, Olivier Brian, Jérôme Brugger, Thomas Selzam, Andreas Spichiger, Katinka Weissenfeld (2015). Gutachten. AHV-Nummer als einheitlicher, organisationsübergreifender Personenidentifikator. Schweizerische Informatikkonferenz. Retrieved March 1, 2016 from <https://www.egovernment.ch/en/dokumentation/control/>
- Estermann, Beat, and Thomas Jarchow (2015). Big Data: Chancen, Risiken und Handlungsbedarf des Bundes. Ergebnisse einer Studie im Auftrag des Bundesamts für Kommunikation. Federal Office of Communications OFCOM. Retrieved, March 1, 2016 from <http://www.bakom.admin.ch/themen/infosociety/index.html?lang=en>
- Hansen, Marit and Meiko Jensen, and Martin Rost (2015). Protection Goals for Privacy Engineering. IEEE CS Security and Privacy Workshops, 159-166.
- Hefti, Esther, and Angelina Dungga (2016). Der steinige Weg zum einheitlichen Personenidentifikator. eGov Präsenz 2016 (1), 57-58. Retrieved March 1, 2016 from https://www.wirtschaft.bfh.ch/de/forschung/e_government_institut/publikationen/egov_praesenz.html

de Montjoye Y.-A., L. Radaelli, V. K. Singh, and A. Pentland (2015). Unique in the shopping mall: On the reidentifiability of credit card metadata. *Science*, 347 (6221), 536-539

WP13 (14 Sep 2007). D13.3: Study on ID number policies. Retrieved March 01, 2016, from <https://lirias.kuleuven.be/bitstream/123456789/205522/1/f>

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A Digital Village: Beyond Smart Nation to Self-Solving and Citizen Governance

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Abstract: Policymakers in Singapore, a wired nation-state of 5.4 million, have been summoning the “kampong spirit” (i.e., village spirit) when reminding citizens of the importance of cohesiveness in a diverse society. Initiatives such as crowdsourcing, the sharing economy and community-based portals are “villages-at-work”. Despite their different forms and purposes, these initiatives are founded on the same premise - people will act as a collective to solve problems and improve their lives when given the means. This reflection paper is based on a research project that explores the research idea of if and how a nation-state like Singapore can be a digital village of 5.4 million people and beyond. Unlike the smart nation initiative, which focuses on authorities and institutions deploying technology and devices to improve people’s daily lives, the “digital village” concept is a ground-up approach. The study targets policymakers and academics who are interested in technology’s potential to transform the individual, society and nation.

Keywords: traditional village, digital village, communities, smart nation

1. Introduction

Besides industrialisation and urbanisation, the Internet has been touted as the next major threat to community life in modern times. Scholars have adopted different positions concerning the Internet’s impact on society. While some raise concerns over information overload, digital alienation and ghettoization (e.g., Galston, 2003; Sunstein, 2009), others advocate that technology plays an important role in building social capital and strengthening communities (e.g., Adams & Roscigno, 2005; Nip, 2004; Rheingold, 1993). With the proliferation of social media, people are not only constantly connected to their social networks, they are also privy to intimate details of the lives of their friends, colleagues and acquaintances.

The “kampong spirit” has been summoned on several occasions by policymakers to remind citizens of the importance of social ties in an increasingly diverse society such as Singapore’s. Through nostalgic story telling by the older generation and reminiscence of community leaders, various ideals of a village pervade public consciousness. Singapore as a highly wired and dense city with a diverse population mix of 5.4 million. It was ranked 16 out of 166 countries on the International Telecommunication Union’s Information and Communication Technology Development Index in 2013. The index measures people’s access to and skills in using information

and communication technology. Singapore's rapid adoption of information technology (IT) was driven by its economic imperative to differentiate itself from the neighbouring economies (Rodan, 1998). Its economic planners wanted to progress into high-tech, knowledge-based production and retain its edge as a hub for an increasingly wired world through telecommunication technologies (Yeo, 1995). The government – through the National Computer Board followed by the Infocomm Development Authority (IDA) in 2000 – embarked on a series of initiatives to wire up the nation and build a sophisticated IT infrastructure (Baber, 2002). The initiatives saw much success in driving IT adoption in various sectors. By 2014, 79% of Singapore's resident population used the Internet (IDA Singapore, 2014). Although a highly connected nation-state juxtaposes the idea of a village comprising tightly knit inhabitants, emerging trends indicate that a new form of society in the form of a digital village is not just inevitable but will be the way to sustain and transform governance and society. In the next section, I will dissect the traits of a traditional village and community, and explicate the parallels between a traditional village and a digital village. The parallels demonstrate that cities or developed states functioning like how villages do is not a paradox. Following which, I will explain how the digital village concept is different from the smart nation initiative. This reflection paper will conclude with a discussion on the implications for policymakers and governance.

1.1. Back to the Village

In his book on the impact of urbanization on rural life in China, India, Mexico, Serbia and Russia, Halpern (1967) conjured a picturesque image of the village. In a village, people's sense of belonging and community is grounded on physical proximity and the sharing of a somewhat restricted social space results in much transparency as everyone's lives are visible to others, which also means there is little privacy. Working together and providing mutual aid for the benefit of those living in the same community, is a distinctive feature of village life. Self-organised cooperation in the form of exchanging resources and providing support is part and parcel of village life, whether it is sharing daily necessities, caring for one another's young and old, or trading.

Studies have established that individuals living in traditional communities are bound together by affective or emotional ties, and enjoy much reciprocity in their relationships. There is also a strong sense of vigilance as members watch each other's backs and extend help when needed. The traditional definition of community is grounded on physical proximity and propinquity (see for example, Bender, 1982). In traditional communities, people have a strongly shared mental mode of the sense of place. However, with the advent and proliferation of information communication technologies like the Internet, communities are being seen and conceptualized in a different light. Jones (1998) argues that the issue of geography is "critical not only for an understanding of computer-mediated communication (CMC) but for an understanding of the increasingly complicated relationship between mass communication, individuals, and new media technologies" (p.6).

Despite different practices and histories, villages spanning from African villages, British hamlets, Chinese villages, Indian villages and Malay kampongs, there are distinctive traits that

undergird all village systems. Strong parallels can be observed between traditional villages and current technology-enabled initiatives and enterprises such as sharing economies. Worldwide, the phenomenon of the sharing economy is gaining traction. In a sharing economy such as Air BNB and Zipcar, people pool resources, so that individuals get what they need, when they need it, and sell what they do not use. In Singapore, renttycoons.com and BlockPooling.sg let people (neighbours in the latter case) rent out items they do not need. Within a year of their launch, they have drawn 1,700 and 3,500 users respectively. They are microcosms of the digital village

1.1.1. Leveraging the Power of Many in Problem-Solving

While there is fear that Internet users, in the course of going online to communicate with others in other parts of the world with increasing ease, might abandon contact with their local communities as they participate in increasingly fragmented communities (Horrigan & Rainie, 2002; Shapiro; 1999), current trends in technology adoption suggest otherwise. One basic organising principle behind villages is problem-solving. Anthropologists and sociologists have attributed the formation of villages to environmental, economic and social factors, including drought and warfare. For instance, the formation of many rural settlements in China is related not only to the increasing population and a long historical background but also to water supply and to defence (especially against attack by bandits). In traditional villages, people converge and collaborate to overcome the odds of surviving in a harsh environment. People with excess resources and those who need the resources participate in exchanges, which leads to extrinsic and oftentimes intrinsic gratification. The same principle applies to a digital village where people start ground-up efforts and leverage collective intelligence to solve problems, create solutions and improve the quality of their lives. Initiatives such as Rent Tycoons¹ and Blockpooling² in Singapore, and even global platforms such as the Kickstarter³ demonstrate this principle at work.

A subsidiary of the registered society My Community in Singapore, the website “My Queenstown” was set up in 2009 as an online community portal and has since expanded to Facebook, Twitter and YouTube. Other than preserving heritage and educating residents on the history and civic life in Singapore’s first satellite residential town, My Queenstown aims to integrate residents and instil them with a sense of pride and belonging to the community. Through residents’ contributions, the community portal has been used to improve conditions in the estate and provide feedback to relevant authorities on maintenance lapses (e.g., tangled wires, littering and insufficient wheel-chair accessibility). Its publication on insufficient wheel-chair accessibility attracted scrutiny on the management of senior citizens’ needs and prompt action was taken by the authorities to address the problem.

¹ <http://www.renttycoons.com/>

² <http://www.blockpooling.sg/>

³ <https://www.kickstarter.com/>

1.1.2. Solidarity and Self-Monitoring Sustain Community Life

The second trait which characterises village life is mutual monitoring and solidarity which is key to the sustainability of a village. There is recognition that one's well-being is inextricably tied to that of the group in a village, and there is much transparency in community life because everyone's behaviour is visible to others. Similarly, with increasing transparency due to the sharing of data, there is little need for top-down intervention in a digital village as best practices will emerge over time. This is because members will practise lateral surveillance and self-regulation to protect group norms and interest – the watching of one another's back, reporting of misdeeds and abuse, and the extension of help will develop naturally. Some of these norms emerged even in earlier studies of online communities, such as WELL in which Rheingold (1993) was a member. Intervention from "the top" (the authorities or regulators) is required only when there is a crisis that members cannot resolve. Rules or guidelines for communication and transactions will be developed ground-up and members who want to stay in the community will have to abide by the rules. With reference to the earlier examples of Rent Tycoons, Blockpooling and Kickstarter, users have to adhere to rules of engagement which protects them from exploitation.

1.1.3. Egalitarianism in Participation

The third similarity between a traditional village and a digital village is egalitarianism in participation. In a traditional village, everyone has a role to play and to contribute to village life - the young help their parents with the chores and mind their younger siblings, the adults the production engines of a village, and the old are elders sought for their experience and supervision of the young ones. Similarly, the connectivity and multi-modality of digital technologies will bring back egalitarianism and the digital village will bridge the old, young, aged and handicapped. While the digital divide is still a problem faced by some societies, rapid innovation driving adoption costs down and alternative ways of accessing the World Wide Web (as in the case of the mobile phone – see Hussain & Howard, 2013; Yu, 2004) will close the gap in the near future.

2. Beyond Smart Nation

In 2014, the Singapore government launched the smart nation initiative and set up a Smart Nation Programme Office to oversee infrastructural and technological innovations, as well as drive and coordinate cross-industry partnership. The key vision of the initiative is to enable people to live "meaningful and fulfilled lives, enabled seamlessly by technology, offering exciting opportunities for all". Networks of sensors and smart devices are envisioned to pervade people's daily lives for sustainable and comfortable living, and facilitate human connections (Prime Minister Office, Smart Nation, n.d.; IDA Singapore, iN2015 Masterplan, n.d.). According to the smart nation blueprint, eight elements define a smart city. They are: governance, buildings, healthcare, mobility, infrastructure, technology, energy and citizens. In order for the Smart Nation to be realized, a world-class infrastructure (such as next-generation nationwide broadband network and extensive

wireless network), a capability layer (hence education plays an important role) and a global ecosystem (where people are able to quickly prototype and market their ideas) are needed.

Various government agencies are collaborating with the private sector (Standard Chartered Bank), technological companies (e.g., Google, IBM), education institutions, community organisations and research institutions in driving innovation in areas ranging from mobility, daily transactions, smart homes, and lifelong needs. What is clear is that while technology evolves and is harnessed by policymakers to improve people's quality of life, human behaviour will also evolve. Thus, while the smart nation initiative focuses on identifying areas of need, the technological innovations required to meet those needs, and developing programmes to generate suitable skill sets, the digital village thesis asks these fundamental questions:

- 1) What drives human connection and collaboration?
- 2) What can be done to cultivate the spirit of collective problem-solving?
- 3) What can be done to encourage ground-up technology-enabled collaboration in solving day-to-day problems?

3. Conclusion

Moving forward, besides identifying and analysing case studies, the research study seeks to analyse how society, economy and governance will be reconceptualised in a digital village. The project is multi-disciplinary as it draws on the fields of sociology, political science, psychology and communication for analysis and policy recommendations. The analysis of such transformations would be grounded in specific policy challenges faced by an aging society such as Singapore's, one which is also seeing increasing political pluralism (e.g., caregiving, labour resources, "local" and national governance).

This project focuses on how technology accords each citizen the opportunity and capability to help solve problems on a nationwide scale, and reconceptualises how people will organize themselves in future. It targets policymakers, researchers and the intelligent layperson who are concerned about Singapore's future and interested in technology's potential in transforming the individual, society and nation. A city-state or a country as a digital village has several important implications for society, such as strengthening social capital, building societal resilience in the long term, and reducing the reliance on legislation as individuals assume the responsibility for rectifying mistakes and negative behaviour. The findings and discussions will have implications for countries seeking to leverage on technology's potential to transform human agency and cultivate citizen governance

References

- Adams, J., & Roscigno, V. J. (2005). White supremacists, oppositional culture and the World Wide Web. *Social Forces*, 84(2), 759-778.
- Baber, Z. (2002). Engendering or endangering democracy? The Internet, civil society and the public sphere. *Asian Journal of Social Science*, 30 (2), 287-303.

- Bender, T. (1982). , *Community and social change in America*. Baltimore: John Hopkins.
- Galston, W. A. (2003). If political fragmentation is the problem, is Internet the solution? In D. M. Anderson, & M. Cornfield Johnson (Eds.), *The civic web: Online politics and democratic values* (pp.47-62). Lanham, MD: Rowman & Littlefield.
- Halpern, J.M. (1967). *The changing village community*. Englewood Cliffs, NJ: Prentice-Hall Inc.
- Horrigan, J. B. & Rainie, L. (2002). Online communities: Networks that nurture long-distance relationships and local ties. Pew Internet & American Life Project.
- Hussain, M.M. & Howard, P.N. (2013). What best explains successful protest cascades? ICTs and the fuzzy causes of the Arab Spring. *International Studies Review*, 15, 48-66.
- IDA Singapore. (2015). Annual survey on infocomm usage in households and by individuals for 2013. Retrieved from <https://www.ida.gov.sg/~//media/Files/Infocomm%20Landscape/Facts%20and%20Figures/SurveyReport/2014/2014%20HH%20public%20report%20final.pdf>
- IDA Singapore (n.d.). iN2015 Masterplan. Available at <https://www.ida.gov.sg/Tech-Scene-News/iN2015-Masterplan>
- International Telecommunication Union (2014). Measuring the Information Society Report. Available at https://www.itu.int/en/ITU-D/Statistics/Documents/publications/mis2014/MIS2014_without_Annex_4.pdf
- Jones, S. G. (1998). Information, Internet, and community: Notes towards an understanding of community in the Information Age. In S. G. Jones (Ed.), *Cybersociety 2.0: Revisiting computer-mediated communication and community* (pp. 1-34). Thousand Oaks, CA: SAGE Publications, Inc.
- Nip, J. Y. M. (2004). The queer sisters and its electronic bulletin board. *Information, Communication & Society*, 7(1), 23-49.
- Prime Minister Office. (n.d.). Smart nation. Available at <http://www.pmo.gov.sg/smartnation>
- Rheingold, H. (1993). *The virtual community: Homesteading on the electronic frontier*. New York: HarperPerennial.
- Rodan, G. (1998). The Internet and political control in Singapore. *Political Science Quarterly*, 113 (1), 63-89. Retrieved August 8, 2015, from <http://www.jstor.org/stable/2657651>.
- Shapiro, A.L. (1999). *The control revolution*. New York: PublicAffairs.
- Sunstein, C. (2009). *Republic.com 2.0*. (pp.19-45). Princeton, NJ: Princeton University Press.
- Yeo, G. (1995, April 23). Information Technology – Positioning Singapore in Asia.
- Yu, H. (2004). The power of thumbs: The politics of SMS in urban China. *Graduate Journal of Asia-Pacific Studies*, 2, 30-43.

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Augmenting Social Talk: The #ask Project

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Abstract: In this paper the #ask project is presented. The aim of the project is to bring together young people and politicians. For this purpose, #ask will exploit online discussions that have already taken place on the online social media network Twitter. The role of #ask is to act as a broker between young people and politicians. For this purpose, a five-step approach will be taken, aiming to identify existing contributors, understand hot topics, broker discussions, analyse reactions, and feedback the results back to stakeholders. The project involves partners in five European countries.

Keywords: eParticipation, young people, Twitter

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1. Introduction

According to Eurostat, by 2050 youth under the age of 25 will account for a *quarter* of all working age person (Eurostat, 2009). To tap into the full potential of this rich source of social dynamism, politicians and policymakers must make sure they take the thoughts of young people into account. The European Commission recognizes this fact in its 2010-2018 EU Strategy for Youth (European Commission, 2009) as does the Council of Youth Ministers which adopted a 2009 resolution promoting the active citizenship, social inclusion and solidarity of all young people. This resolution is supported by Article 12 of the UN Convention on the Rights of the Child, which states that young people have a right to have their views taken into account, and adults have a duty to provide them support.

Unfortunately, over 5 years later the goals of the EU Strategy for Youth remain unfulfilled. Recognising the growing use of ICT amongst young people (87% have basic ICT skills, 95% basic internet skills¹, over 60% have personal social media profiles and tend to use the internet over TV and printed press; Eurodesk Qualified Multiplier, 2013), policy makers have initially invested in designing online platforms to engage youth. Despite these efforts, less than one quarter of young Europeans participated in online political discussion forums (Standard Eurobarometer 77, 2012). Moreover, recent findings show that almost half of young distrust the EU and its political directions (Standard Eurobarometer 77, 2012). Consequently, whilst well intended, it is simply unrealistic to expect youth to use formal platforms to freely express views. In summary, the roll out of specialised platforms rarely scale and do not reach a large amount of users - as the recent history of eParticipation shows (Pedro Prieto-Martín et al., 2012). Yet, young people are engaging in lively political debates other using free, easily accessible and popular social media tools.

The aim of this project is to present the #ask project. This project aims to close the gap between young people and politicians who use Twitter and is funded by the Erasmus+ programme.

The remaining of this paper is organized as follows. Section 2 presents the overall solution, section 3 discusses the approach while section 4 outlines the implementation roadmap before concluding in section 5.

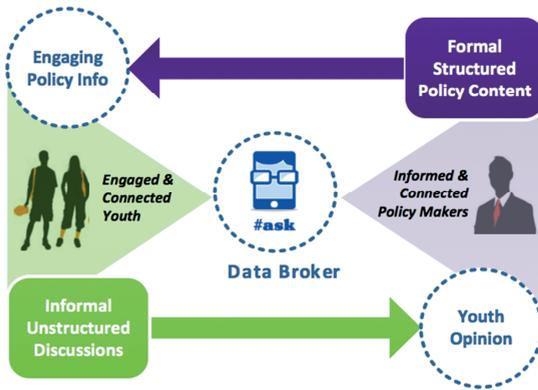
2. Proposed Solution

Project #ask is designed to use eParticipation as an instrument to foster young people's empowerment and active participation in democratic life. Instead of expecting youth to search for and find pre-existing discussion platforms, #ask will go directly to the conversations that young people and politicians are already having – in isolation from each other - on the popular online social media network Twitter. Twitter has been described as “the SMS of the Internet” and boasts more than 320 million monthly active users.

Whilst a growing number of politicians/policymakers use Twitter, they rarely intersect and engage with young people. Stuck in the traditional top-down communication mode, they tend to “push out” views – often in large and difficult to digest formats. At the same time, whilst young people use Twitter, their discussions are often fleeting and unstructured, responding to issues as they arise rather than feeding into and informing policy discourse.

¹ <http://epp.eurostat.ec.europa.eu/>

Figure 1: #ask Broker Concept



#ask aims to overcome these obstacles by acting as a ‘broker’ between the formal content pushed out by politicians/policy makers and the more informal content spontaneously generated by European youth. It will do so by using 1) communication experts and youth organisations to reformulate structured policy documents and Tweets into more engaging formats 2) sentiment analysis and visualisation tools to translate unstructured youth discussions into opinion ‘snapshots’ for politicians/policymakers 3) the promotion of #hashtags to stimulate exchanges between these two groups.

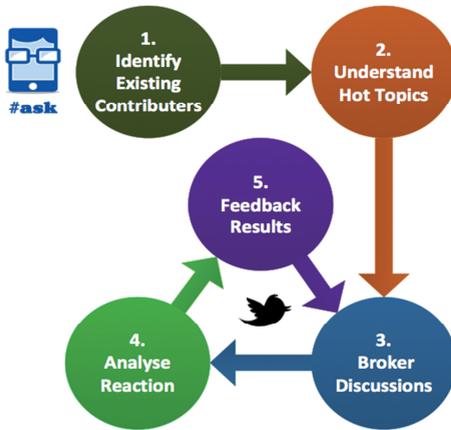
Visualisations representing insights from structured and unstructured data (maps, graphs, infographics) will provide:

- New, easy-to-understand ways for young people (particularly those with poor language skills, learning difficulties or disinterest in reading heavy documents) to view policy.
- Quick data-driven insights presenting youth views to time poor politicians/policymakers.

3. Approach

#ask is rooted in the conviction that to be truly scalable, sustainable and impactful, eParticipation initiatives must overcome the current “generational divide” between digital natives (for whom posting and Tweeting views is now second nature) and politicians/policymakers (who came of age in a more traditional communications era). Toward this end, #ask has created a five-step “data broker” framework (Figure 2). A brief introduction to each step follows.

Figure 2: #ask Data Broker Framework



3.1. Identify Existing Contributors

The first challenge for the #ask framework is identifying and capturing the youth and to this end, policy makers already having political discussions online. A straightforward approach is to focus on Tweets that contain specific hashtags relevant to current news or policy terms. Researchers can manually select the search terms or adopt a dynamic approach and derive hashtags from a computational process (e.g., using Google trends). Resulting findings will help #ask identify and categorise existing communities and policymakers via twitter @handles and #hashtags. Project #ask aims to understand existing conversations policy makers and youth are having and who is having them.

3.2. Understand Hot Topics

#ask aims to engage young people with low skills, either in training or unemployed, who wouldn't normally participate in political discussions. To do so, #ask will start by identifying hot topics of most relevance to this group and relate them to political themes. Topic identification will be realized by analyzing the content (text) of existing Tweets using/extending open source tools and/or libraries that support Natural Language Processing (NLP) methods for document and topic clustering. Once hot topics are identified, #ask researchers will match them to the interested policy makers and community #hashtags identified in stage one. Project #ask aims to find topics that interest young people and matches them with interests of online policy makers.

3.3. Broker Discussions

#ask will identify relevant Tweets from policy makers identified in stage one and Retweet them directly to relevant youth discussions likewise identified in stage one, reformulating and repacking

policy text from policy makers where necessary to ensure that they are engaging to young people, i.e., attention grabbing messages, infographics, short videos, etc., and Retweeting them into the stream of conversation that young people are already having - using the hashtags #ask has already identified - therefore provoking reaction and stimulating ongoing discussions. Project #ask aims to act as data broker to exchange information between policy makers and young people.

3.4. Analyse Reaction

#ask will create a tailored dashboard to measure and analyse feedback to the “brokered” messages in order to capture the collective opinions of young people and understand how policy makers interact with them. The volume of Tweets provides one significant metric of the level of public interest and attention about a topic. Other useful investigations include identification of the most significant participations of a particular discussion or topic. Lessons learned will be used to improve the “brokerage” methods in stage three and create a Twitter guide for policy makers on how to better engage youth online and build successful communities.

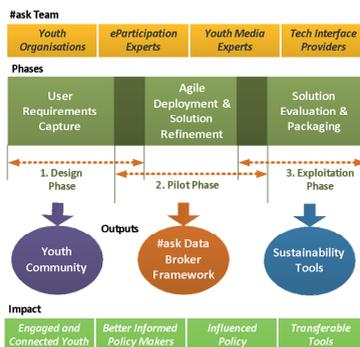
3.5. Feedback Results

Collective opinions gathered during the above analysis will be shown on the #ask dashboard using engaging, easy to understand visualisations including standard chart types, interactive maps and info graphics. These visual results will be sent by #ask to both policy-makers and young people over Twitter to provoke further discussions. Project #ask aims to provide outcomes from discussions to stimulate further conversation and support decision making.

4. Project Design

The project will be brought from a conceptual phase to a fully integrated data broker solution through the implementation roadmap presented in Figure 3. In this figure, the three main interleaving phases (requirements capture, agile development and solution evaluation) are shown along with main outputs and expected impact.

Figure 3: Implementation Roadmap



5. Conclusions

In this paper the project #ask is briefly outlined. #ask aims to tackle the inherent challenges faced by earlier eParticipation projects (high costs, limited scalability, no sustainability) by using a popular, free-to-use and tried & tested platform -Twitter- to (a) give young people a collaborative, collective voice with policy makers, (b) enable policy makers to better understand their opinions and (c) facilitate exchanges between these two groups.

#ask will do so by (i) researching the @handles of politicians/ policymakers involved in European youth issues and the #hashtags of related youth discussions (ii) Retweeting content between these groups in formats that speak to them, i.e., short and snappy for youth and visual snapshots for politicians and (iii) capturing and analysing youth feedback to create reliable data-driven evidence for policymakers.

The project started in November 2015 and will last for 2.5 years. The consortium consists of five organizations in Bulgaria, Croatia, France, Greece and the UK and is coordinated by the University of Macedonia in Thessaloniki, Greece.

References

- Eurostat. (2009). Youth in Europe: A Statistical Portrait. Retrieved March 1, 2016, from <http://pjp-eu.coe.int/documents/1017981/1668203/YouthinEurope.pdf/40f42295-65e4-407b-8673-95e97026da4a>.
- European Commission. (2009). EU Strategy for Youth. Retrieved March 1, 2016, from <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2009:0200:FIN:EN:PDF>.
- Eurodesk Qualified Multiplier. (2013). Social Media Strategies and the Integration of Youth Culture. Retrieved March 1, 2016, from http://europa.eu/youth/node/12767_en.
- Standard Eurobarometer 77. (2012). Spring 2012. Retrieved March 1, 2016, from http://ec.europa.eu/public_opinion/archives/eb/eb77/eb77_en.htm.
- Prieto-Martín, P., & de Marcos, L., & Javier Martínez, J. (2012). A critical analysis of EU-funded eParticipation. In Y. Charalabidis & S. Koussouris (Eds.), *Empowering Open and Collaborative Governance* (pp. 241-262). Heidelberg: Springer.

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E-Participation Platform Features and Design Principles

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Abstract: Austria has seen some efforts in e-participation initiatives during the last years, for instance in the area of urban design. However, a single official platform (“one-stop”-principle) comprising many e-participation processes for a broader target group is so far missing. In the KIRAS project “ePartizipation” researchers and practitioners have worked on a demonstrator for a platform that seeks to integrate multiple online identification methods and is able to offer activities on different levels of e-participation. This paper describes the conceptualisation of the platform and the inherent design principles, in particular related to Privacy by Design and e-inclusion.

Keywords: E-participation, online identities, Privacy by Design, e-inclusion, identification

Acknowledgement: The project “ePartizipation” is funded by the Austrian security research programme KIRAS of the Federal Ministry for Transport, Innovation and Technology (bmvit). The project was presented at CeDEM15 in a workshop and in an accompanying conference paper.

1. Introduction

E-participation is an interdisciplinary research field (Ringler 2013) and often seen as a means to increase participation in political decision making. In particular in the early stages of e-participation, projects sought to integrate a high number of users. Later stages focused more on inclusive design and quality of contributions instead of mass participation. Sanford and Rose (2007) mention the socio-technological design of the system as a major challenge. Certainly there are a lot of accompanying measurements to be taken, in particular if e-participation platforms are meant to be hosted by officials, the state or public authorities, and if they are to attract a big variety of users. Not only measurements fostering digital inclusion have to be taken into account (Macintosh et. al. 2009, Horrigan 2005, Heussler et al. 2016), but also regarding privacy and data handling processes of the system (Hoepman 2014). Moreover, there are specific measurements on the project level that offer users some flexibility in participation, for instance regarding the selection of different methods of electronic identification: from official e-IDs offered by the state or more popular solutions like open or social e-IDs, users should be able to choose their preferred

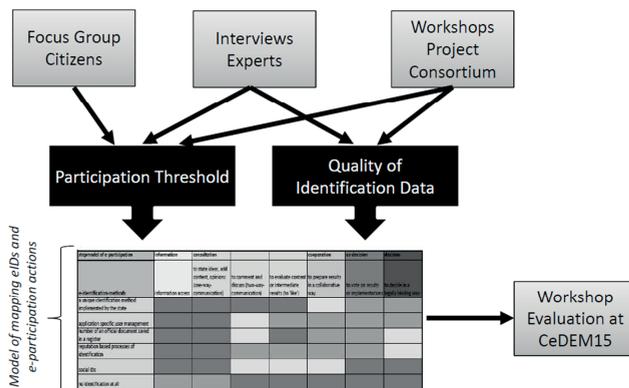
way of identification, if feasible. On some levels of e-participation (e.g. consultation), it makes sense to grant users more flexibility.

In the following we will describe the conceptualisation and design features of the platform demonstrator with a particular view to the integration of multiple online identification methods. We will further address the relevant design principles reflected the platform. The results of the two-year project (both from the mapping and the actual platform design) may help other e-participation platform designers in their own design or evaluation process.

1.1. Project Aims and Methodology

The aim of the Austrian project “ePartizipation” is to design a platform demonstrator that can be used as a single site for multiple e-participation purposes and on many levels of e-participation; (from information to consultation, cooperation and co-decision (Parycek et al. 2015)). One of the subgoals in the project was to map different methods of online identification and authentication methods with different activities of e-participation to find out about the appropriateness of specific e-IDs on a particular level of e-participation. For instance: “Which e-ID is appropriate on the level of consultation?” By integrating the work of e-participation experts in a focus group, interviews, and workshops, the e-IDs were mapped according to two dimensions: quality of identification data and participation threshold. (see figure 1) The results of this model are reflected in the scenarios of the demonstrator, but could also be valid for e-participation platform designs and officials who need to decide on the appropriateness of a specific e-ID for an e-participation process. The model was introduced to fellow researchers at a workshop at CeDEM15 (Sachs and Schoßböck, 2015). Feedback showed that the task of mapping e-IDs and e-participation activities was challenging, but the results were overly approved.

Figure 1: Methodology of mapping e-participation activities with e-ID method. For details on the model see Parycek et al. 2015.



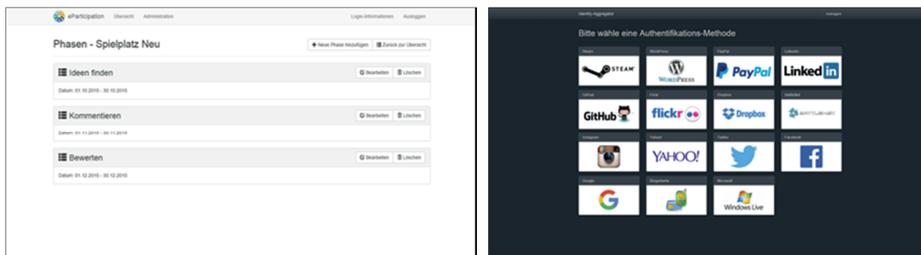
Alongside the output of the requirements report, the technicians within the project consortium commenced the development of platform architecture and the platform itself. At current state, the platform is in the final development phase to include all functionalities for the testing with users.

While usability tests were integrated in the development of the platform, user acceptance tests in spring 2016 will provide an assessment on how the public perceives the platform and the context of e-participation. User acceptance tests will include work-related and urban planning scenarios.

1.2. Project Implementation

The concept and the implementation of the projects allows high flexibility in the usage of the tool. On the one hand side, hosts of e-participation processes can design their processes according to their needs (see figure below on the left side). This means that a discussion activity can be followed by co-decision activity, which can be the end of a process or again be followed by a discussion.

Figure 2: On the left: User interface for administrator to choose and order participatory action. On the right: User interface to select an electronic identity for authentication. The demonstrator is currently in development, so the screenshots provide a first impression of the prototype.



On the other hand, the platform allows the integration of multiple e-IDs for authentication. The host of e-participation processes (the administrator of the platform) can choose no, one or more e-IDs for each individual participation activity. That means that multiple e-IDs can be allowed in one participation process. While the activity of stating ideas could f.i. be open for Facebook and Twitter-IDs, the process of co-deciding as the subsequent step could be only allowed to users that login with a unique ID implemented by the state (e.g. in Austria: Citizen Card). The graphic above on the right shows integrated social IDs and the Austrian Citizen Card (the latter in bottom mid).

2. Platform Features and Design Principles

Regarding the design of the platform, the following features and design principles are reflected in the design of the demonstrator:

- Integration of multiple online identification methods (e-IDs)
- Aspects of e-inclusion (Design for All)
- Privacy and Security by Design

In the following, we will describe those features and their application to the platform demonstrator.

2.1. Integration of Multiple Online Identification Methods

One aspect of digital inclusion or e-inclusion is already reflected in the flexibility of being able to choose between different e-IDs (both for users and providers). E-participation providers are advised to implement a multiple identity management system that allows users to participate in some processes completely without registration (e.g. commenting). In all multi-levelled processes of e-participation, it is recommended to offer open or social media IDs (Open IDs), which will enhance usability for specific groups. The model below seeks to provide a generalised approach for usually individual e-participation processes.

Figure 3: Recommendations for the use of specific e-IDs for e-participation activities. Dark field = not recommended; gray fields = highly situation dependent; light fields = recommended.

levels of e-participation e-identification methods (IDs)	information		consultation		cooperation	co-decision	decision
	to access information	to state ideas and opinions one-way- communication	to comment and discuss two-way- communication	to rate and choose (e.g. to like)	to collaborate	to vote on results	to decide in a legally binding way
unique ID implemented by the state	Dark	Dark	Dark	Dark	Gray	Light	Light
application specific user management	Dark	Dark	Gray	Light	Light	Light	Light
number of an official document saved in a register	Dark	Dark	Dark	Dark	Light	Light	Light
reputation based ID	Dark	Dark	Dark	Dark	Light	Light	Light
social IDs	Dark	Dark	Dark	Dark	Light	Light	Light
no ID	Light	Light	Dark	Dark	Dark	Dark	Dark

The multiple e-ID management system allows the hosts of e-participation processes guidance in selecting appropriate and already existing e-IDs. For many activities it is recommended to include multiple e-IDs in order to make registration convenient for users. This allows users some flexibility in selecting e-participation processes and their preferred method of online identification. Needless to say, that the activity of co-decision (or decision) should allow only an e-ID with high security standards, while the activity of accessing information or stating ideas should generally not require registration. However, as most e-participation platform targets different person groups and is set for specific purposes, these recommendations can only be guidelines.

2.2. Inclusion of Target Groups: E-inclusion and Design for All

Another aspect of e-inclusion is the concept Design for All, based on the idea of accessibility. As design for “human diversity, social inclusion and equality” (EIDD Stockholm Declaration, 2004) it describes the effort to promote universal design (as opposed to different viewing designs) in internet based technologies, and avoids the need for a specialised design. Inclusion of people with disabilities should be a central aim for official e-participation projects, as providers which are public authorities have to design accessible platforms. Private providers have to do this according to their capabilities or resources. Independent from the question of whether an accessible e-participation design is reasonable for providers, there are some simple features enhancing inclusivity and accessibility which are reflected in the platform design. For reasons of inclusivity, it

is recommended to always offer an application specific user integration in addition to more specialised e-IDs preferred by a certain target group. The demonstrator is fully functional on a PC or other devices like tablets as mobile integration was considered in design too. For further development of the tool, other features like operability via keyboard only are recommended. Instead of creating different viewing versions, in accordance with the “Design for All” (Leidner 2007) idea, one version is recommended, in order to not stigmatise users with special solutions.

2.3. Privacy and Security by Design

Privacy and security by Design (or privacy by technology) describes the integration of data protection and privacy in the complete technology lifecycle, from the early design stages to implementation, usage, and abandonment of the service (Europäische Kommission 2010), as opposed to from the implementation stage (Terbu et al. 2016). One of the principles of Privacy by Design is data minimization, amongst other data or process oriented strategies. (Hoepman 2014). In the project, researchers relied on a scrum based (Schwaber and Sutherland 2013) software development process with systemic mechanisms for the implementation of security and privacy requirements. They defined dedicated privacy and security sprints and teams in the process. In the project, this process model has been applied in a simplified form, due to the small size of the team and the software (Terbu et al. 2016). User stories relevant for privacy and security found their way in the product backlog. In the sprint planning, they are estimated with classic user stories and in story points, which also enhances awareness for privacy and security among the developer team. The developer team described the experiences with the process model as very positive and would encourage other project developers to utilise it or elements of it in practice (Terbu et al. 2016).

3. Outlook

The project contributes to the increased demand by citizens, governments and public administrations to further include the interested public in democratic discourse and decision making. The use of the internet for political and democratic purposes, inclusive and user-centred approaches provided, could lead to better informed decisions and collaboration with citizens. Further details on the demonstrator tool and results from acceptance tests will be available by the end of the project in autumn 2016. The project contributes to the discussion on the interface of digital identities and participation and shows users some application scenarios for using online identification methods from social media IDs to unique IDs issued by governments.

References

- EIDD Stockholm Declaration, 2004. <http://dfaurope.eu/what-is-dfa/dfa-documents/> (accessed March 15th, 2016). Via IRIS PbD
- Heussler, V., Schossböck, J., Böszörményi, J. (2016). Aspekte der Inklusion aus Sicht der E-Partizipation. In: Schweighofer, Kummer, Hötendorfer, Borges, Tagungsband des 19. Internationalen Rechtsinformatik Symposions, Jusletter IT, Salzburg.

- Horrigan, J. B. (2005). *On Demand Citizens: E-Government at High Speed*. Pew Internet & American Life Project, Washington DC, USA.
- Hoepman, J. H. (2014). Privacy Design Strategies, ICT Systems Security and Privacy Protection, *IFIP Advances in Information and Communication Technology* 428, 2014, p. 446-459.
- Macintosh, A., Coleman, S., Schneeberger A. (2009). eParticipation: The Research Gaps. In: Macintosh, A. and Tambouris, E. (Eds.), *Electronic Participation*. First International Conference, ePart 2009 Linz, Austria, September 1–3, Proceedings, pp. 1–11.
- Parycek, P.; Schoßböck, J.; Rinnerbauer, B. (2015). Identification in E-Participation: Between Quality of Identification Data and Participation Threshold. In: Efthimios, T.; Panagiotopoulos, P.; Sæbø, Ø.; Tarabanis, K.; Wimmer, M. A.; Milano, M.; Pardo, T. A., *Electronic Participation*. 7th IFIP International Conference, ePart 2015, Thessaloniki, Greece, August 30 – September 2, 2015, proceedings, Springer, pp. 108-119.
- Ringler, P.; Parycek, P.; Schossböck, J., Sturmberger, W.; Schönherr, D.; Oberhuber, F.; Aichberger, I.; Hacker, E. (2013). *Internet und Demokratie in Österreich*. Grundlagenstudie. SORA Forschungsbericht, SORA - Institut für Social Research and Consulting, Wien.
- Sachs, M.; Schoßböck, J. (2015) Perspectives on Electronic Identity Application in Online Engagement. In: Parycek, P.; Edelman, N., *CeDEM15 Proceedings of the International Conference for E-Democracy and Open Government*, Edition Donau-Universität Krems, pp. 373-376.
- Sanford, C.; Rose, J. (2007). Characterizing eParticipation. *International Journal of Information Management*, 27(6) 2007, pp. 406–421. doi:10.1016/j.ijinfomgt.2007.08.002
- Terbu , O., Hötendorfer, W., Leitner, M. Bonitz, A., Vogl, S. Zehetbauer, S. (2016). Privacy and Security by Design im agilen Softwareentwicklungsprozess. In: Schweighofer, Kummer, Hötendorfer, Borges, Tagungsband des 19. Internationalen Rechtsinformatik Symposions, Jusletter IT, Salzburg.

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The E-Participation Ladder - Advancing from Unawareness to Impact Participation

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Abstract: Participation ladders have been described previously, but E-Participation and Open Government have changed the perspective on how people interact and what rungs on an imaginative ladder need to be climbed in order to set forth sustainable participation with a genuine impact on how public services are delivered. The proposed E-Participation Ladder focuses not only on political participation, but more generally on the question of how policies, programs and projects must be designed in order to get people involved.

Keywords: Participation, Collaboration, Open Government, Citizensourcing

1. Introduction

The Open Government Implementation Model by Krabina/Prorok/Lutz (2012) works as a guideline for developing a comprehensive Open Government strategy to be used by politics and administration. The version 2 focuses on stage 1 (Increasing Data Transparency), while the other phases are not yet as extensively elaborated. This will be done during the first half of 2016 with the participation ladder described in this paper as a contribution to stage 2: Improving Open Participation.

Participation ladders have been described previously, but E-Participation and Open Government have changed the perspective on how people interact and what rungs on an imaginative ladder need to be climbed in order to set forth sustainable participation with a genuine impact on how public services are delivered.

Hilgers and Ihl (2010) note that if the gap increases between the way in which citizens and companies collaboratively interact on the Internet on the one hand, and citizens and government on the other, there is a great risk that the citizenry will become increasingly dissatisfied if their expectations of what modern governance should entail are not fulfilled. He examines how external input, information and community-spinning can be employed for public matters and public problem solving, and how citizens can systematically be invited to participate.

Therefore the proposed E-Participation Ladder focuses not only on political participation, i.e. the question of how citizens are involved in the political process and how intensely power is redistributed. It focuses more on the question of how policies, programs and projects must be

designed in order to get people involved, be it in a political task like a participatory budget or in a collaboration project like a wiki or a crowdsourcing project. The E-Participation Ladder is the result of my participation in Schäfer's master class: "Power & Participation in the Age of Big Data" at Angewandte Innovation Lab in Vienna in May 2015¹. The idea was developed without prior knowledge of already existing participation ladders, based solely on the knowledge ladder from the area of knowledge management.

2. Related Work

2.1. Participation Ladders

Arnstein's "Ladder of Citizen Participation" dates back to 1969 and focuses on the redistribution of power as an essential element, with her fundamental point being that participation without redistribution of power is an empty and frustrating process for the powerless. She distinguishes between eight levels of participation: Non-participation (1. Manipulation, 2. Therapy), Tokenism (3. Informing, 4. Consultation, 5. Placation) and Citizen Power (6. Partnership, 7. Delegated Power, 8. Citizen Control). (Arnstein 1969)

Connor's "New Ladder of Citizen Participation" from 1988 builds on Arnstein's work, but focuses on orienting managers and others to the many approaches available and on preventing and resolving public controversy about specific policies, programs and projects. It consists of the seven rungs education (1), information feedback (2), consultation (3), joint planning (4), mediation (5), litigation (6) and resolution/prevention (7). (Connor 1988)

In 1995, Pretty develops a typology of participation, not in the form of a ladder, but as seven different types of participation ranging from manipulative participation (1), where people are told what is to happen and act out predetermined roles, to self-mobilization (7), where people take initiatives in manner that is largely independent of external institutions. (Pretty 1995)

Fung described a "Democracy Cube" with three dimensions in 2006: (1) participant selection methods (from diffuse public sphere to expert administrators), (2) modes of communication and decision (from listen as spectator to deploy technique and expertise) and (3) extent of authority and power (from personal benefits to direct authority). (Fung 2006)

Ferro and Molinari build on the work of Forrester Research who adapted the ladder concept as a way to profile the likely audience of e-Participation experiments and the level of take-up that these could actually reach within the population as a whole. Segmentation is a valuable aspect, making us aware that different user types need different engagement possibilities. (Ferro and Molinari 2010)

¹ <http://mtschaefer.net/entry/master-class-power-and-participation-age-big-data/>

The aforementioned works are aimed at jointly solving problems and preparing decisions, i.e. the typical focus of participation. As Lucke and Große (2014) argue, much is written about third-party involvement in the first stages of the policy cycle (problem definition, agenda setting, decision making), but the latter stages (implementation, monitoring, and evaluating) are not as prominently discussed by policy makers and scientists. Therefore the E-Participation ladder aims to be usable in all stages of the policy cycle.

2.2. The Knowledge Ladder

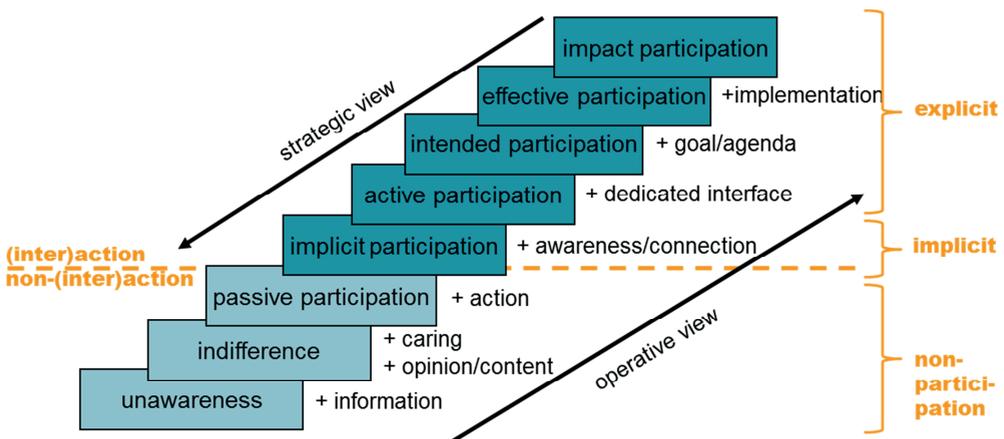
Implementing knowledge management in the public sector is as challenging a task as is Hilgers' approach, demanding that the public sector must learn from Open Innovation and transform it to what he calls "citizensourcing", making it natural to borrow concepts from knowledge management theory and practice and to apply them to Open Government. As a result, we have borrowed the knowledge ladder concept from North and Kumta (2014), applying it to our problem of designing and managing policies, programs and projects for participation. Just as the knowledge management of an organization according to North means organizing all the stages of the Knowledge Ladder, the steps of the E-Participation Ladder likewise all have to be investigated.

3. The E-Participation Ladder

3.1. The Steps to "Impact Participation"

In the following, the eight steps of the E-Participation Ladder are described briefly, with a focus on the elements missing to take the next step and on the key questions that should be answered in order to proceed to the next level (see Figure 1).

Figure 1: The E-Participation Ladder



Unawareness

In the first stage of the participation ladder, people are simply unaware of the topic in general or the possibilities of participation. They simply do not know, therefore information about a topic and participation possibilities is important in order to get to the next stage.

The missing element is information. The key questions to ask are: How can I deliver the information to the different target audiences? What are the target audiences to be involved? Where do they usually get their information?

Indifference

On a daily basis, people obtain information on topics and opinions by reading newspapers, listening to discussions or scanning their social media timelines. In this phase, the information has reached them, but they feel indifferent about the topic, i.e. have no personal opinion about it, have no topic-related content to share/contribute or simply do not care enough about the topic to even form an opinion or share content.

The missing elements are caring about the information received, forming an opinion about a topic or adding a piece of content to the problem in discussion. Key questions to ask are: How can we find those among the informed who do care? How can we make people care about the topic? What additional information is needed for them to form their opinions and who can deliver it to them? What content could they provide that is relevant to and important for our discussion or problem solving?

Passive participation

People in passive participation now care about the topic, they have an opinion about it or would have some content to share, but still take no action. In order to trigger action, they need additional motivation.

The missing element is action. Key questions to ask are: How can people be motivated to take action. What possibilities do they have to take action? Is our service attractive and easy enough for them to use?

Implicit Participation

In contrast to the generally understood intrinsically or extrinsically motivated explicit activity of participation, Schäfer (2011) described "implicit participation" as motivated by the design of an information system itself. In implicit participation, people are unaware that they are actually participating, but they take action by following certain media practices: by simply using the systems they participate implicitly. By clicking on certain elements on a website (e. g. a video), people interact with the system. They view/read an item, share it or tag it, thus interacting with the system without necessarily being aware of participating.

The missing elements are awareness of the participation process and connection to a participatory goal. How can we make people aware that participating is worth the effort? How can

we connect the possibilities they have with a participatory goal? Additionally we have to ask: How can we design our systems to make use of implicit participation? In implicit participation, a lot of valuable interaction can take place that can be useful to analyze.

Active Participation

In active participation, people are taking deliberate action: they might join a group in a social network, rate an article, post a comment, share their views. They might use the interface of their choice whether or not this is intended by others. Contributions can be seen as trolling or abuse (if the action does not take place in a dedicated interface, e. g. a discussion forum where the post is off-topic) or as general usage of social media (e. g. creating a page or group in Facebook, or a personal tweet). If a dedicated participation interface exists, the aim is to channel user activity (also) to these dedicated interfaces.

The missing element is a dedicated interface. This does not mean that special systems have to be set up, it can simply mean that we want people to upload their content or contribute their discussion items in a tool or forum that we are aware of, instead of doing it somewhere without us noticing. In many cases though, specified interfaces will of course be provided for the relevant participation purpose. The key questions to ask are: How can we get people to use our dedicated interface? What alternatives do they have? How can we make our system easy to use for active participation?

Intended Participation

Intended participation is the user activity that is supposed to happen according to the designers of the system: people post their views, rate articles, etc. on the interface that is known/monitored or specifically designed by the organizers of participation.

The missing elements now are a goal and an agenda. Participants should not contribute randomly, they should know what the goal of their participation is, why they should participate and what the agenda is, i.e. what has happened so far and what will happen next. Key questions to ask are: How do we best communicate the goals of participation? What timeframe will people be willing to spend in the process? What timeframe do we need to get enough participation? What phases do we need, what will happen when?

Effective Participation

In effective participation, users do not post comments or create content arbitrarily, but follow a defined and communicated goal or agenda. We now can talk about a successful participation project, but we have to care about people coming back the next time. The worst thing that can happen is that our users have climbed the ladder this far and after they have participated, nothing is going to happen with it.

The missing element therefore is implementation. This does not mean implementing every idea, but it means that the output of the participation will be used, further discussed. Key questions are: How can we make sure that the output is taken, used, put into action? How can we communicate

at the beginning what possible outcomes of the participation are? How can we communicate what has been done and what has changed after the participation phase?

Impact Participation

In impact participation, the participation effort is sustainable. This means that for the participants it was worth it and for the managers of the process, valuable input was received and implemented/used. The result was a better public service, an improved program or project or a successful and sustainable initiative.

3.2. The Operative and Strategic Aspect

From the operative viewpoint, you look up the ladder and try to get people up the next step, like we did in chapter 2. From a strategic viewpoint, if you design a participation project, you can start at the necessities for the highest ladder (making sure implementation can happen) and "walk" down to the next step (setting goals and agenda), to the next (defining dedicated interfaces), etc. down to the basic information about the participation possibility.

4. Conclusion and Future Work

The proposed participation ladder is generic enough to be used for all kinds of participation projects, but at the same time remains easy enough to use. It is not yet grounded in empirical studies, hence it must yet be proved whether it has any value at all from a theoretical as well as a practical viewpoint.

References

- Arnstein, S. R. (1969.) A Ladder of Citizen Participation. *Journal of the American Institute of Planners*, Vol. 35, No.4, July, 1969, pp. 216-224
- Connor, D. M. (1988). A New Ladder of Citizen Participation. *National Civic Review* 77 (3): 249-257, DOI=<https://dx.doi.org/10.1002%2Fncr.4100770309>. Retrieved January 10th, 2016
- Ferro, E., Molinari, F. (2010). Framing Web 2.0 in the Process of Public Sector. *Innovation: Going Down the Participation Ladder*. *European Journal of ePractice*. No 9, March 2010. Retrieved March 16th, 2016 from [Joinup.eu](http://joinup.eu)
<https://joinup.ec.europa.eu/sites/default/files/f5/8e/dd/ePractice%20Journal%20Vol.9-March%202010.pdf>
- Fung, A. (2016). Varieties of Participation in Complex Governance. *Public Administration Review*. December 2006, Retrieved January 10th, 2016 from [Archonfung.net](http://www.archonfung.net)
<http://www.archonfung.net/papers/FungVarietiesPAR.pdf>
- Hilgers, D., Ihl, C. (2010). Citizensourcing - Applying the Concept of Open Innovation to the Public Sector. *International Journal of Public Participation (IJP2)*, Vol. 4, 2010, No. 1, S. 67-88. Retrieved January 10th, 2016

http://c.ymcdn.com/sites/www.iap2.org/resource/resmgr/imported/Journal_10January_Vol4_No1_6_Hilgers%26Ihl_Citizensourcing.pdf

Krabina, B., Prorok, T., Lutz, B. (2012). Open Government Implementation Model. Retrieved January 10th, 2016 from KDZ <http://kdz.eu/de/node/2651>

Lucke, J. v.; Große, K. (2014). Open Government Collaboration. Opportunities and Challenges of Open Collaboration With and Within Government. In Gascó-Hernández, M. Open Government. Opportunities and Challenges for Public Governance. pp 189-204, Springer 2014. ISBN: 978-1-4614-9562-8 DOI= http://dx.doi.org/10.1007/978-1-4614-9563-5_12

North, K., Kumta, G. (2014). Knowledge Management. Value Creation Through Organizational Learning. Springer 2014. DOI=10.1007/978-3-319-03698-4

Pretty, J. N. (1995). Participatory Learning For Sustainable Agriculture. World Development, Vol 23, No 8. pp. 1247-1263, 1995 Retrieved January 10th, 2016
<http://lms.unhas.ac.id/claroline/backends/download.php?url=L1BhcnRpY2lwYXRvcnlfTGZhcm5pbmdfUFJldHR5LnBkZg%3D%3D&cidReset=true&cidReq=274I31>

Schäfer, M. T. (2011). Bastard Culture! How User Participation Transforms Cultural Production. Amsterdam University Press, Amsterdam, 2011, pp. 105-123. Retrieved January 10th, 2016 from mtschaefer.net
http://mtschaefer.net/media/uploads/docs/Schaefer_Bastard-Culture_2011.pdf

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PhD Colloquium



The Use of Online Spaces by Government for Enhancing Citizen Participation: Indonesia as a Case Study

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Abstract: Citizen Participation is widely recognised as a central principle of good governance and democracy. The advent of the internet has prompted new questions about how this technology might be utilised to enhance online participatory governance, otherwise known as online citizen participation, e-participation, or e-engagement. Numerous studies exist investigating Indonesian practices of web engagement. However, few such studies have examined how the Indonesian government uses online channels in order to facilitate citizen participation. This study will do so, by undertaking a qualitative investigation of the activities, responses, and actions of Indonesian government institutions in facilitating citizen participation through online spaces. Through interview and focus groups, the project will involve not only participants from government institutions but also citizens and experts to ensure most of perspectives are covered in this project.

Keywords: online participation, citizen participation, Indonesia, new media

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1. Introduction

Participation opens up the opportunities for both individuals and communities to work with their governments to balance government roles in serving and governing. Indeed, McNair (2011) states that “participation” is one of three characteristics of democratic regime in conjunction with “constitutionality”, which is the availability of agreed procedures and rules, and “rational choice”, the availability of choice and right of citizen to choose rationally.

Furthermore, the rise of the Internet has enabled society to participate in their government, not only through offline participation, but also through online participation channels. Scholars have argued that new media or online spaces can re-shape participatory culture, democracy and the public sphere (Bruns, 2008; Freeman, 2012; Jenkins, 2006; McNair, 2006; OECD, 2003; Osimo, 2008; Siau & Long, 2005; UN, 2014). According to McNair (2006), it is caused by three reasons. Firstly,

online media opens up accessibility that enables to consume, distribute and produce more information by and/or to more people. Secondly, it enables the existence of media independence that acts beyond public and private interests, and the opportunities of “diversity of bias, and a balance of critical opinion within a political culture” as one of the nature of the public sphere (McNair, 2006, pp. 138-139). Thirdly, it enables to provide influence on political decision-making through critical scrutiny towards elites.

However, as offline citizen participation may generate manipulative or ineffective results (Arnstein, 1969; Cornwall, 2008; King, Feltey, & Susel, 1998; Pretty, 1995; White, 1996), online participation may face the same challenges (OECD, 2003). Thus, online participation should also be evaluated properly (Macintosh & Whyte, 2006, 2008). This leads to the question: To what degree, the use of new media by government enhances or is enhancing citizen participation. This question is important to be answered as it helps in reflecting the quality of democracy and governance occurring in a particular context. It can be explained by understanding that the failure of government to value and enable participation effectively can constitute failure of establishing good governance and democracy practices, as participation itself is one of the key elements in performing good governance (UNESCAP, n.d.) and democracy (McNair, 2011).

However, the answer to the question might be various in different contexts. Therefore, this study selects a context to assist in answering the question, which is Indonesia context.

1.1. The Indonesian Context

Indonesia provides us with an important case study for considering such issues for three reasons. First, Indonesian internet use and social media penetration continue to grow rapidly. It has grown from 42 million internet users (17.6 % of population) in 2010 to over double that number, at 88.1 million internet users (34.9% of population) in 2014 (APJII, 2014, p. 22). Indonesia is also one of the most active countries using social media, whose citizens spent 2.9 hours daily in average, which is above time spent daily for social media in United States , Russia or India (GlobalWebIndex, 2014); Indonesia has been described as the Twitter Nation (CNN, 2010) and its capital, Jakarta, has been mentioned as the Capital city of Twitter (Forbes, 2012). Indonesia also has the fourth largest number of Facebook users in the world (Statista, 2014). This explosive growth promotes the potential rapid growth of citizen engagement in online spaces.

Second, Aspinall and Mietzner (2010, p. 3) have argued that Indonesia is “one of the main laboratories” in analysing “democratic transitions” since it has shifted from three decades of authoritarian government to democratic elections over the last two decades. Thus, Indonesia provides an important context for discussions about democracy in developing countries, if not in the world. Realising the two aspects: rapid penetration of the internet and social media in Indonesia, and Indonesia as one of the important contexts for discussing democracy in developing countries; it raises the question whether the argument about online spaces shape democracy and public spheres can be applied to the Indonesia context and to what extent it shapes Indonesian democracy and public spheres.

Third, the shape of Indonesian democracy, after the fall of authoritarian Suharto regime, is still debatable. Some scholars believe that the change in Indonesian democracy after Suharto era is shallow due to the fact that significant numbers of Suharto's elites are still in power, corruptions are prominent and authoritarian practices are still visible in different forms (Boudreau, 2009; Robison & Hadiz, 2004). Nevertheless, some argue that Indonesia has successfully strengthened its democracy indicating by less restriction in freedom of association and expression, citizen satisfaction on the new democracy and its ability in accommodating different interests (Diamond, 2010; Freedom House, 1998, 2006; MacIntyre & Ramage, 2008). Other scholars take a middle position; they hold that although Indonesia is developing in its democracy, issues such as corruption and law enforcement obscure the progress (Aspinall, 2010; Davidson, 2009). These debates trigger questions as to how the current online citizen participation practices fit or shape Indonesian democracy. Do the online participation channels bring more democratic practices where citizens are more empowered? Do the online participation practices provide tangible political and/or social changes? The answers to those questions can be a good input for body of knowledge in describing democracy that Indonesia is currently practicing, by using online participation as the case.

1.2. Objective and Contribution to Body of Knowledge

This study aims to understand the Indonesian government's endeavours to use online spaces to facilitate citizen participation. The outcomes of this study will provide insights in several broad fields of public administration, political science, and media and communication.

From a media and communication point of view, the study will broaden scholarship on Indonesians' web engagements, which has thus far been limited to examining citizen-to-citizen and citizen-to-government perspectives. The current study focuses primarily on the implications of Indonesians' uses of the web for government-to-citizen relations. It explores, in other words, the internet's potential to enhance democratic participation from the perspective of those responsible for governing.

From the public administration perspective, the study will provide insights about an effective and efficient administration for strengthening good governance and democracy through online engagement.

From the political science perspective, it will contribute to theories of emergent democracies and will enhance scholarly endeavours to understand the contours of Indonesian democracy.

2. Research Questions

Although Indonesia is a significant case study for analysing the development of new media and its relationship to political participation and democracy based on reasons explained before, few studies have been conducted in which Indonesian online participation is discussed. Furthermore, most of the existing studies that have raised this issue (Abbott, 2013; Gazali, 2014; Hill & Sen, 2005; Lim, 2003, 2011, 2013; Nugroho & Syarief, 2012; Sen & Hill, 2010; Tapsell, 2014) are focused on the

use of new media from the perspective of citizens or civic society. Yet, there are limited studies that investigate the use of new media by Indonesian public sectors, especially to enhance citizen participation practices.

Based on that, this project will answer the following research question:

“How does the government use online spaces to facilitate citizen participation in contemporary Indonesia?”

To answer the research question, three sub-questions are raised.

- 1) What are the purposes of the government in using online spaces to facilitate citizen participation practices?
- 2) How do those practices contribute to the democratic empowerment of citizens?
- 3) How do those practices produce tangible outcomes in terms of more open and effective forms of government?

3. Methods

To answer the research questions, a qualitative research will be conducted by focusing on case studies. This research will conduct multiple-case studies since it is considered to be “more compelled... and robust” (Yin, 2009, p. 53).

3.1. Case Studies

The cases will include three existing online channels in Indonesia. These three case studies are selected by considering these several thoughts:

- 1) This study should investigate the most used online channel by the government as it will help to portray comprehensively regarding how government use online spaces to facilitate citizen participation. Based on that, LAPOR is included since it is the most used channel by Indonesia government institutions.
- 2) This study should cover central and local government aspects. Since the people directly elect the leader of the local government (i.e., Mayor), it is likely that central and local government policies are not matched. Thus, covering both level of government may result different findings that will enrich this study. Therefore, the use of online channels by Bandung City Mayor will be investigated to see the perspective of Indonesia local government.
- 3) Due to the trend of social media and its potential in governing, this study should also cover the use of social media by government to engage citizen. Thus, Bandung City Mayor case is selected as he is well known in the national level for his social media activities in engaging citizens.
- 4) Another case will also be investigated due to its uniqueness. As most of government online participation channel are initiated and managed by government, laporpresiden.id is an exception. Although it is used for government, it is initiated and managed by a volunteer community. Because of this uniqueness and its potential in enriching findings of this study, laporpresiden.id will also be investigated.

The details of the three case studies:

1) *LAPOR (www.lapor.go.id): Indonesia Online Complaint & Aspiration Channel*

LAPOR is an application that has been designed to accommodate the complaints and aspiration from citizens. To access the application, citizens can log in through Facebook, Twitter or Website (www.lapor.go.id). The uniqueness of this application is that users can keep track of the status of his or her report and, at the same time, other users can amplify the report by clicking the “support” button or share it to his or her Twitter and Facebook account. It is also recognised as one of the world’s best initiatives in Open Government Partnership Summit 2013 in London (LAPOR, 2014).

This channel has been selected because it is the most used application maintained by the Indonesian government which has announced it as an official national online channel. In addition, hundreds of Indonesian public institutions are connected to and use this channel.

2) *Laporpresiden (www.laporpresiden.org): Online-Petition-like Channel to the Indonesian President*

Laporpresiden is an online-petition-like channel where information from citizens can go straight to the president. Through this, citizens may raise and vote up/down issues that need direct attention of the president. At the end of every month, the president will receive only the top five issues with the highest votes.

Uniquely, although this channel is introduced by the President, the channel has been proposed and independently managed by a civil community. However, it is trusted by the Indonesian government, particularly the president, as one of channel to engage with the government/president. Thus, this channel will be investigated as it shows a unique case where online participation or eParticipation is managed through an active collaboration between civic community and government.

3) *Bandung City Mayor Social Media Accounts*

In addition to previous channels, the personal account of policy makers cannot be ignored in investigating government in online spaces since the personal account has also been used for citizen engagement purposes. Most of the e-participation practices are in a form of government formal project, in contrary; this approach is informal and interestingly attached to a personal social media account. Yet, it has been used for the same purpose, to engage the citizens. Bandung City Major, Ridwan Kamil, uses Facebook and Twitter as internal coordination media and a way of connecting to his citizens on a daily basis (BBC Indonesia, 2014; Setiawan, 2014). Not only does Ridwan Kamil use it as an ordinary publication media, but his social media accounts are also embedded as part of public administration system in each department.

3.2. Data Collection Methods

In all of the case studies, interview and focus group will be conducted to gather the data. There are four types of participants involved.

1) Policy makers

Government officials will be queried about their motivations for establishing online communication channels, and their perception of its benefits.

2) Users

Users will be asked through focus groups about their opinions and experiences of using the online participation channel(s).

3) Civil society organizations or Experts in Indonesia Online Participation

The perspectives of civil society organizations or experts are valuable due to their expertise and experiences on a practical level in this area of study. This type of participants will be interviewed about their perceptions of the implementation of the online participation channel(s) including the background, effectiveness and challenges of the online participation channel(s).

4) Technical administrators of the Online Participation Channel(s)

Administrators will be interviewed about how the technical aspects of the channels' design may affect the success of his or her operation.

4. Progress of Study

After successfully exceeding candidature stage, I am currently conducting data collection. The data collection will be conducted from February to May 2016. Thus, by the time of CeDEM held on 18-20 May 2016, my early data analysis should be available for presentation.

References

- Abbott, J. (2013). Introduction: Assessing the Social and Political Impact of the Internet and New Social Media in Asia. *Journal of Contemporary Asia*, 43(4), 579.
- APJII. (2014). *Profil Pengguna Internet Indonesia 2014*. Asosiasi Penyelenggara Jasa Internet Indonesia.
- Arnstein, S. R. (1969). A ladder of citizen participation. *Journal of the American Institute of planners*, 35(4), 216-224.
- Aspinall, E. (2010). Indonesia: The Irony of Success. *Journal of Democracy*, 21(2), 20-34. Retrieved from ProQuest Central.
- Aspinall, E., & Mietzner, M. (2010). *Problems of Democratisation in Indonesia: Elections, Institutions and Society*: Institute of Southeast Asian Studies.
- BBC Indonesia. (2014). Ridwan Kamil berinovasi setiap hari. Retrieved 12 July 2015, from http://www.bbc.com/indonesia/laporan_khusus/2014/07/140727_bincang_ridwan_kamil
- Boudreau, V. (2009). Elections, repression and authoritarian survival in post-transition Indonesia and the Philippines. *The Pacific Review*, 22(2), 233-253. doi:10.1080/09512740902815359
- Bruns, A. (2008). *Blogs, Wikipedia, Second Life, and beyond: from production to produsage* (Vol. 45.). New York: Peter Lang.
- CNN. (2010). Indonesia: Twitter nation. Retrieved 11 November 2014 from CNN, <http://edition.cnn.com/2010/TECH/social.media/11/23/indonesia.twitter/>
- Cornwall, A. (2008). Unpacking 'Participation': models, meanings and practices. *Community Development Journal*, 43(3), 269-283.

- Davidson, J. S. (2009). Dilemmas of democratic consolidation in Indonesia. *The Pacific Review*, 22(3), 293-310. Retrieved from <http://dx.doi.org/10.1080/09512740903068354>. doi:10.1080/09512740903068354
- Diamond, L. (2010). Indonesia's Place in Global Democracy. In E. Aspinall & M. Mietzner (Eds.), *Problems of Democratization in Indonesia* (pp. 21-49). Singapore: Institute of Southeast Asian Studies (ISEAS).
- Forbes. (2012). The World's Most Active Twitter City? You Won't Guess It. Retrieved 21 May 2015 from <http://www.forbes.com/sites/victorlipman/2012/12/30/the-worlds-most-active-twitter-city-you-wont-guess-it/>
- Freedom House. (1998). *Freedom in the World 1998*. Retrieved from https://freedomhouse.org/report/freedom-world/1998/indonesia#.VZo9_mqqko
- Freedom House. (2006). *Freedom in the World 2006*. Retrieved from <https://freedomhouse.org/report/freedom-world/2006/indonesia#.VZpFyfmqkko>
- Freeman, J. (2012). E-government: Engagement and Digital Divide. In P. Parycek, M. Sachs & M. M. Skoric (Eds.), *CeDEM Asia 2012: Proceedings of the International Conference for E-Democracy and Open Government* (pp. 19-30): Edition Donau-Universität Krems.
- Gazali, E. (2014). Learning by clicking: An experiment with social media democracy in Indonesia. *International Communication Gazette*, 76(4-5), 425-439. doi:10.1177/1748048514524119
- GlobalWebIndex. (2014). Time Spent on Social Media. Retrieved from <http://www.globalwebindex.net/blog/gwi-social-q4-2014-the-latest-social-networking-trends>
- Hill, D. T., & Sen, K. (2005). *The Internet in Indonesia's new democracy*. London: Routledge.
- Jenkins, H. (2006). *Convergence culture : where old and new media collide*. New York: New York University Press.
- King, C. S., Feltey, K. M., & Susel, B. O. N. (1998). The Question of Participation: Toward Authentic Public Participation in Public Administration. *Public administration review*, 58(4), 317-326.
- LAPOR. (2014). Tentang LAPOR! Retrieved 13 November 2014 from https://lapor.ukp.go.id/lapor/tentang_lapor/tentang-lapor-dan-info-grafis.html
- Lim, M. (2003). The Internet, social networks, and reform in Indonesia. In N. Coultry & J. Curran (Eds.), *Contesting media power: alternative media in a networked world* (pp. 273-288). Lanham, MD [etc.]: Rowman & Littlefield.
- Lim, M. (2011). *@crossroads: Democratization and Corporatization of Media in Indonesia*.
- Lim, M. (2013). Many Clicks but Little Sticks: Social Media Activism in Indonesia. *Journal of Contemporary Asia*, 43(4), 636-657. doi:10.1080/00472336.2013.769386
- Macintosh, A., & Whyte, A. (2006). *Evaluating How Participation Changes Local Democracy*.
- Macintosh, A., & Whyte, A. (2008). Towards an evaluation framework for eParticipation. *Transforming Government: People, Process and Policy*, 2(1), 16-30.
- MacIntyre, A., & Ramage, D. (2008). *Seeing Indonesia as a Normal Country: Implication for Australia*.

- McNair, B. (2006). *Cultural Chaos: Journalism, News and Power in a Globalised World*. New York; London: Routledge.
- McNair, B. (2011). *An introduction to political communication* (Vol. 5th; 5; 5.). New York; London: Routledge.
- Nugroho, Y., & Syarief, S. S. (2012). *Beyond Click-Activism? New Media and Political Processes in Contemporary Indonesia*. Retrieved from
- OECD. (2003). *Promise and Problems of E-Democracy*. France: Retrieved from <http://www.oecd.org/governance/public-innovation/35176328.pdf>.
- Osimo, D. (2008). Web 2.0 in government: Why and how. *Institute for Prospective Technological Studies (IPTS), JRC, European Commission, EUR, 23358*.
- Pretty, J. N. (1995). Participatory learning for sustainable agriculture. *World development*, 23(8), 1247-1263.
- Robison, R., & Hadiz, V. R. (2004). *Reorganising Power in Indonesia: The Politics of Oligarchy in an Age of Markets*. London & New York: Routledge.
- Sen, K., & Hill, D. (2010). *Politics and the Media in Twenty-First Century Indonesia : Decade of Democracy*. Hoboken: Routledge.
- Setiawan, S. R. D. (2014, 22 September 2014). Ridwan Kamil, Media Sosial untuk "Visual Reporting System", *Kompas*. Retrieved from <http://bisniskeuangan.kompas.com/read/2014/09/22/120000426/Ridwan.Kamil.Media.Sosial.untuk.Visual.Reporting.System>.
- Siau, K., & Long, Y. (2005). Synthesizing e-government stage models – a meta-synthesis based on meta-ethnography approach. *Industrial Management & Data Systems*, 105(4), 443-458. doi:doi:10.1108/02635570510592352
- Statista. (2014). Leading countries based on number of Facebook users as of May 2014. Retrieved 20 May 2015, from <http://www.statista.com/statistics/268136/top-15-countries-based-on-number-of-facebook-users/>
- Tapsell, R. (2014). Digital Media in Indonesia and Malaysia: Convergence and Conglomeration. *Asiascape: Digital Asia*(Digital Asia), 201-222.
- UN. (2014). *United Nations E-Government Survey 2014*. New York: United Nations Retrieved from <http://unpan3.un.org/egovkb/>.
- UNESCAP. (n.d.). *What is Good Governance?* : United Nations Economic and Social Commission for Asia and the Pacific Retrieved from <http://www.unescap.org/sites/default/files/good-governance.pdf>.
- White, S. C. (1996). Depoliticising development: The uses and abuses of participation. *Development in Practice*, 6(1), 6-15. doi:10.1080/0961452961000157564
- Yin, R. K. (2009). *Case study research: design and methods* (Vol. 4th). Thousand Oaks, Calif: Sage Pub.

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Making the World Small: A Closed Facebook Group and Peace Activists in Indonesia

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Abstract: Abundant research on the roles of social media in civic engagements has focused on open features of social media (i.e., Facebook pages, open groups, or Twitter). However, little is known of how closed-features of social media may play out in civic engagements. This study investigates the use of a closed Facebook group in the context of violent religious conflict in Ambon, Indonesia. Using interviews and observation, this study found that the activists deliberately made their information world small. The presence of social types, social norms, and shared worldviews constructs this small world. As the group was meant to be closed, trust became crucial for keeping the information flow, while outsiders' access to information was restricted. This study may inspire online social activists to create more safe spaces for civic engagements by using non-commercial platforms as well as for understanding the emergent culture of the movements.

Keywords: Facebook, social media, civic engagement, conflict, Indonesia

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1. Introduction

Socio-political changes have dominated a large body of literature on social media used for civic engagements (see Pang et al. (2015) for Asian context and Allagui and Kuebler, (2011); Wolfsfeld, Segev, & Sheaffer, (2013) for the Middle East context). Much research has scrutinized the role of social media in balancing relationships between those who are in a position of power and concerned citizens (Gaby & Caren, 2012; Howard & Hussain, 2011; Juris, 2012). The presence of social media in civic engagements has created space for mobilizing resources from wider audiences (see Castells (2012); Shirky (2011)). Bringing these works altogether, it seems that much attention has been given to the open features of social media (i.e., open Facebook group, Facebook page, Twitter). Hence, findings that social media have helped mobilize critical mass are evident.

However, little is known about the use of closed features of social media (e.g., closed Facebook groups) in the domain of civic engagements. One reason for this could be uneasy access; researchers need to gain trust from the group administrator and build rapport with the members. Studying closed-features of social media is useful in understanding how social media can provide

a safe space for the agents of change in assembling personal and public concerns together for having wider social impact (Hart, 2011).

This study aims to explore the use of closed Facebook by peace activists during Christian and Muslim violent conflicts in Ambon, Indonesia. Informed by Theory of Life in the Round (Chatman, 1999), this study argues that the closed Facebook group is a form of virtual small world, with social types (i.e., founder, members, and administrator), social norms (i.e., rules for sharing information), and worldviews (i.e., as the citizens of the small world). The members deliberately created a closed group for restricting outsiders' access to information flow.

2. Background

The Ambon violent conflict occurred in 1999–2005 and caused more than five thousand deaths (BBC, 2011). A peace agreement was signed in 2002 and the situation appeared to be resolved until 2011 when conflict occurred again. A street crime originated the conflict. Rumors that a Muslim killed a Christian circulating via face-to-face communications and cellphones provoked both religious communities to engaged in violence.

This study focuses on the 2011 Ambon conflict and the presence of social media use during the time of violence. The peace activists used Facebook to counter rumors that potentially leveraged the violent conflict to other area and/or increased emotions between both religious communities. An activist created a closed Facebook group, called Filterinfo. The group intended to filter conflict-sensitive information so the chance of violence between Christians and Muslims could be reduced. Filterinfo was created in September 24, 2011, thirteen days after the first violence. The founder added six people, and they then added other people from their networks to the group. The group had twenty members from various social entities such as non-governmental organization (6%), universities (5%), media and local artists (5%) and government (1%). Until May 24, 2012, there were 85% comments and 15% posts (N = 184). Since the conflict ended, the group has not been as active as before.

3. Literature

Theory of Life in the Round (Chatman, 1999) informs this research. This theory is useful to address virtual communities (i.e., listserv, chatroom, online book clubs, and Facebook groups) since it focuses on a localized context in which information is valued and understood. The theory provides "a close analysis ... in which different small world intersect, leading to conflicts and misunderstandings between groups" (Burnett, Jaeger, & Thompson, 2008, p. 4).

The primary premise of the theory is that living in the round will negatively influence information seeking and sharing in everyday life (Chatman, 2000). Chatman (1999) proposed four constructs to operationalized the theory:

- 1) Small world is "a society in which mutual opinions and concerns are reflected by its members, a world in which language and customs bind its participants to a worldview," (p. 213).

- 2) Worldview is "a collective set of beliefs held by members who live within a small world. It is a mental picture or cognitive maps that interpret the world," (p. 213).
- 3) Social norms are "the customary patterns that take place within a small world," (213).
- 4) Social types are "persons who exhibit traits or characteristics that distinguish them from other members of their world," (p.214).

The theory of life in the round has been employed in different contexts, such as information access (Burnett et al., 2008), organizational behavior (Huotari & Chatman, 2001), and public library (Pendleton & Chatman, 1998)). A common feature of these studies is the use of physical places as a context. Hence, extending these works to virtual context is beneficial to addressing the rapid development of social media and information communication technologies. Burnett (2007) attempted to "virtualize" the theory by exploring online communities. Virtual communities "do differ in significant ways from "real life small worlds" (Burnett, Besant, & Chatman, 2001, p. 539).

The boundaries of virtual communities are clearer and mediated by text exchanges. Their presence in the flow of information sustains the existence of virtual communities. The members build on their small world using text that places their world out of non-members. Text exchanges construct norms in the virtual communities, not only used for governing information behavior but also affecting attitudes, interests, language, and local ideology (Ling, 2012). Burnett's study (2009) on an online public library found that when worldviews were not shared by users, conflicts were likely to happen. Rather than creating a common ground, shared interests among users prompted conflicts as mutual understanding was lacking. Within this situation, the place of information became "a place of battle" (p. 707).

Despite prevalent use, the closed Facebook group has been inadequately studied using the small world theory. This study confirms the findings of Burnett et al. (2001; 2008), that the closed Facebook group reflects the users' small world where clear boundaries with outsiders are created. This study offers the 2011 Ambon violent conflict as an arguably new context in the domain of social media and civic engagements. The arrival of conflicts drives the citizens of the small world to integrate their worldviews, which later motivates sharing information for achieving a common goal. As the situation in conflicts was volatile, the closed Facebook group served as a hub for human actors from various social backgrounds (e.g., social class, religions) to assemble. The closed Facebook group is a space to build a network for creating boundaries between insiders and outsiders.

Since the boundaries created in the closed Facebook group are clear, the presence of the group can trigger the development of a network privatism (Campbell, 2015) which promotes the group's cohesiveness. This network, rather than improving relationships with weak ties, strengthens relationships with strong ties. Consequently, the insiders ignore information, social types and norms coming from outside of their small world. The group members search for information that are near and within their reach (Shils, 1957; Wilson, 1983) and rely on resources that already exist in their information world (Chatman, 1996). As a result, the networks may evolve into a space for reinforcing a particular worldview and norms.

4. Methodology

Data were collected through interviews and observation was conducted by the author. The data and observations were supplemented with text gathered from the Facebook group. The group administrator was the key informant. The informants were mainly peace activists and members of the Facebook group. Interviews were carried out in conversational settings (Patton, 2002) and lasted sixty minutes on average. Observation was performed by following the activists' interactions with others (i.e., conflict-related actors, other activists, journalists, artists). Doing so, data that did not emerge in the interviews could be revealed (Gibson & Brown, 2009). I was added by the administrator to the Facebook group after approximately three weeks intensive interactions. I am a passive member in the group and have previous experience interacting with four members.

Transcribing and translating the interviews into English and reading through the transcripts were the start of the data analysis. This was an interactive process involving the researcher's cultural background (I am a native of Java-Indonesia and had spent approximately two years interacting with the key participants involved in this study), familiarity with the literature, and insights gained from the data. Open and focused coding were utilized to label the insights and to search themes addressing the research questions (Charmaz, 2006).

Findings and Discussion

4.1. Exploring the Closed-Facebook Group as a Small World

Filterinfo epitomizes a small world since it is a space where individuals can share the same concerns and opinions. The group members perceived that the presence of rumors had contributed to escalating the violent conflict, thus a movement to counter its repercussion was needed. The group intends to protect the citizens of Ambon by filtering conflict-sensitive information so that conflict potentials could be prevented. Filtering information required a strong social bonding to demarcate the group members (insiders) from non-members (outsiders). The boundary manifested in the form of closed group, where the administrator determined the memberships. The presence of online and/or offline mutual friends and face-to-face experiences affected the membership approval. The closed group was responsible for limiting the outsiders' access so that the members could rely on each other through sharing information, worldviews and resources.

Filterinfo has three social types: the ordinary members, the founder, and the group administrator. These positions reflect the magnitude of power and the roles each can exercise in the information flow. Although the members were interacting equally, the power of the ordinary members in affecting the information flow was the least vis-à-vis the latter. Although the ordinary members could suggest new members, they were unable to add them to the group directly.

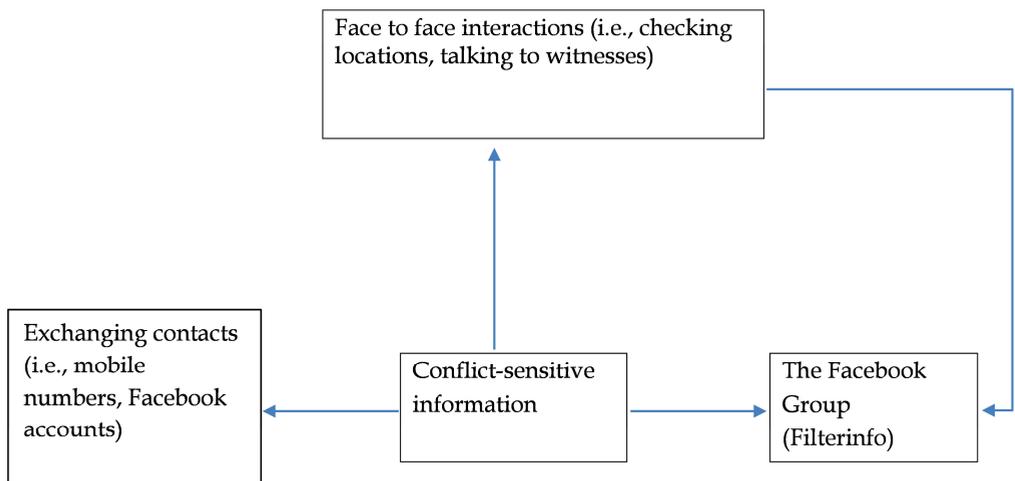
The founder was the person who started the group. He offered rules governing the interactions in the group so that the information flow could help the group members' achieve the common goal. It is worth mentioning that the group founder assigned one member to become the group administrator. This signifies how a social type may transfer power to an ordinary member. He transferred his power to one who was seen as trustworthy and capable of achieving the group's

mission. In this spectrum, power seems to become a fluid resource that can be exercised to transform situations (i.e., the absence of key persons, limitation of resources) (Giddens, 1984).

The group administrator had power regarding membership approvals and managing the information flow. He had authority to decide approval and removal of memberships, to profile who the new person suggested, and to determine whether a mutual friend or face-to-face experience existed. The group administrator had the authority to remove members who were perceived as irrelevant. One of the reasons for removal was, as the administrator explained, perception that the member was neither capable of sharing information nor engaging in the group discussion (i.e., lack of knowledge on conflicts and its political nuances). This lack of skills and information, hence, constrained the information flow, and the administrator was responsible for keeping it flowing by exercising his authority.

Social norms functioned as rules for the group members to share information. The founder introduced procedures to use the group for sharing information as illustrated below:

Figure 1: Norms for Governing Information Flow



The figure shows that exchanging contacts (i.e., phone numbers, Facebook accounts) originates the information flow followed by face-to-face interactions (i.e., checking conflict locations, talking to witnesses). The information (e.g., new and/or verified information from the ground) was then shared on the Facebook group. The other members discussed and completed it with further information, if necessary. When the information was completed, the group members broadcasted it to the citizens of Ambon.

Two worldviews tied the activists to Filterinfo. First, a shared viewpoint as the citizens of Ambon motivated the activists to secure their small world from violence. They assembled in the closed Facebook group because they believed that they could make Ambon safe for both Christian and Muslim communities. For example, the emergence of the jargon '*kitorang basudara*' (we are

brothers) signifies force to work together in countering rumors, regardless of their religious differences. Second, a collective view that rumors had facilitated the conflict drove the activists to associate with one another. They perceived that filtering conflict-sensitive information could deescalate the conflict as well as empower the citizens of Ambon to become more informationally literate.

To recap, it seems that the activists deliberately made their information world small since they believed that information from outside was irrelevant. The notion of small world appeared in the form of strengthening in-group feeling, the presence of social types and norms. The shared worldviews motivated the activists to assemble in the closed Facebook group, and then use it as a tool for filtering conflict-sensitive information.

4.2. *Making the World Small*

This study finds that the activist used the closed Facebook group for making their information world small. The group was useful to create boundaries between them and the others. Only approved individuals became members, access to information for non-members was limited since their presence could possibly jeopardize the activists' common goal. This supports the notion of "network privatism" (Campbell, 2015), explaining the presence of information communication technologies (e.g., mobile communications, social networking sites) as unfavorable to "diverse ties, but not in a way that reduces the level of diversity, or number of diverse ties, in one's network" (p. 8). The use of closed Facebook group to make the information world of the peace activists small is a form of privatizing their social network so that the public cannot access information they shared.

Trust is vital for keeping the world small. An activist mentioned:

"We have known each other. Not everyone can be added [to the group] ... [to be added in] s/he must be very trustworthy. [We] questioned who posted what; could the information be trusted? If not really [trustworthy], we checked it again ... If there was inaccurate information posted, we deleted it straight away ... There were about twenty members ... we know each other very well... Or, at least, we have met in person" (Participant R).

This material demonstrates that trust improves mutual expectations and obligations among the group members (Sunderland, 2007). As trust develops, the activists marked the irrelevant others (e.g., insiders vs. outsiders (Chatman, 1996)). Trust stemmed from a certain level of face-to-face experience that the members had, which was also utilized for determining their memberships. The depth and breadth of interaction were used to examine the credibility of information posted by the group. Considering this, each member was expected to be accountable or the level of trust among them would decrease. For example, when a member posted an information that there was a bomb, questions regarding locations and who involved were raised by other members. When these details were found to be inaccurate, the group administrator deleted it and the members who posted the information was asked to clarify. This finding suggests that the presence of trust strengthens the members' social ties and then is capitalized on to keep the information flow.

The closed Facebook group is a proxy for a deliberate action of seeking information from within. The group members viewed themselves as credible information sources so the decision to

restrict information from outside is reasonable. The activists decided to make the Facebook group as a “small world” and took advantage of its exclusiveness as a way to promote solidarity within the network. This reflects that when information is varied and trust is volatile, creating an exclusive network for social change is more beneficial than recruiting more members. An explanation for this could be that the smaller the group, the less effort needed for securing the information flow.

5. Conclusion

This study investigates a closed Facebook group, called Filterinfo, as a representation of small world (Chatman, 1999) for peace activists in the 2011 Ambon conflict. Filterinfo was created as a closed group so that information was restricted only to those who knew each other and shared the same values. The decision to use a closed Facebook group as a space for filtering information during the conflict indicates that the activists deliberately made their information world small (i.e., by limiting outsiders’ access). Consequently, reliance on each other was significant, and trust was crucial for maintaining information flow. Their worldview is a binding factor among various social types involved in the group and norms are produced to achieve the common goal (i.e., preventing more violence from spreading).

This research is limited as the data were not gathered during the conflict. The interviews were conducted four years after the conflict and the Facebook group is inactive. Data used in this study relied on the activists’ memories and texts (Facebook posts and comments), which are both susceptible to distortion and reinterpretations as time passes. Future research can be framed on the role of collective memories in social movements and how social media can become a space to recall them in different contexts (i.e., post-conflict situation, recovery processes). Exploring the dynamics of face-to-face and mediated communications (i.e., mobile or social media) in affecting individuals’ engagement in social movements is worth studying.

The findings are useful for addressing extant criticism toward the use of commercial social media platforms for socio-political changes due to their vulnerability to third-party control and surveillance (for review see (Gerbaudo, 2012; Morozov, 2011; 2013). The findings may inspire the creation of non-commercial platforms for civic engagements and social movements. Although Facebook and other social media are still useful, creating space, where only the activists/concerned-citizens have access, can be used strategically in more sensitive situations (i.e., involving surveillance from government agents, authoritarian regimes and highly-classified information). It is hoped that through these findings light is shed on ways to frame in-group information to become useful for the greater good of people as well as to understand a culture of online movement.

References

- Allagui, I., & Kuebler, J. (2011). The Arab Spring and the Role of ICTs Editorial Introduction. *International Journal of Communication*, 5, 1435–1443.

- Burnett, G. (2009). Colliding Norms, Community, and the Place of Online Information: The Case of archive.org. *Library Trends*, 57(4), 694–710. <http://doi.org/10.1353/lib.0.0057>
- Burnett, G., Besant, M., & Chatman, E. a. (2001). Small Worlds: Normative Behavior in Virtual Communities and Feminist Bookselling. *Journal of the American Society for Information Science and Technology*, 52(March), 536–547. <http://doi.org/10.1002/asi.1102>
- Burnett, G., Fisher, K. E., Fulton, C., & Hersberger, J. A. (2007). Channeling Chatman: Questioning the Applicability of a Research Legacy to Today's Small World Realities. In *Proceedings of the American Society for Information Science and Technology* (Vol. 43, pp. 1–7). <http://doi.org/10.1002/meet.1450430197>
- Burnett, G., Jaeger, P. T., & Thompson, K. M. (2008). Normative Behavior and Information: The Social Aspects of Information Access. *Library & Information Science Research*, 30(1), 56–66. <http://doi.org/10.1016/j.lisr.2007.07.003>
- Campbell, S. W. (2015). Mobile Communication and Network Privatism: A Literature Review of the Implications for Diverse, Weak, and New Ties. *Review of Communication Research*, 3(1), 1–21. <http://doi.org/10.12840/issn.2255-4165.2015.03.01.006>
- Castells, M. (2012). *Networks of Outrage and Hope: Social Movements in the Internet Age*. Cambridge, UK: Polity Press.
- Charmaz, K. (2006). *Constructing Grounded Theory: A Practical Guide Through Qualitative Analysis*. <http://doi.org/10.1016/j.lisr.2007.11.003>
- Chatman, E. A. (1996). The Impoverished Life-World of Outsiders. *Journal of the American Society for Information Science*, 47(3), 193–206. [http://doi.org/10.1002/\(SICI\)1097-4571\(199603\)47:3<193::AID-ASIS>3.0.CO;2-T](http://doi.org/10.1002/(SICI)1097-4571(199603)47:3<193::AID-ASIS>3.0.CO;2-T)
- Chatman, E. A. (1999). A Theory of Life in the Round. *Journal of the American Society for Information Science*, 50(3), 207–217. [http://doi.org/10.1002/\(SICI\)1097-4571\(1999\)50:3<207::AID-ASIS>3.3.CO;2-#](http://doi.org/10.1002/(SICI)1097-4571(1999)50:3<207::AID-ASIS>3.3.CO;2-#)
- Chatman, E. A. (2000). Framing Social Life in Theory and Research. *The New Review of Information Behaviour Research*.
- Gaby, S., & Caren, N. (2012). Occupy Online: How Cute Old Men and Malcolm X Recruited 400,000 US Users to OWS on Facebook. *Social Movement Studies*, 11(3-4), 367–374. <http://doi.org/10.1080/14742837.2012.708858>
- Gerbaudo, P. (2012). *Tweets and the Streets. Social Media and Contemporary Activism*. London: Pluto Press.
- Gibson, W. J., & Brown, A. (2009). *Working with Qualitative Data*. London: Sage.
- Giddens, A. (1984). *The Constitution of Society*. Cambridge: Polity Press.
- Hart, A. D. (2011). Inquiring Communally, Acting Collectively: The Community Literacy of the Academy-Women eMentor Portal and Facebook Group. *Community Literacy Journal*, 6(1), 79–90. <http://doi.org/10.1353/clj.2012.0003>
- Howard, P. N., & Hussain, M. M. (2011). The Role of Digital Media. *Journal of Democracy*, 22(3), 35–48. <http://doi.org/10.1353/jod.2011.0041>
- Huotari, M.-L., & Chatman, E. (2001). Using Everyday Life Information Seeking to Explain Organizational Behavior. *Library & Information Science Research*, 23, 351–366. [http://doi.org/10.1016/S0740-8188\(01\)00093-7](http://doi.org/10.1016/S0740-8188(01)00093-7)

- Juris, J. S. (2012). Reflections on #Occupy Everywhere: Social Media, Public Space, and Emerging Logics of Aggregation. *American Ethnologist*, 39(2), 259–279. <http://doi.org/10.1111/j.1548-1425.2012.01362.x>
- Ling, R. (2012). *Taken for Grantedness. The Embedding of Mobile Communication into Society*. Cambridge, Massachusetts: MIT Press.
- Morozov, E. (2011). *The Net Delusion. New York* (Vol. 9). New York: PublicAffairs. Retrieved from <http://www.amazon.com/Net-Delusion-Morozov/dp/1846143535>
- Pang, N., Parycek, P., & Skoric, M. (2015). Social Media and Socio-Political Change : An Asian Perspective. *Journal of eDemocracy*, 7(1).
- Patton, M. Q. (2002). *Qualitative Research & Evaluation Methods* (3rd ed.). California: Sage Publications, Inc.
- Pendleton, V., & Chatman, E. (1998). Small World Lives: Implications for the Public Library. *Library Trends*, 46(4), 732–751. Retrieved from <http://cat.inist.fr/?aModele=afficheN&cpsid=1622039>
- Shils, E. (1957). Primordial, Personal, and Sacred and Civil Ties: Some Particular Observations on the Relationship of Sociological Research and Theory. *The British Journal of Sociology*, 8(2), 130–145.
- Shirky, C. (2011). The Political Power of Social Media. *Foreign Affairs*, 90(February), 1–9. Retrieved from <http://www.foreignaffairs.com/articles/67038/clay-shirky/the-political-power-of-social-media>
- Sunderland, D. (2007). *Social Capital, Trust and the Industrial Revolution* (Vol. 20070472). Oxon: Routledge. <http://doi.org/10.4324/9780203964323>
- Wilson, P. (1983). *Second-Hand Knowledge. An Inquiry into Cognitive Authority*. Westport, Connecticut: Greenwood Press.
- Wolfsfeld, G., Segev, E., & Sheaffer, T. (2013). Social Media and the Arab Spring: Politics Comes First. *The International Journal of Press/Politics*, 18, 115–137. <http://doi.org/10.1177/1940161212471716>
- Zuckerman, E. (2013). *Digital Cosmopolitans in the Age of Connection*. New York: W.W. Norton & Company.

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The Crisis of Representative Democracy: Transformation of Institutional Politics through Net-Parties and Their Use of ICTs

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Abstract: This paper is an introduction to my PhD project that I started in October 2014 at Universitat Oberta de Catalunya (UOC). After presenting introduction, theoretical background research design I will address the limitations and open issues of the research which I propose to discuss in the PhD Colloquium to profit from the participants' expertise.

1. Introduction

Since two decades now scholars and experts of western democracies foresee the approaching end of representative democracy, especially in European countries with established parliamentary systems. Low turnout rates in elections, party membership decline and disinterest in politics lead to authors questioning if democracy can be saved (Della Porta, 2014) or, in the most radical formulation, if it is already dead (Keane, 2009). Studies about shortcomings in democracy have a long-standing tradition, however, they saw an increased revival in the recent five years touching upon the question in which direction representative democracy is heading. Authors name similar roots where the crisis comes from: Political fatigue and mistrust by the citizens towards their representatives that is based on the perception that people's "control over political decision-making sometimes lay beyond the reach of the ordinary citizen." (Mair, 2013: 1 f.). This in turn leads to disinterest in political mobilization on a social level and on an individual level to uninformed, depoliticized citizens.

Departing from the general problems democracy is facing, one special focus has been on the role of political parties and their contribution to the crisis. Authors are substantially agreeing on party decline (Ignazi, 1996; Gauja, 2001) and claim that the symptoms of the failing of democracy have "to do with the failings of political parties" (Mair, 2013: 2) that are based on a specific conception of democracy and to an ideal social structure, "neither of which is characteristic of postindustrial societies" (p. 6). This critique leads to the question if the age of "party democracy has passed" (Mair, 2013: 1) and if parties are subjects to a devolution process.

At the same time, a wave of alternative party formation is emerging in political systems worldwide, mobilizing large numbers of citizens and implicitly proposing alternative ways of citizen participation, representation and intra-party democracy. Such parties include Partido X

(Spain), Podemos (Spain), Partido de la Red (Argentina), The Pirate Party (International), Wikipartido (Mexico) and Movimento 5 Stelle (Italy).

We will call this party formation “net-party” and define it firstly as a party that explicitly incorporates the problems of political fatigue and seeks to identify the strategies to fight against the crisis of democracy, exploring uncharted political ways heavily relying on deliberation, fostered through new ad-hoc spaces and facilitated by a combination of network-like organization architectures and an intensive use of ICTs. Since this form of party organization is somewhat “new” (Tormey, 2015), political science still lacks an adequate typology of the phenomenon – the main objective of this research.

The multidimensionality of this new political phenomenon provides an overlooked and much needed perspective within both the mainstream political party discourse and the question how digital technologies facilitate and change democratic actions. Doubtlessly, it is the task of academic scholars to try to contribute to the explanation and conceptualization of the phenomenon of parties that foster strong intra-party democracy and thus propose solutions to the crisis of representative democracy. Thus, it can be questioned if a new form of citizen influence on politics is possible. Related to this, the use of digital technologies in political realms gives rise to the question of how far institutions are obsolete and political sovereignty is subject to a devolution process. There is a pressing need to explore how practical and transformative political change can be facilitated and assisted through the use of digital technologies.

2. Literature Review and Theoretical Framework

2.1. Development and Models of Political Party Organization

Political science and especially comparative political science has long been occupied with the analysis of political parties (Ostrogorski, 1903; Michels, 1911). Here, parties are usually regarded as “playing a central role in both the theory and the practice of modern liberal democracy, constituting a vital link between the sovereign people and the politicians” (Luther & Müller-Rommel, 2002: 1) and therefore are seen as being indispensable within representative democracies. Regarding their organizational form, scholars have identified how various models of parties can be located in terms of the relationships between civil society and the state.

The mass party model, developed by Duverger (1954), can be seen as the ideal type of the “membership-oriented bottom-up party” which according to Kirchheimer’s (1966) analysis of the transformation of party organizations is being displaced by the catch-all party model. Catch-all parties downgrade the role of the individual party member while the party leadership is strengthened. This centralization is explained by the assumed trade-off between internal democracy and electoral efficiency (Saglie & Heidar, 2004: 387). More recently, Katz and Mair (1995) introduced a further variation, namely the concept of cartel parties that can be characterized as being part of -and highly dependent on- the state, resulting in a diminishing competition between established parties. Within cartel parties, members have more formal rights than within catch-all parties, and thereby obtain a more powerful role.

Conceptual accounts made within political science literature regarding the phenomenon of parties that strongly use ICTs - like in the net-party phenomenon - are rather rare. Margetts introduces the "cyber party" as an ideal type of party that has its origins in ICTs, especially the Internet combined with "new trends in political participation and the de-institutionalization of political parties" (2001: 8). Another key defining characteristic of the cyber party is the changing relationship between voters and party in contrast to the traditional notion of membership. She subsequently argues that parties should not be seen as institutions but rather as organizations. Secondly, this research will build upon ideas of the concept of "movement parties" by Kitschelt (1989; 2006). This type of party is characterized by its momentum of political activism that emanates from social movements and its application of a diverse set of practices of social movements in the area of party competition, mostly promoting a high level of intra-party democracy. Another body of literature we will build on derives from the study of minor and new parties in democratic systems. Scholars have acknowledged the phenomenon of new parties in current democracies, however, only a minority of these have been intensively studied (Burchell, 2002; Poguntke, 2002; Carter, 2005; Mudde, 2007; Art, 2011).

Regarding the evaluation of performance of parties, Bolleyer (2013) recently has developed a framework that allows investigating "the organizational characteristics that support or weaken the institutionalization of new parties" (p. 2). Based on the analytical distinction about a party's origins, she explores why not all new parties are equally able to exploit their electoral potential and to consolidate a support base in the longer term. However, although there is extensive literature on cross-national studies of party decline or failure in advanced democracies, studies about parties that propose a transformation of representative democracies and support a direct democracy approach have – with the exception of the German Greens – not been studied intensively yet. Starting from the accounts made in this field, we argue that these conceptions of party formation are inadequate for catching the phenomenon net-parties since they do not entail the transformative intentions of these parties with respect to their respective institutional context. The development of a typology of net-parties will be located in the tradition of these accounts but with an extended focus on intra-party democracy.

2.2. Intra-Party Democracy and Technopolitics

We will build on literature on intra-party democracy as opposed to "state democracy" (Rahat et al., 2008) which is understood as inter-party democracy. Resting on the argument that "inclusive decision making reflect equality between citizens and are thus crucial at state level, (it) still might generate problematic consequences when implemented within a voluntary organisation" (Gideon et al., 2008: 676). This field therefore examines the question to what degree a political party can be efficiently and democratically organized hinging on the normative choice between direct (participatory) democracy and representative democracy. Within the optimistic approach towards intra-party democracy two understandings of participation can be distinguished: the mere ability of citizens to vote on intra-party issues (...) and the more demanding concept of deliberative democracy (Teorell, 1999) with the extreme of the strong democracy approach where "politics in the participatory mode (...) is self-government by citizens rather than representative government" (Barber 1984: 151).

Since the understanding of participation of net-parties promotes a strong approach to direct democracy and enhanced intra-party democracy, the focus here lies on the second variation. Participation in this line of democratic theory can be understood as “codetermination or shared decision-making among equals (...) in the common decision which bind all the members in the group” (Gould, 1988: 85). Based on Habermas’ (1996) connotation of rational discourse, the deliberative model underscores the importance of the very process through which opinions are formed, ideally with the force of the better argument. Within a political party, this approach could be highly preferable since “political parties would have to participate in the opinion- and will-formation from the public’s own perspective, rather than patronizing the public sphere for the purposes of maintaining their own power” (Habermas, 1996: 379).

However, a serious challenge limits the possibility of a horizontally organized party structure concerned with the impossibility of a “truly” participatory democracy, namely, the statement that every decentralized organization sooner or later creates hierarchical structures. Robert Michels made a famous argument – named the iron law of oligarchy – that every organization becomes oligarchic over time; that is, a few will rule over the majority. He further argued that this is not a byproduct of organization processes that can be avoided, but a symptom that is part of the tactical and technical necessities (see Michels, 1911) of organization. Therefore, every organization that aims to be decentralized and participative will sooner or later end up with the opposite: a few representatives speaking for the majority of the members. However, as has been argued by net-parties, new digital infrastructures, especially the Internet will give rise to new politics, overcoming this problem, especially regarding time and lack of efficiency in decision-making processes.

This vision derives from the argument that online-platforms enable direct, location-unbound deliberation, providing the tools for a new area of politics. As a complex phenomenon, the question of how digital technologies transform the political sphere is an inherent sub-question of this research. To approach this question, this study builds upon the growing literature of “technopolitics” (more in the sense of Lebkowsky, 1997, rather than Rodotà, 1997), the investigation of how citizens engage in political actions in allegedly new – and positive – ways, such as new communicational practices (Fernández-Planells et al, 2013), new para-institutions (Peña-López et al, 2014), new distributed leadership (Margetts et al., 2015), new political architectures of communication and participation combining ‘vertical’ with ‘horizontal’ (Tormey, 2015), new collective identities (Monterde et al, 2015) or new levels of engagement (Peña-López, 2014). Based on concepts of e-democracy and cyber democracy, this line of thought presupposes that horizontal communication processes delivered by ICTs are essential for new forms of political participation and deliberative processes (Fishkin, 1991; Barber, 2003; Groshek, 2009; Park, 2013). This could lead to the “beginning of a new polity” (Vedel, 2006: 229).

3. Research Questions

The investigation is based on the following research questions:

- 1) What are the different strategies provided by net-parties towards intra-party democracy?

- a) What are the commonalities and differences of their understanding of intra-party democracy?
 - b) How do they engage with the processes of membership-selection, selection of the electorate and representatives?
 - c) How can the role of digital technologies within these processes be described?
- 2) Does the degree of intra-party democracy change over time, that is, does the iron law of oligarchy apply?
- 3) Why do some of them successfully put high intra-party democracy into practice and some do not?
- a) What are the determinants of performance of these parties?
 - b) Is the degree of intra-party democracy linked to their performance?

4. Research Design

A comparative strategy for discovering empirical relationships among variables between the political parties was used to start the empirical investigation based on the method of middle-range theory construction. The comparative method is concerned with the “interrelations of structural elements of total systems” (Rokkan, 1966: 19); in this case the structural elements of new forms of political parties. Following Rose’s definition of the comparative method, the research involves the “presentation of empirical evidence of some kind in an attempt to compare systematically and explicitly political phenomena” (Rose, 1991: 439). Since the aim of a comparative analysis is to develop “system specific” indicators that serve to operationalize the same concept in distinct ways in different contexts (Collier & Mahon, 1993), it fits the assessment of net-parties seeking to evaluate a similar phenomenon within differing contexts. The research design therefore takes the form of a hypothesis-generating comparative cross-case study, starting with a vague notion of possible hypotheses and the “attempt to formulate definite hypotheses to be tested subsequently among a larger number of cases” (Lijphart, 1971: 692).

4.1. Case Studies

The investigation of the case studies consists of three stages. The first step is an in-depth study. To test the hypotheses preliminarily, to adjust the analytical framework and to test the chosen methods, Barcelona en Comú (BenC) will be investigated first. BenC (formerly known as Guanyem Barcelona) the party now in office in Barcelona (Spain) after the 2015 local elections, is a citizen platform whose aim is to bring together progressive social and political organizations. Having their roots in the 15M movement and the Plataforma por los Afectados de la Hipoteca (PAH), they support participative democratic approaches to let the citizens of Barcelona decide on the future of the city. They can be placed in the wider context of the transformation of city politics by proposing alternatives to “old-school politics” (Guanyem Manifesto, 2014). Their ethos has been replicated all over Spain, proving to have mobilizing potential on a national level. They are using open deliberation and voting tools such as Democracy OS and AgoraVoting.

In the second step, a variable-oriented cross-case analysis will be conducted to develop the typology of net-parties. That means that common patterns will be identified to highlight the “appearing across several observations that typically represent different cases under study” (Babbie, 2010: 395). A variable-oriented analysis is an “analysis that describes, and/or explains a particular variable” (ibid.) - here organization, communication, representation, institutional context and deliberative and participative performance.

As the final step, a case-oriented analysis will be conducted with Podemos (Spain) and Die Piratenpartei (Germany). This kind of analysis “aims to understand a particular case or several cases by looking closely at the details of each” (Babbie, 2010: 395). The sampling was done to compare prominent cases that failed (Germany), succeeded in elections (BenC), and to closely observe the process of institutionalisation during times of elections (Podemos). Founded in 2014, Podemos is a leftist political formation also rooted in the 15M movement, led by Pablo Iglesias Turrión. In the European parliament elections the same year, Podemos obtained 8% of the national vote. In terms of their use of ICTs, Podemos is particularly interesting, because their success in 2014 was explained through their trans-media approach (Postill, forthcoming), thus enabling a critical perspective on the optimistic view on ICTs. The national elections in Spain toward the end of 2015 will serve as an adequate field study to apply the methodological set developed through the study of BenC to validate the failure and success criteria of net-parties.

Die Piratenpartei was founded 2006 after the Swedish model of the Piratpartiet and therefore has roots in the social movement around copyright reformation based on the Pirate Bay. Since 2011, when they gained 8.9% of the votes in the Berlin state elections, the party has succeeded in attaining a high enough vote share to enter four state parliaments and the European Parliament. Members perceive themselves as being part of an international movement to shape, in their terms, the “digital revolution”. The party uses the tool liquid feedback for program development and inner-party discourse (Horbank, 2011). However, after a steady decline in the following years, the party only received 2.2% and 1.45% of the national vote in the 2014 European parliament elections. This case study will serve as an opportunity to identify the criteria for failure of net-parties.

4.2. Methods

Content Analysis (CA) of the discussion boards of the parties and relevant media material, programs and manifestos is being undertaken to identify the relevant criteria that a typology of net-parties will be based upon. Content analysis enables the researcher to explore textual information and to identify its properties, such as the frequencies of most used keywords (Babbie, 2010). This method will be a core tool to compare important elements in the respective programs as well as in identifying the elements organization and understanding of representation the party perceives. It thus provides evidence and data relevant to all the research questions and involves identification and gathering of relevant primary and secondary materials. The findings will also be used to inform the respondent database for further research techniques.

Semi-structured interviews with organizers, spokespersons, participants, sympathizers of the case studies, and other social groupings, as well as interviews with politicians from other parties are being conducted. Semi-structured interviews can offer an opportunity to “discover actor-

specific interpretations of situations and of the motives that guide their actions” (Hopf, 2012: 350). Furthermore, interviews elicit people’s views and perspectives on the world and can capture the perspective of an individual on events and experiences (Cresswell, 2007). This is particularly important for the historical analysis of the discourses of the Piratenpartei, where the retrospective view on the events that explain the parties decline may reveal important factors. Expert interviews with scholars working on current political developments will help to elaborate a typology of net-parties and to complement the perspectives of the members in a critical manner.

Participant observation during meetings and assemblies will explore how the members of the case studies are using ICTs to communicate ideas and develop policy- related content. Furthermore, it will reveal eventual discrepancies between what members say in interviews to promote the party and what they are actually doing (Emerson et al., 2001). In particular, I will closely observe party meetings and assemblies of BenC and Podemos. This allows not only the investigation of the use of ICTs, but also an analysis of the social environment and the interaction between the participants to be observed. Key informants will be identified based on coded results after a first round of discourse analysis of official documents. These actors will serve as participants for in-depth interviews. Transcription and coding of the data will be done through Nvivo.

5. Limitations and Open Issues

An issue that still needs revision and is a question for the upcoming year is the determination of success of net-parties. The question of perspective is: Are net-parties successful when they accomplish to maintain a high degree of intra-party democracy or are we taking common criteria from political science such as high turnout in elections as success factors? But electoral success does not represent the overall satisfaction with the party since, as outlined in the introduction, political fatigue leads to volatile turnout rates. Therefore the criterion electoral success cannot fully be relied on. How these parties can be evaluated, which trade-offs have to be taken into account and the political context has to be considered.

Another remaining problem that needs to be reflected upon when undertaking this research is a methodological one that can emerge when undertaking a comparative cross-case analysis. This kind of analysis often falls into the “danger of being overwhelmed by large number of variables and, as a result, losing the possibility of discovering controlled relationships” (Lijphart, 1971: 690). Therefore, the amount of major variables will be limited to organization, communication, representation, contextualization and performance. How to operationalize and select those variables is still under consideration and needs some further development.

References

- Art, D. (2011). *Inside the Radical Right: The Development of Anti Immigrant Parties in Western Europe*. Cambridge: Cambridge University Press.
- Babbie, E. R. (2010). *The Practice of Social Research* (12th ed.). Wadsworth: Cengage Learning.

- Barber, B. R. (2003). *Strong democracy: Participatory politics for a new age*. Oakland: University of California Press.
- Bolleyer, N. (2013). *New Parties in Old Party Systems. Persistence and Decline in Seventeen Democracies*. Oxford: Oxford University Press.
- Burchell, J. (2002). *The Evolution of Green Politics. Development and Change Within the European Green Parties*. London: Earthscan Publishers.
- Carter, E. (2005). *The Extreme Right in Western Europe: Success or Failure?*. Manchester: Manchester University Press.
- Collier, D. & Mahon, J.E. (1993). Conceptual Stretching Revisited: Alternative Views of Categories in Comparative Analysis. *The American Political Science Review*, 87 (4), 845 – 855.
- Cresswell, J.W. (2007). *Qualitative Inquiry and Research Design: Choosing among five traditions*. 2nd ed. Thousand Oaks, CA: Sage.
- Della Porta, D. (2013). *Can Democracy be Saved? Participation, Deliberation and Social Movements*. Cambridge: Polity.
- Duverger, M. (1964). *Political Parties*. 3. edn. London: Methuen.
- Emerson, R.M., & Fretz, R.I., & Shaw, L.L. (2001). 'Participant Observation and Fieldnotes'. In Atkinson, P., Coffey, A., Delamont, S., Lofland, S. (Eds.), *Handbook of Ethnography* (pp. 356 – 357). Thousand Oaks, CA: Sage Publications.
- Fishkin, J. S. (1991). *Democracy and deliberation: New directions for democratic reform* (Vol. 217). New Haven: Yale University Press.
- Gauja, A. (2006). *Enforcing Democracy? Towards a Regulatory Regime for the Implementation of Intra-Party Democracy*. Canberra: Democratic Audit of Australia.
- Gideon, R., & Hazan, R.Y., & Katz, R.S. (2008). Democracy and Political Parties: On the Uneasy Relationship between Participation, Competition and Representation. *Party Politics*, 14 (6), 663–683.
- Fernández-Planells, A., & Feixa Pampols, C. & Figueroas Max, M. (2013). 15-M En España: Diferencias y Similitudes en las Prácticas Comunicativas con los Movimientos Previos. *Última Década*, (39), 115-138.
- Gould, C. (1988). *Rethinking Democracy: Freedom and Social Cooperation in Politics, Economy, and Society*. Cambridge: Cambridge University Press.
- Guanyem Manifesto (2014). *Let's win back Barcelona*. Retrieved December 02, 2014 from <https://guanyembarcelona.cat/lets-win-barcelona/>.
- Habermas, J. (1996). *Between Facts and Norms: Contributions to a Discourse Theory of Law and Democracy*. Cambridge: Polity.
- Hopf, C. (2012). Qualitative Interviews – ein Ueberblick. In Flick, U. & V. Kardoff, E., & Steinke, I.: *Qualitative Forschung. Ein Handbuch* (pp. 349 – 360). 9th edition. Reinbek: Rowohlt.
- Horbank, D. (2011). *Liquid Democracy. Seminararbeit im Rahmen des Seminars „Wissen in der modernen Gesellschaft“ (WS 2011/11)*. Leipzig: University Leipzig.

- Ignazi, P. (1996). The Crisis of Parties and the Rise of New Political Parties. *Party Politics* 2(4), 549-566.
- Katz, R.S. & Mair, P. (1995). Changing Models of Party Organization and Party Democracy: The Emergence of the Cartel Party. *Party Politics*, 1, 5-29.
- Kirchheimer, O., (1966). The Transformation of the West European Party Systems. In LaPalombara, J., & Weiner, M. (Eds), *Political Parties and Political Development*, Princeton: Princeton University Press.
- Keane, J. (2009). *The Life and Death of Democracy*. London and New York: Simon & Schuster.
- Keane, J. (2011). Monitory Democracy? In Alonso, S., & Keane, J., & and Merkel, W. (eds), *The Future of Representative Democracy* (pp. 212-236). Cambridge: Cambridge University Press.
- Kitschelt, H. (1989). *The Logics of Party Formation: Ecological Politics in Belgium and West Germany*. Ithaca and London: Cornell University Press.
- Kitschelt, H. (2006). Movement Parties. In Katz, R., & Crotty, W. (Eds.), *Handbook of Party Politics* (pp. 291-301). London: SAGE.
- Lebkowsky, J. (1997). *TechnoPolitics*. Melbourne: The Commission.
- Lijphart, A. (1971). Comparative Politics and the Comparative Method. *The American Political Science Review*, 65(3), 682 – 693.
- Luther, K, & Müller-Rommel, F. (2002). *Political Parties in a Changing Europe [Working Paper 14]*. School of Politics, International Relations and the Environment. (SPIRE) Keele University Staffs: UK.
- Mair, P., & van Biezen, I. (2000). Party membership in twenty European democracies, 1980–2000. *Party Politics*, 7, 5–21.
- Margetts, H. (2001). *The Cyber Party*. Paper for the ECPR Joint Sessions, Grenoble, 6. 11 February 2001.
- Michels, R. (1911). *Political Parties*. New York: Free Press.
- Monterde, A., & Calleja-López, A., & Aguilera, M., & Barandiaran, X.E. & Postill, J. (2015). Multitudinous identities: a qualitative and network analysis of the 15M collective identity. In *Information, Communication & Society*, Published online: 20 May 2015. London: Routledge
- Mudde, C. (2007). *Populist Radical Right Parties in Europe*. Cambridge: Cambridge University Press.
- Ostrogorski, M. (1903). *Democracy and the Organization of Political Parties*. Chicago: Qundrangle Books.
- Park, Y. J. (2013). Digital literacy and privacy behavior online. *Communication Research*, 40(2), 215-236.
- Peña-López, I., & Congosto, M. & Aragón, P. (2014). Spanish Indignados and the evolution of the 15M movement on Twitter: towards networked para-institutions. *Journal of Spanish Cultural Studies*, 15 (1-2), 189-216.
- Poguntke, T. (2002). Party organizational linkage: Parties without firm social roots. In: Luther, K.R. & Müller-Rommel, F. (eds.), *Political Parties in the New Europe: Political and Analytical Challenges*. Oxford: Oxford University Press.
- Rodotà, S. (1997). *Tecnopolitica. La democrazia e le nuove tecnologie della comunicazione*. Roma: Laterza.

- Rokkan, S. (1970). *Citizens, Elections, Parties: Approaches to the Comparative Study of Processes of Development*. New York, NY: David McKay.
- Rose, R. (1991). Comparing Forms of Comparative Analysis. *Political Studies*, 39, 446-462.
- Saglie, J. & Heidar, K. (2004). Democracy within Norwegian Parties: Complacency or Pressure for Change?. *Party Politics*, 10 (4), 385-406.
- Teorell, J. (1999). A Deliberative Defence of Intra-party Democracy. *Party Politics*, 5, 363-382.
- Tormey, S. (2015). *The End of Representative Politics*. Cambridge: Polity Press.
- Vedel, T. (2006). The idea of electronic democracy: Origins, visions and questions. *Parliamentary Affairs*, 59(2), 226-235.

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Tracking Typhoon Haiyan: Open Government Data in Disaster Response and Recovery

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Abstract: In the aftermath of Supertyphoon Haiyan, which broke the charts by registering a total of USD 12.7 billion in damage and losses, the Philippines received an outpouring of support from the international community and domestic stakeholders (e.g., the business sector and NGOs). This prompted demands for government transparency and accountability from various sectors, survivors and observers alike. The government responded by creating Open Government Data portals to provide the public with data regarding the inflow of donations and as well as projects for those affected. This study is a condensed version of research that examines the value and salience of the open government data provided by these portals and attempts to evaluate them based on the international standards for OGD set by the Sunlight Foundation. Initial findings show that despite these OGD efforts, government transparency regarding donations and projects remain wanting even as a comparison of websites between agencies showed inconsistencies in data.

Keywords: open government data, Philippines disaster management, foreign assistance, Typhoon Haiyan

1. Introduction

The Philippines is one of the world's high-risk areas when it comes to disasters. Its geographical location and development characteristics have made it highly vulnerable to a wide array of natural hazards, such as typhoons, monsoon rains, volcanic eruptions, earthquakes, landslides, sea level rise, drought, and flooding. It ranked third among 173 countries with the highest deadly combination of extreme exposure and high vulnerability. (World Risk Report, 2012) In 2008, the country was identified as a disaster hotspot with approximately 50.3 percent of its total area and 81.3 percent of its population vulnerable to disasters. (World Bank, 2008)

Historically, the Philippines' annual average direct damage to disasters ranged from P5 billion to P15 billion (US\$100 million to US\$300 million) from 1970-2009. This does not include indirect losses borne out of disruption in productivity, livelihood, and other foregone opportunities (COA, 2014). Typhoon Haiyan (local name: Yolanda), which directly affected nine of the country's 17 administrative regions last year, broke the charts by registering a total of USD 12.7 billion in damage and losses.

In the aftermath of Haiyan, the Philippines received an outpouring of support from the international community and domestic stakeholders (e.g., the business sector and NGOs). Despite the deluge of promises and pledges for relief and early recovery (through livelihood, housing and financial assistance), implementation gaps in disaster response and management and the lack of a strategic recovery plan emerged as serious problems or obstacles. These prompted demands for government's transparency and accountability from various sectors, survivors and observers alike. Many, especially the victims, do not believe that the government heralded its response as quick and adequate. Moreover, the government claims that throughout the rehabilitation and recovery phase, it had been transparent in the use of funds through its effort of open government data.

1.1. Statement of the Problem

The Philippine government has repeatedly stressed its commitment to administrative transparency. In the aftermath of Typhoon Haiyan, the Office of the President initiated a disaster management portal that aims to publicize the disaster efforts by government as well as information on the funds received from foreign and domestic donors for rehabilitation and recovery efforts. This study examines the value and salience of the open government data provided by government with regards disaster management. It seeks to evaluate them based on the international standards for OGD set by the Sunlight Foundation. Through this effort the study hopes to demonstrate need for greater government transparency towards greater accountability and citizen participation. The study asks the following questions:

- 1) What is the official policy on transparency in disaster management?
- 2) What are the existing data available on Typhoon Haiyan?
- 3) Do these data meet the international standards for OGD?
- 4) Do these data meet the needs of the general public for information?

2. Background of the Study

2.1. Philippine Open Government Policy

In an effort to promote and foster OGD, the US government initiated an international platform dubbed as the Open Government Partnership (OGP) in September 2011 to gain commitments from governments around the world to be more open, accountable, and responsive to their citizens. The Philippines has the distinction of being among the eight founding member states, along with Brazil, Indonesia, Mexico, Norway, South Africa, the United Kingdom and the United States. Within the first two years of its launch, the OGP members acquired another 57 participating nations.

OGD principles were defined and proposed by advocates led by the Sunlight Foundation, Google and Yahoo corporations (Ubaldi 2013). These are: Completeness, Primacy, Timeliness, Accessibility, Machine readability, Non-discriminatory, Non-proprietary, and License-free.

The Philippines, on the other hand, is one of the eight founding states of the Open Government Partnership, a multilateral initiative that "aims to secure concrete commitments from governments

to promote transparency, empower citizens, fight corruption, and harness new technologies to strengthen governance (<http://www.opengovpartnership.org/about>). The Presidential Spokesperson Edwin Lacierda said during the launch of the “Open Data PH” last year (Speech at the Open Data PH forum, Malacanang, 25 February 2014), “We’re supposed to give government data to the public and it is our duty to disclose it.” It is interesting to note that one of the requirements to maintain the country’s membership into the Open Government Partnership is the passage of a Freedom of Information law.

Meanwhile, an initial attempt to increase government data on the Internet is required by law, specifically the General Appropriations Act of 2012. Section 93 of the said Act requires government agencies to strive for transparency and enforce accountability via a so-called Transparency Seal, a symbol on government agency websites indicating that it contains public information deemed vital by the law.

2.2. Disaster Management Policy

The National Disaster Risk Reduction and Management Council (NDRRMC) is imbued with policy-making, coordination, integration, supervision, monitoring, and evaluation functions during disasters (Ref. Republic Act No. 10121). NDRRMC is composed of the respective Ministers of the Ministries of Defense; Interior and Local Government; Social Welfare and Development; Science and Technology; and the National Economic and Development Authority. Its membership is a long list of offices, including the rest of the national agencies, the armed forces, some government-owned and controlled corporations, and the various leagues of local government officials. This membership composition allows the NDRRMC access, at least theoretically, up to the grassroots level to ensure that policies, plans, and protocols are applicable up to the most basic level to ensure smooth operations when natural disasters strike. However, this composition of equals can make it difficult for the implementation of disaster programs even as there is an absence of a singular office that will take charge on the organization, and actual response and recovery effort, as well as be responsible for funds and their use.

Thus, for an extraordinary disaster like Haiyan, the Office of the President intervened by creating the Office of the Presidential Assistant for Rehabilitation and Recovery (OPARR), which in turn created two sources of disaster management information. These are: (1) The Foreign Aid Transparency Hub (FAiTH), and (2) e-Management Platform: Accountability and Transparency Hub for Yolanda (eMPATHY). FAiTH is an online portal of calamity foreign aid information originally launched by the FAiTH Task Force to track foreign aid for those affected by Typhoon Yolanda. It tracks the status of foreign aid coursed through government agencies like Social Welfare and Development, the NDRRMC, etc. However, it does not track donations wired directly to private groups and organizations like UNICEF, Red Cross, or the USAID (Ref. OPARR Status report as of August 2014).

The FAiTH Task Force is composed of representatives from 10 government Ministries. On the other hand, eMPATHY is the searchable database launched by and under the control and supervision of the OPARR. It holds information on financial aid donated by foreign countries and organizations as coursed through national government agencies or through the respective

organizations' local counterparts, and the projects to which they are allocated. Both OPARR and eMPATHY are accessible to the public.

3. Theoretical Framework and Research Design

Fenster (2015) argues that transparency as an element of good governance cannot be solely built on traditional public administration theory because it is dependent on a set of identifiable variables that revolve around the production of information. He notes that when scholars talk about transparency, they make the following assumptions, either explicitly or implicitly (p.152):

- Government is a producer or repository of information and can be made to share that information;
- Government information constitutes a message that can be isolated and disclosed;
- There is a public that awaits this information and is ready and willing to act based on this information.

Thus the researcher attempted to combine and adopt new public management theory along with theories currently outside the public administration discourse.

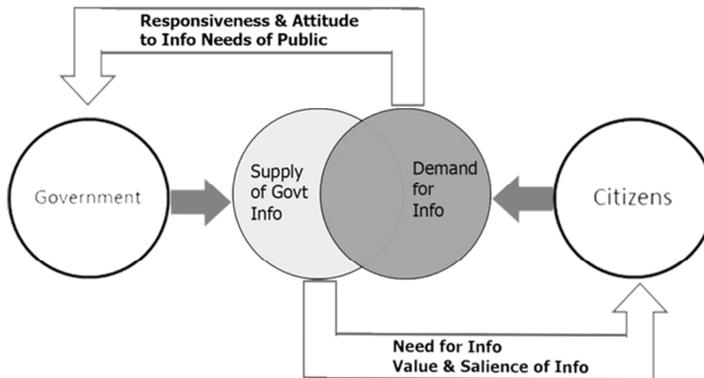
3.1 Theoretical Framework

Jetzek, et al. (2012) argue that the social value of transparency, and consequently Open Government Data, is proportional to its ability to contribute to participation, i.e., the more the useful the information to the public, the higher the value.

The proposed model combines Fung, Graham and Weil's Transparency Action Cycle (2007); Claude and Shannon's Communication Model (1949) as well as the Grunig and Hunt (1984) two-way symmetrical model of Public Relations. The combination of these theories helps the researcher balance the tendency of the government agency to secrecy (or limiting information) and its obligation to transmit the information to the public. If the information provided has value and salience to the public then users (e.g., media) can act on the information without the need to seek additional data.

Conceptually, the above model can look like this:

Figure 1: Conceptual Framework by Author



Despite its apparent simplicity, the proposed model tweaks Fung, Graham and Weil's Transparency Action Cycle by taking into account the source of the information (i.e., a government agency), the tendency to secrecy (or limit information), and the process of transmitting that information to the public. If the information provided has value and salience to the public then users (e.g., media) can act on the information without the need to seek additional data. Government transparency is symbolized by the overlap between the "supply of government information" and the "demand for information." This diagram shows that the greater the overlap between "supply" and "demand", the greater the level of government transparency.

For the purposes of this dissertation, the "supply of government information" is the Open Government Data on disaster management efforts as seen in the portals FAiTH and eMPATHY.

On the other hand, because the Philippines has no Freedom of Information legislation to date, the demand for information remains informal rather than legal, i.e., the government source can choose to ignore the request for information or they can choose to act on it and change or update the original message (public information) even as feedback is --more often than not--a demand for information. The ideal set-up, however, implies that the government source does not ignore the noise and welcomes feedback from the public so as to be able to improve accessibility of information and achieve symmetry in communication and overall government transparency. The model proposes that value and salience of the data can be gleaned from whether or not the data made available by the government meet the standards set by the international principles of OGD as well as government sensitivity to the needs of the public.

3.2 Methodology

The study conducts a content analysis of specific government agencies websites that had direct involvement in the recovery of Typhoon Haiyan, namely the official website of the NDRRMC, the FAiTH and eMPATHY portals. The content analysis will be followed up with structured interviews of officials from the previously mentioned agencies.

4. Initial Findings

The research is still on going. However, initial findings showed that the practice of disaster risk management (DRM) in the country remains fairly undeveloped, leaving a lot of room for improvement. This is not surprising given that the country has just transitioned in 2010 from an emergency-oriented management (read: disaster management) to a more holistic and proactive developmental approach (read: disaster risk management), through the adoption into law of Republic Act 10121 or the Philippine Disaster Risk Reduction and Management Act.

The aforementioned online hubs (FAiTH, eMPATHY) of the government must be improved by providing for: (a) granular breakdown of project data and disbursements; (b) enhanced search engine to improve access to the data; and, (c) improved data curating and regular updates. The utilization of the NDRRMF must also be reported separately and disaggregated from agency funds, to enhance analysis and feedback on DRRM initiatives. Further, the financial reports uploaded in the Ministry of Interior and Local Government portal must be accompanied with Local DRRM Plans to present the direct link of plans and budgets and clarify fund utilization.

Regarding the Haiyan situation, glimmers of the above ideal are visible, especially in completed projects found in eMPATHY. But these glimpses may still be too few and far between considering the resources already gathered, and the timeline that our country has already let pass from the actual disaster, until its conclusion, up until the moving-on phase. There is certainly a lot of room for improvement, moving forward should be easier, considering that the pioneer in FAiTH made a vast leap in improvement with its predecessor in eMPATHY. However, the scattered rehabilitation efforts and the unequal competence of government agencies involved in sharing data on disaster rehabilitation and recovery will remain a hindrance for as long as there is a lack of an overall government agency to oversee all the activities and use of funds. The next logical step then, is to create a specific national government agency mandated to take over disaster risk reduction and management for the NDRRMC. Such an agency, with its own organizational chart, funding, and personnel should be able to concentrate on their mandate without the need to juggle different hats as concurrent members of different aspects of the bureaucracy. This set-up is crucial in establishing and maintaining a true and efficient database for transparency purposes when it comes to both local and international funding, in relation to recovery and rehabilitation efforts.

References

Alliance Development Works (2012). World Risk Report. United Nations World Institute for the Environment and Human Security, downloaded from <http://unu.edu/publications/articles/our-world-at-risk.html>

- Commission on Audit (2014). "Special Audit of Relief Operations of Yolanda", downloaded from http://www.coa.gov.ph/phocadownloadpap/userupload/DRRM/Yolanda_Report.pdf
- Fenster, Mark (2015). "Transparency in Search of a Theory" in the *European Journal of Social Theory*, Vol. 18 (2), pages 150-167. United Kingdom: Sage Publications, Ltd.
- Fung, Archon, Mary Graham and David Weil (2007). *Full Disclosure: The Perils and Promise of Transparency*. UK: Cambridge University Press.
- Hood, Christopher 2010. 'Accountability and Transparency: Siamese Twins, Matching Parts, Awkward Couple?' *West European Politics* 33: 989 -1009.
- Hood, Christopher 2007. 'What Happens When Transparency Meets Blame Avoidance?' *Public Management Review* vol. 9 (2): 191-210.
- Jetzek, Thorhildur, Michael Avital, Niels Bjorn-Andersen 2012. *The Value of Open Government Data: A Strategic Analysis Framework*. Denmark: Copenhagen Business School.
- Office of the Presidential Assistant on Rehabilitation and Recovery (OPARR). Status Report as of August 2014.
- Shanon, Claude and Warren Weaver (1949). *The Mathematical Theory of Communication*. Urbana: University of Illinois Press.
- World Bank (2008). Good Practice Notes: Disaster Risk Reduction, downloaded from http://siteresources.worldbank.org/CHINAEXTN/Resources/318949-1217387111415/Disaster_Risk_en.pdf

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Political Participation in Times of Bologna and Social Web: A Grounded Theory from a Students' Point of View

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Abstract: Today's students, as well as adolescents and young adults in general, are publicly perceived to be less engaged in conventional politics than previous student generations. This PhD dissertation deals with the question if the Social Web plays a role as a new medium of political participation. In other words, the aim of this thesis is to reveal more about students' attitudes to and experience with political participation in times of Bologna and Social Web. Employing a qualitative-empirical research design to analyse empirical data gathered in guided interviews and a group discussion, I decided to use and work with the methodology of Grounded Theory by Strauss and Corbin. The concept of mediatization is the theoretical frame of my doctoral thesis.

Keywords: political participation, Social Web, mediatization, life-world of students, Grounded Theory

1. Introduction and Background

In the last decade media underwent a remarkable change which can be described with concepts like digitalisation (transformation of analogue to digital technology), convergence (merging different media for example the convergence of TV and Internet, Internet and Smartphone), pluralisation (multiplication of media forced by the digitalisation, mp3-player, Smartphones, tablets, etc.), and diversification (highly visible web offers) (Hugger, 2014, p.7). This change affects almost everybody but especially young people.

1.1. Bologna

It is not only the media change that affects young people's lives. The area of higher education in Europe is also passing through a far-reaching process of change initiated by the Bologna reform (Schmatz et al., 2015). Different studies (Bargel, 2008; Multrus et al., 2010; Ramm et al., 2014) assert that the mentality of the contemporary student generation has changed compared to previous generations: They are labour oriented and look for practical experience to increase their employability which plays a central role. Nowadays the university is not the centre of a student's life.

The multifaceted changes that are taking place in today's student life have an age related component that is most obvious with the newest waves of technology. Prominent amongst these are the uses of e-Learning platforms (e.g., ILIAS) social networking sites (e.g., Facebook (messenger) for communication, discussions and networking) and the use of Smartphones or tablets to access the mobile Internet (e.g., WhatsApp) (Jones & Shao, 2011, p.4).

1.2. Social Web

With the Internet, especially through Social Web, new forms and possibilities of political participation have emerged. Via social networking sites like Facebook, etc., micro blogging platforms like Twitter, etc., open sourced encyclopaedias like Wikipedia, video sharing platforms like YouTube, etc., almost everybody is able to create and spread self-produced contents and even get involved in different (political) discussions or discourses.

In this context Bruns (2009) coins the term "produser". The infrastructure of Web 2.0 makes it easy to get engaged online for or against a political issue, for example the initiation of an online-petition (with change.org, avaaaz.org, campact.de), organisation and mobilisation of demonstrations (e.g., the mobilisation via internet against the demo Hooligans against Salafists 2.0, on the 25th of October 2015 in Cologne), flash mobs or smart mobs via Facebook or Twitter, and afterwards watching on YouTube. Social Web or the participatory Web refers to a new spirit of self-confidence among Internet users.

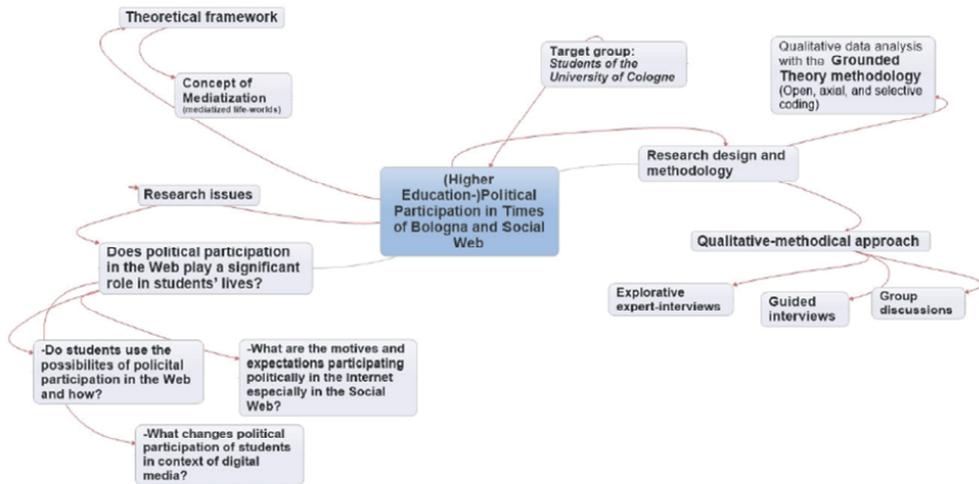
The "Digital Natives" (Prenski, 2001; Palfrey & Gasser, 2008), "Net Generation" (Tapscott, 1997) or "Millenials" (Howe & Strauss, 2000) have grown up with these new technologies. Smartphones, computers, the Internet, online resources and instantaneous access are simply a main part of their life-worlds respectively their lives. The way things are done is a digital (Oblinger & Oblinger, 2005, p.11).

Since they have grown up with new media, they can be characterised with special characteristics: visual orientation, multitasking, active learning, tolerance towards minorities, team orientation, quick change of attention, well informed and so on. Besides these positive descriptions, however, there are also critical voices. Schulmeister (2009) identified the "Net Generation" and the "Digital Natives" as a myth, Jones and Shao (2011) stated that these terms do not capture the processes of change that are taking place. Furthermore, empirical analyses (Schulmeister, 2009; Jureit, 2006; Busemann & Gscheidle, 2010) of media usage data disprove the thesis of the Digital Natives in general. One goal of this research is to work on this critical discourse.

Having this in mind, I ask the following question: The students in times of Bologna – a Net Generation?

The following mind map (see Figure 1) presents a short overview of my ambitious dissertation project

Figure 1: A Graphic Illustration of the PhD Research Project



2. Theoretical Framework

The concept of mediatization is the theoretical frame of my doctoral thesis. Study, work, free time, politics, economy and other parts of society and culture rely more and more on media communication. In order to grasp these media change and the resulting developments, I refer in particular to the concept developed by Friedrich Krotz. Krotz understands mediatization as a meta process, as a long term development that includes media change and the respective change in culture and society (Krotz, 2007). For that reason, Friedrich Krotz defines the term meta process as follows:

“By using the term meta process we want to point out that these are long-term and culture-crossing changes, processes of processes in a certain sense, which influence the social and cultural development of humankind in the long run. More in detail, they are conceptual constructs, by which science as well as persons in their everyday life sum up certain developments, their causes, forms of expression and consequences and therewith make the world manageable”. (Krotz, 2007, p.27)

Having this in mind, mediatization is comparable to individualisation, globalisation and commercialisation. Mediatization proceeds on different levels:

- the macro-theoretical level as the transformation of culture and society,
- the meso-theoretical level as the transformation of institutions and finally
- the micro-theoretical level as the change of social and communicative action.

There are two traditions within the mediatization research: the “institutionalist tradition” and the “social constructivist tradition” (Hepp, 2013). It is not possible here to describe and discuss the traditions in detail, but for my thesis, I set the focus on the “social constructivist tradition”. While in the “institutionalist tradition” media are understood as independent social institutions with their own sets of rules (Hepp & Krotz, 2014), from the social constructivist point of view the role of

various media (especially digital media) moves into the foreground as part of the process of the construction of social and cultural reality. In this sense, mediatization refers to the process of construction of socio-cultural reality by communication (Schütz & Luckmann, [1979] 2003, Krotz, 2001). Within this tradition, I move the individual (the students of the University of Cologne) and its social and communicative action in the centre of analysis.

In a further step, I want to link the concept of mediatization with the social life world perspective, because the “mediatized worlds” are life-worlds that rely on communication media (Lundby, 2014, p.5).

3. Research Issues

In this paper, I set the focus on political participation in the Internet. The main research question reads as follows: “Does political participation in the Web play a significant role in students’ lives?”

This question can be specified with these four more precise questions:

- Students in times of Bologna – a Net-Generation?
- Do students use possibilities of political online participation and how?
- What are the motives and expectations when participating politically in the Internet especially in the Social Web?
- What changes the political participation of students in the context of digital media?

4. Research Design and Methodology

This project employs a qualitative-empirical research design. I started with explorative expert interviews with students working in student’s union executive committee (AStA, ÖH), Senate and student associations (Fachschaft) to get in the field of higher education participation. Additionally, I talked with social media experts about the relevance and role of political participation in the Internet. The results and awareness of these explorative expert interviews have been integrated into the development of the guided questionnaire.

Currently I generate data (in the sense of theoretical sampling) with guideline-oriented interviews with engaged students of the University of Cologne. The data collection and analysis are interrelated processes. One of the main characteristics of the Grounded Theory is that the analysis begins as soon as the first bit of data is collected (Corbin & Strauss, 1990). At the end of data collection I plan a group discussion.

The guided questionnaire contains questions about students’ course of study, attitude to the Bologna-reform, significance of Internet use in everyday life and in the university context (e.g., e-learning), usage of (different) Social Web applications, political participation in the internet and University, politics and political interest, effects from online participation to offline participation and vice versa, flash mob as a new form of political participation.

5. Discussion

The aim of my PhD thesis is a contribution to the current mediatization discourse on the basis of empirical data. My methodological approach offers the possibility to develop a system of categories by comparing various parts of my (field) interview data. In other words, the special emphasis is to develop a theory through qualitative analysis (open, axial and selective coding according to Strauss, 1998 and Strauss & Corbin, 1996).

References

- Bargel, T. (2008). Wandel politischer Orientierungen und gesellschaftlicher Werte der Studierenden. Studierendensurvey: Entwicklungen zwischen 1983 und 2007. Bonn: Bundesministerium für Bildung und Forschung.
- Bruns, A. (2009). From Prosumer to Producer: Understanding User-Led Content Creation. Paper presented at Transforming Audiences, London, 3-4 Sep. 2009.
- Busemann, K., & Gscheidle, C. (2010). Web 2.0: Nutzung steigt – Interesse an aktiver Teilnahme sinkt. Ergebnisse der ARD/ZDF-Onlinestudie. In: Media Perspektiven (2010) 7-8, (pp. 359-368).
- Corbin, J., & Strauss, A. (1990). Grounded Theory Research: Procedures, Canons and Evaluative Criteria. In: Zeitschrift für Soziologie, Jg. 19, Heft 6, (pp.418-427). Retrieved March 02, 2016, from <http://www.zfs-online.org/index.php/zfs/article/viewFile/2741/2278>
- Hepp, A. (2013). Mediatisierung. In: J. Schröter, Handbuch Medienwissenschaft. Stuttgart, Weimar: Metzlar Verlag.
- Hepp, A., & Krotz, F. (2014). Mediatized worlds: Culture and society in a media age. London: Palgrave.
- Howe, N., & Strauss, W. (2000). Millennials rising. New York.
- Hugger, K.-U. (2014). Digitale Jugendkulturen: Von der Homogenisierungsperspektive zur Anerkennung des Partikularen. In: K.-U. Hugger, (Eds.). Digitale Jugendkulturen. (pp.11-31) 2. Auflage, Wiesbaden: Springer VS.
- Jones, C., & Shao, B. (2011). The net generation and digital natives: implications for higher education. Retrieved November 23, 2015 <https://www.heacademy.ac.uk/sites/default/files/next-generation-and-digital-natives.pdf>
- Jureit, U. (2006). Generationsforschung. Göttingen: UTB Verlag.
- Krotz, F. (2001). Die Mediatisierung des kommunikativen Handelns. Der Wandel von Alltag und sozialen Beziehungen, Kultur und Gesellschaft durch die Medien. Opladen: Westdeutscher Verlag.
- Krotz, F. (2007). Mediatisierung. Fallstudien zum Wandel von Kommunikation. Wiesbaden: VS Verlag für Sozialwissenschaften.
- Livingstone, S. M. (2009). On the Mediation of Everything. In: Journal of Communication, 59 (1), (pp. 1-18).
- Lundby, K. (2014). Mediatization of Communication. In: Lundby, K. (Ed.) Mediatization of Communication. Handbooks of Communication Science (pp 3-35) De Gruyter Mouton.

- Multrus, F., & Ramm, M., & Bargel, T. (2010). Studiensituation und studentische Orientierungen. 11. Studierendensurvey an Universitäten und Fachhochschulen. Bonn: Bundesministerium für Bildung und Forschung.
- Oblinger D., & Oblinger J. (2005). Educating the Net Generation. EDUCAUSE. Retrieved November 28, 2015, from <https://net.educause.edu/ir/library/pdf/pub7101.pdf>
- Palfrey, J., & Gasser, U. (2008). Born Digital. Understanding the First Generation of Digital Natives New York, Basic Books.
- Prensky, M. (2001). Digital natives, Digital immigrants. In: On the Horizon 9, 5. Retrieved November 30, 2015, from <http://www.marcprensky.com/writing/Prensky%20-%20Digital%20Natives,%20Digital%20Immigrants%20%20Part1.pdf>
- Ramm, M., & Multrus, F., & Bargel, T., & Schmidt, M. (2014). Studiensituation und studentische Orientierungen. 12. Studierendensurvey an Universitäten und Fachhochschulen. Berlin: Bundesministerium für Bildung und Forschung.
- Schmatz, R., & Wolf, G., & Landmann, M. (2015). Students as costumers: The Net Promoter Score as a measure for loyalty and satisfaction in Higher Education. Paper presented at the EAIR-Conference on the Danube University Krems, Austria, 30 Aug. - 2 Sep. 2015.
- Schütz, A., & Luckmann, T. (2003). Strukturen der Lebenswelt. Konstanz, UVK Verlagsgesellschaft mbH.
- Schulmeister, R. (2009). Gibt es eine Net Generation? Widerlegung einer Mystifizierung. Retrieved November 30, 2015 from <http://subs.emis.de/LNI/Proceedings/Proceedings132/gi-proc-132-001.pdf>
- Strauss, A. (1998). Grundlagen qualitativer Sozialforschung. Datenanalyse und Theoriebildung in der empirischen soziologischen Forschung. 2. Auflage, München: Wilhelm Fink Verlag.
- Strauss, A., & Corbin, J. (1996). Grounded Theory: Grundlagen Qualitativer Sozialforschung. Beltz Psychologie, VerlagsUnion.
- Tapscott, D. (1997). Growing up digital: The rise of the net generation. New York.

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Reporting Science in the Digital World - Are Codes of Conducts Missing Something?

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Abstract: Media and technical change like digitalisation, global political and economic change put pressure on journalism and media plus their work ethics. This doctoral seminar paper aims at identifying challenges in codes of conducts regarding (online) science journalism. It examines media accountability and science journalism, journalism ethics, and codes of conduct as professional tools of media accountability. The following case study analyses two professional Codes of Conduct (CoCs) and the guidance they provide to cope with these challenges.

Keywords: Science Journalism, Accountability, Codes of Conduct, Media Change

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1. Introduction and Aim

On-going media change, technical change, and growing pressures on journalists as well as global changes in technology and politics are well-known arguments for the need of evolvement in journalists' ethics and media accountability (cf. e.g., Eberwein et al., 2011:7ff.). Science journalism as a special part of the journalistic community also struggles with these challenges, but seemingly even more so because of the mediatisation and emerging trust issues as well as scandalising tendencies towards science (cf. e.g., Weingart, 2011:45ff., Schäfer, 2008:212ff., Imhof, 2006:202f.). In the framework of media's self-regulation, codes of conduct (CoCs) are formal rules and norms that supposedly aim at giving journalists guidelines for their daily work (cf. Brown and the SPJ Ethics Committee, 2011:29f.), but even such CoCs are often criticised (cf. Zelizer, 2013:272ff.).

This raises the research questions: How do these CoCs mirror the demands of science journalists during growing digitalisation and media change? In which manner are they tailored to particular needs of science reporting? This paper, written as part of a structured doctoral programme, aims at identifying challenges in CoCs to satisfy (online) science journalism. Media accountability, the changes due to global (media) change, and the interconnection with science journalism are discussed. In the analysis, the codes of conduct from two media companies, Reuters and the BBC, are examined in a case study. The content analysis focuses on the guidance for

journalists handling scientific topics in the digital world. Comparing the results, conclusion and discussion as well as an outlook conclude this paper.

2. Media Accountability

It has commonly been observed that media wields power as a “fourth estate”: As institution outside the government, keeping the other three branches in check (cf. Powe, 1991f.) and bridging the gap between politics and public as parts of society (cf. Luhmann, 2004:9). But this power produces fear of power abuse and public ambivalence regarding media (cf. Schultz, 1998ff.). Combined with the conviction of media’s responsibility towards society, this leads to the idea of imperative media accountability, aiming “*to improve the services of the media to the public; restore the prestige of media in the eye of the population, diversely protect freedom of speech and press; obtain, for the profession, the autonomy that it needs to play its part in the expansion of democracy and the betterment of the fate of mankind*” (Bertrand, 2000:151). Media accountability is thus defined by McQuail (2010:206) as “*all the voluntary or involuntary processes by which the media answer directly or indirectly to the society and those immediately affected for the quality and/or consequences of publication*”.

2.1. Media Accountability, Global (Media) Change, and Science Journalism

As McQuail accentuates, accountability processes are defined by complexity and time-intensity; their implementation is neither fast nor simple. The on-going fundamental media change amplifies these struggles and makes a quick and effective reaction even more difficult (cf. McQuail, 2005:99f.). In the internet age, media converges more and more, making boundaries between classic and new media even more fluid (cf. Ruß-Mohl, 2012:81). This media change, sometimes more accurately qualified as structural change by authors like Blöbaum (2005:47ff.), is furthermore characterised by a fierce competition in newspapers/media markets, combined with a crowded journalists’ labour market. So, ethics in practice are even more so difficult for journalists, being pushed into unethical behaviour because of (globalised) competition, pressure from proprietors, and fear of job loss (cf. Phillips, 2013:255ff.; cf. Keeble, 2009:263ff.). This leads to the long known request for institutionalised ethics and quality assurance, cross-linked as infrastructure in-between the main structures of the system (cf. Ruß-Mohl, 1994:92f.,110ff.).

Science journalists are often described as interpreters in-between science and public, but this ideal seems to be simple-hearted (cf. Campenhausen, 2011:11ff.). To survive, science reporting has to face the consequences of media change as described and still has to follow the inherent rules of publishing/journalism. Thus it has to evaluate and review scientific results critically. All this leads to high conflict potential between scientists and journalists (cf. Göpfert, 2006:24ff.). Science journalists also have to sell news, so there is a need to entertain the audience and to use framing, and this is criticised by authors such as Weingart (2011:54) as exploiting science. Furthermore, media change and the tough journalistic labour market leads to more and more precarious employment and the need for additional income for science journalists, strengthening conflicts of interest (cf. for Austria: Kaltenbrunner, 2013:56ff.). Combined with complexity, difficulties, and expectations that science journalism entails (cf. Kohring, 2005:83ff.,282ff.). This seems to strengthen the need for media accountability and ethics guidance even more in science journalism (ibid.:223f.).

3. Journalism Ethics and Codes of Conduct

Farrell (2010:136f.) states that the credibility of journalists – whether reporting on science or something else, online or elsewhere – has been a sensible topic for over a decade now. The expectations of the audience, rapid change of technology as well as overwhelming public attention in media failures seem to play a decisive role in this loss of faith in journalism (ibid.:137ff.). The development and implementation of codes of ethics as well as codes of conduct is part of the media accountability process, giving the public some sense of how the media system operates (cf. Bichler, 2012:5ff.). Eberwein (2011:9ff) argues, that codes of ethics and conduct can be considered not only as instruments, but as informal institutions and voluntary steering norms.

3.1. Aims of Codes of Conduct, CoCs and (Online) Science Journalism

Codes of conduct form “a reference frame of values, principles and norms” (Barmeyer, 2011:53f.) for employees, providing them with guidance for daily behaviour. In the context of media and journalism, these codes are considered to provide guidance even without the individual constantly checking their action against the code, merely by creating “expectations that leak into consciousness” (Whitehouse, 2012:58), forming the individual’s ethics set, giving them a way to consider (ethical) consequences of their actions. The in-house rules of media organisations are considered to increase journalistic quality as well as trust between media and audience even more so if they are visible (online), opening them for public discussion (cf. Bichler, 2012:4). Considering this, the discussed ramifications of science journalism, and the particularly sensitive areas in science reporting (such as objectivity, neutrality or even controversy; cf. Nelkin, 1987:19), there should be some representation of those issues in prevailing codes of conducts. Several claims for ethical codes and CoCs for science journalists have been made for at least three decades (cf. Reed, 2001:297, House of Lords, 2000, National Association of Science Writers, 2014).

4. Case Study on the Role of Online Science Reporting in CoCs

So the question arises whether and how professional codes of conduct, placed in the organisational as well as cultural setting of the journalists, mirror the special needs of science journalists in a digital world. In search of answers, two codes of conducts from media companies are analysed.

4.1. Case Selection: Thomson Reuters and BBC

Due to the argumentation before, selection criteria include cultural affiliation and professionalization of the organisation, in order to ensure comprehensive codes. Both chosen media companies are of British origin, with a wide product range and act globally. They are in the top half of 2015’s ranking of the 100 world’s biggest media corporations (Institute of Media and Communication Policy (IfM), 2015). Thomson Reuters is a major news agency, a stock exchange-listed company. In 2014, Reuters had a staff of 53,000 and a \$12,605 million revenue, providing business information and services to their customers (cf. Thomson Reuters, 2015:3,13). BBC is a public sector company with a £4,805 million revenue, a staff of 18,974 and the mission to “inform,

educate and entertain” (cf. BBC, 2015:8,84,133). Both codes of conduct are company-made, available online, and fairly innovative as demanded by scholars in the digital age.

4.2. Method

Methodically, this case study is a comparative analysis researching two cases (cf. Eberwein, 2011:9), using the qualitative content analysis method described in Denzin (2005:445f.,457f.) and Gläser (2009:199ff.) with MAXQDA software. First, both texts are analysed in terms of structure, content, and the mention of science and online media. Journalistic (Schreier, 2012:58ff.) and scientific principles (McBride, 2014:2ff.) are included in the coding frame (six code sets: mention of science/research; journalistic principles; scientific principles; contact points journalism/science; mention of digitalization; contact points journalism/digitalization including crossing points with science reporting) Second, the texts are separately coded in loops and in comparison to enhance the coding frame. Finally, the results are compared and discussed.

4.3. BBC’s Code of Conduct

BBC’s code of conduct (CoC), called editorial guidelines, is fully available online, not only as PDF, but also as fully accessible webpage with a separate guidance and news section plus academy training videos (BBC, 2015). To perform a methodological content analysis, the PDF (BBC, 2010), setting the foundation for the more practice-oriented guidance website, is used.

Age and Extent, Structure and Complexity, Content

While the PDF was downloaded on December 5, 2015, it was compiled in September, 2010. It consists of 215 pages and 19 sections. Sections 1 and 2 set BBC’s general editorial values and usage of the guidelines. From section 3 on, each is structured in 4 sub-sections: introduction, principles, mandatory referrals, and practices. Overall, 1382 codings of the coding frame are applied to the CoC. After the general editorial value and usage section, all remaining 17 sections focus extensively on journalistic issues and account for important journalistic principles and topics a journalist might stumble upon, such as accuracy, impartiality, privacy, but also accountability itself. The content analysis shows that all journalistic principles are discussed in the CoC, transparency/accountability (406) and the role of journalism (175 codings) being the most mentioned. Almost all scientific principles are touched on as well, without the principle of consistent logic, which could be argued being part of accuracy.

Science and Science Journalism, Digitalization/Online Communication

There is no extra chapter on science or science journalism. Science is mentioned, but of all 31 occurrences, the majority (18) refers to journalistic research in the editorial process. The remaining 13 are all in context of contact points between journalism and science. Overall, four major points of contact between journalism and science are detected: The issues of impartiality/controversy, truth/accuracy, uncertainty/risk, and factuality/objectivity. Online communication and media are mentioned frequently in BBC’s CoC (162), but focusing on their own (129) rather than external (33) online media. There is no extra chapter on online or social media. 125 points of contact between

journalism and digitalization are observed, addressing journalistic principles and coherent topics. Legal issues, dangers and requirements are mentioned the most (35), followed by transparency and impartiality (22), independency (19), interaction with the audience (18), and accuracy (13). Social media is only mentioned twice, both times with strong focus on legal implications, only once describing journalistic implications but failing to give substantial advice. Sixteen text passages implicating crossing points with science reporting are detected. Mostly, the advice given focuses on journalistic principles (10), it often resolves around legal implications (4). In 5 cases, engagement with scientific/controversial matters is observed. Not surprisingly, journalistic as well as scientific principles such as integrity, factuality and objectivity (10), impartiality (7), methodology (5) and transparency (3) are main topics. Still, the CoC fails to offer deeper discussion or guidance on online media. BBC's guidance website offers nothing more and remains on a superficial hands-on guide level.

4.4. Reuters' Code of Conduct

Thomson Reuters' (2014) code of business conduct and ethics (CoCB) is fully available online as PDF in 20 languages. It is accompanied by Reuters' handbook of journalism (2008), providing more journalist-specific information. The handbook is available as PDF and online. The CoCB PDF and the handbook of journalism PDF are consecutively analysed.

Age and Extent, Structure and Complexity, Content

While the CoCB PDF was downloaded on December 5, 2015, it was compiled in November 2014. It consists of 39 pages and 7 chapters. The handbook of journalism PDF dates to April 2008 with small updates. It extends to 578 pages with 6 chapters. In the CoCB, each chapter consists of 2-7 sections, there are 30 sections overall. Overall, 194 codings are applied to the CoCB. The content analysis shows no distinct mention/application of scientific principles. Only 28 are attributable to journalistic principles such as truth (11), the role of journalism (7), independency (6), factuality (3) or relevancy (1). The majority (154) are part of the accountability code set, 49 of those in regards to the law. Because of the lack of journalistic specificity, the handbook of journalism is analysed in detail. The handbook is linked to the CoCB in its introduction. 3801 codings are applied to the handbook, including a style guide-specific code set. The handbook more than makes up for the business attitude of the CoCB and accounts for all journalistic matters, even text forms. Journalistic principles are accounted for, truth (596) and accountability (407) being the most used. Despite the principle of consistent logic, arguably part of accuracy, all scientific principles are grazed, accuracy (66) and truth (47) most used.

Science and Science Journalism, Digitalization

There is no extra chapter dedicated to science/research or science journalism in both documents. Science is not mentioned in the CoCB; it is evident this document is mostly concerned with legal business matters. However, the handbook mentions science 9 times, whereby 6 mentions are in the style guide section and 3 times science is mentioned in regards with the contact points uncertainty/risk and impartiality/controversy. Even more important, there is 1 mention of science in the special guidance section, the chapter on attention editor items: a special paragraph

entitled “Scientific and medical breakthroughs and other sensational stories”. But with a word count of mere 202, this paragraph is rather small and remains general, calling for “utmost care” and “a specialist” when dealing with scientific breakthroughs. Overall, all four points of contact between science and journalism from BBC’s CoC are detected in the handbook as well: uncertainty/risk, truth/accuracy, impartiality/controversy, and factuality/objectivity. Online and social media are mentioned 92 times, evenly focused on own (38) and external (34) online media.

There is an extra chapter called “Reporting From the Internet and Using Social Media” and an extra paragraph “Picking up from Twitter and social media”. 218 points of contact between journalism and digitalization are observed, mostly addressing social media (92), but also journalistic principles and coherent topics like legal issues (29), accuracy (27), transparency and impartiality (20), interaction with the audience (18), hoaxes and reputation (12), time pressure (10) and independency (3). Social media is extensively mentioned, including new ways of reporting/interaction (17), reputation (17), risks and safety (16+13), as well as media literacy (10) and trust (9) in this context. Twelve text passages implicating crossing points with science reporting are detected. Mostly, the advice focuses on journalistic principles (6). In 4 cases, engagement with scientific/controversial matters is observed. Legal implications are only mentioned twice. Journalistic as well as scientific principles such as integrity, factuality and objectivity (7), methodology (7), transparency (6) and impartiality (4) are main topics. Reuters’ CoC offers real guidance on how journalists should tackle online and social media, but still gives no further advice how to do so when it comes to scientific topics.

4.5. Results Comparing both Codes of Conduct

Thomson Reuters’ COBC is legal and has a business-style. Only with the handbook of journalism, a real journalistic CoC is formed. BBC’s CoC unites both in one document. Surely, this is the result of company strategies, BBC being more of a media company, while Reuters is more of a news agency. Nonetheless, both CoCs are refined and achieve the broader goals to form individual ethics set and improve journalistic quality. They mirror journalistic reality and are openly available, help forming trust. Both are very extensive, maybe even too much so. Reuters’ handbook is very repetitive, has very much a how-to character, and even explains journalistic formats. BBC’s CoC is more compact, but also repetitive and seemingly supercharged on the legal part. Science is mentioned more often in BBC’s than Reuters’ CoC. Nonetheless, guidance remains on the surface - mostly incidentally mentioned, seldom with real guidance on how to deal with science in every day work, often using generalisations like the advice of being careful, real guidance fails to manifest. Even in Reuters’ extra paragraph on science, the generalisations on carefulness and meagre advice to work with a specialist persist. The utmost part lacks any real guidance for good daily journalistic coverage of science. In contrast to BBC’s more incidental mention of online and social media, Reuters’ CoC offers more guidance on the use of online and social media and the risks and challenges that arise for journalists. But when it comes to potential crossing points of online and science reporting, sadly, both CoCs fail to provide valuable guidance.

5. Conclusion and Discussion, Outlook

The analysis confirms that CoCs are mostly good instruments to give journalistic guidance for everyday work. Applicable guidance for daily journalistic work and help for journalistic accountability implementation is provided. The current format of the CoCs is questionable: Their being too extensive, shortening, accuracy, and brevity is the challenge.

However, real guidance for science journalists and science coverage in a digital age is missing. Given all the pressure on (science) journalists, media change, and the realisation that science is covered by all journalists, this seems to be the crux of the matter. Only one of the two CoCs offers real and hands-on, coherent guidance on digitalization and online/social media, opening space for discussions in editorial offices. It might be argued that online is just another channel for institutions like BBC and that journalistic principles still apply – but only Reuters mentions challenges like real time pressure, online transparency as well as reputation and thus sets a benchmark. As most CoCs are already quite extensive, online and social media challenges should be included as well as ways for (science) journalists to rise to challenges enhanced by controversial discussions of science in social media, the complexity of identification of real scientific information online or phenomena like viral pseudoscience online. The analysis shows that journalists have mostly corresponding work principles and quality demands as scientists. This common ground and similar set of ethical rules build a solid foundation for mutual respect and should enable journalists to cover science accurately and in high quality. Still, in order to achieve their goals, CoCs should take up science as special topic and give specific guidance on how to work with scientists and scientific matters. The most critical points of contact between science and journalism, namely uncertainty/risk, truth/accuracy, impartiality/controversy, factuality/objectivity are not included, but should be covered.

The continuative question is whether journalists see their work, ethics and challenges suitably reflected in CoCs and how they would like to receive better guidance. To research this, a quantitative broad survey with journalists, separately identifying journalists covering scientific issues, combined with specialised qualitative expert interviews, including senior science journalists in positions as managers and editors could shed new light on room for improvement.

References

- Barmeyer, C. I. & Davoine, E. 2011. The intercultural challenges in the transfer of codes of conducts from the USA to Europe. In: Primecz, H., Romani, L. & Sackmann, S. (eds.) *Cross-Cultural Management in Practice. Culture and Negotiated Meanings*. Cheltenham: Edward Elgar.
- BBC 2010. *Editorial Guidelines*. Periodical Editorial Guidelines, Retrieved December 5, 2015, from: http://downloads.bbc.co.uk/guidelines/editorialguidelines/pdfs/Editorial_Guidelines_in_full.pdf
- BBC 2015a. *BBC Annual Report and Accounts 2014/15*. Periodical BBC Annual Report and Accounts 2014/15 Retrieved December 5, 2015, from: <http://downloads.bbc.co.uk/annualreport/pdf/2014-15/bbc-annualreport-201415.pdf>

- BBC 2015b. *Editorial Guidelines Website*. Periodical Editorial Guidelines Website, Retrieved December 5, 2015, from: <http://www.bbc.co.uk/editorialguidelines>
- Bertrand C. J. 2000. *Media Ethics & Accountability Systems*. New Brunswick, N.J.: Transaction Publishers.
- Bichler, K., Harro-Loit, H., Karmasin, M., Kraus, D., Lauk, E., Loit, U., Fengler, S. & Schneider-Mombaur, L. 2012. *Media Accountability and Transparency in Europe (MediaAcT) - Best Practice Guidebook: Media Accountability and Transparency across Europe*. Retrieved November 22, 2015, from: http://www.mediaact.eu/fileadmin/user_upload/Guidebook/Best_Practice_Guidebook_new.pdf
- Blöbaum, B. 2005. Wandel und Journalismus - Vorschlag für einen analytischen Rahmen. In: Behmer, M., Blöbaum, B., Scholl, A. & Stöber, R. (eds.) *Journalismus und Wandel Analysedimensionen, Konzepte, Fallstudien*. Wiesbaden: VS Verlag für Sozialwissenschaften.
- Brown, F. & The SPJ Ethics Committee 2011. *Journalism Ethics - A Casebook of Professional Conduct for News Media*. Portland: Marion Street Press.
- Campanhausen, J. 2011. *Wissenschaftsjournalismus*. Konstanz: UVK Verl.-Ges.
- Denzin, N. K. 2005. *The SAGE Handbook of Qualitative Research*. Thousand Oaks: SAGE.
- Eberwein, T., Fengler, S. & Leppik-Bork, T. 2011. Mapping Media Accountability - in Europe and Beyond. In: Eberwein, T., Fengler, S., Lauk, E. & Leppik-Bork, T. (eds.) *Mapping Media Accountability - in Europe and Beyond*. Köln: von Halem.
- Farrell, M. & Cupito, M. C. 2010. *Newspapers - A Complete Guide to the Industry*. New York: Peter Lang.
- Gläser, J. & Laudel, G. 2009. *Experteninterviews und qualitative Inhaltsanalyse als Instrumente rekonstruierender Untersuchungen*. Wiesbaden: VS Verlag für Sozialwissenschaft.
- Göpfert, W. & Lange, V. 2006. *Medienkompetenz: Wissenschaft publik gemacht*. Berlin: Rhombos.
- House of Lords 2000. *Science and the Media*. Retrieved November 22, 2015, from: <http://www.publications.parliament.uk/pa/ld199900/ldselect/ldsctech/38/3810.htm>
- Imhof, K. 2006. *Mediengesellschaft und Medialisierung*. Medien & Kommunikationswissenschaft, M&K, Heft 2/06. Hamburg: Nomos Verlag.
- Institute of Media and Communication Policy (IFM) 2015. *Media Data Base - International Media Corporations 2015*. Media Data Base - International Media Corporations 2015 Retrieved November 22, 2015, from: <http://www.mediadb.eu/en.html>
- Kaltenbrunner, A. & Bichler, K. 2013. *Magnetnadeln im Heuhaufen. Zur Arbeits-, Bildungs- und Ausbildungssituation von Bildungs- und WissenschaftsjournalistInnen in Österreich*. Wien: Klub der Bildungs- und Wissenschaftsjournalisten. Retrieved November 22, 2015, from: http://www.wissenschaftsjournalisten.at/wp-content/uploads/2013/06/130625_WissKlubStudiePrint.pdf
- Keeble, R. 2009. *Ethics for Journalists*. New York, NY, Routledge.
- Kohring, M. 2005. *Wissenschaftsjournalismus. Forschungsüberblick und Theorieentwurf*. Konstanz: UVK-Verlag-Gesellschaft.

- Luhmann, N. 2004. *Die Realität der Massenmedien*. Wiesbaden: VS Verlag für Sozialwissenschaften.
- McBride, K. & Rosenstiel, T. 2014. Introduction: New Guiding Principles for a New Era of Journalism. In: McBride, K. & Rosenstiel, T. (eds.) *The New Ethics of Journalism*. Principles for the 21st Century. Thousand Oaks: CQ Press, SAGE.
- McQuail, D. 2005. Accountability of Media to Society: Principles and Means. In: McQuail, D., Golding, P. & Bens, E. D. (eds.) *Communication Theory & Research - An EJC Anthology*. London, Thousand Oaks: SAGE.
- McQuail, D. 2010. *McQuail's Mass Communication Theory*. Thousand Oaks: SAGE.
- National Association of Science Writers 2014. *Code of Ethics for Science Writers*. Retrieved November 22, 2015, from: <http://www.nasw.org/code-ethics-science-writers>
- Nelkin, D. 1987. *The Culture of Science Journalism*. *Society*, 24, 17-25, Retrieved November 22, 2015, from: <http://dx.doi.org/10.1007/BF02695570>
- Phillips, A. 2013. Journalism, Ethics and the Impact of Competition. In: Couldry, N., Madianou, M. & Pinchevski, A. (eds.) *Ethics of Media*. London: Palgrave.
- Powe, L. A. S. 1991. *The Fourth Estate and the Constitution - Freedom of the Press in America*, Berkeley: University of California Press.
- Reed, R. 2001. *(Un-)Professional Discourse? Journalists' and Scientists' Stories About Science in the Media*. *Journalism*, 2, 279-298, Retrieved November 22, 2015, from: <http://jou.sagepub.com/content/2/3/279.abstract>.
- Ruß-Mohl, S. 1994. *Der I-Faktor*. Qualitätssicherung im amerikanischen Journalismus - Modell für Europa? Zürich: Ed. Interfrom.
- Ruß-Mohl, S. 2012. Opfer der Medienkonvergenz? Wissenschaftskommunikation und Wissenschaftsjournalismus im Internet-Zeitalter. In: Füssel, S. (ed.) *Medienkonvergenz - Transdisziplinär* Media Convergence - across the disciplines. Berlin: De Gruyter.
- Schäfer, M. S. 2008. *Medialisierung der Wissenschaft? Empirische Untersuchung eines wissenschaftssoziologischen Konzepts*. *Zeitschrift für Soziologie*, 37.
- Schreier, M. 2012. *Qualitative Content Analysis in Practice*, Los Angeles, London, New Dehli, Singapore, Washington D.C.: SAGE.
- Schultz, J. 1998. *Revoiving the Fourth Estate - Democracy, Accountability, and the Media*. Cambridge, U.K.; New York: Cambridge University Press.
- Thomson Reuters 2008. *Handbook of Journalism*. Retrieved December 5, 2015, from: <http://handbook.reuters.com/extensions/docs/pdf/handbookofjournalism.pdf>
- Thomson Reuters 2014. Code of Business Conduct and Ethics. Periodical Code of Business Conduct and Ethics. Retrieved December 5, 2015, from: http://media.corporate-ir.net/Media_files/IROL/76/76540/conduct/COBC_English.pdf

Thomson Reuters 2015. Annual Report 2014. Periodical Annual Report 2014, Retrieved December 5, 2015, from: <http://fileshare.gcs.thomsonreuters.com/digital/annual-report-2014/downloads/regulatory-filing-2014.pdf>

Weingart, P. 2011. Die Wissenschaft der Öffentlichkeit und die Öffentlichkeit der Wissenschaft. In: Hölscher, B. & Suchanek, J. (eds.) *Wissenschaft und Hochschulbildung im Kontext von Wirtschaft und Medien*. Wiesbaden: VS Verlag für Sozialwissenschaften.

Whitehouse, G. 2012. Newsgathering and Privacy: Expanding Ethics Codes to Reflect Change in the Digital Media Age. In: Babcock, W. A. (ed.) *Media Accountability - Who Will Watch the Watchdog in the Twitter Age?* London: Routledge.

Zelizer, B. 2013. When Practice is Undercut by Ethics. In: Couldry, N., Madianou, M. & Pinchevski, A. (eds.) *Ethics of Media*. New York: Palgrave Macmillan.

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Government Initiatives of E-Participation: Scenario Analysis of the Bodies and Mechanisms for Social Participation in Virtual Environments

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Abstract: This article aims to promote the debate on policy shaping, proposing the analysis of the initiatives of e-participation, and to what extent e-participation strengthens and renews the interactions between the state and citizens through production, to influence or interference in the process of public policies relying on technology. Thus, the construction features of the instruments for analysis of prioritizing efforts to develop a comprehensive model capable of capturing the status of e-participation opportunities offered by government and potentially interfere with the public policy cycle, and the development of evaluation of performance metrics of initiatives as e-participation.¹

Keywords: e-participation, cycle of public policy, public administration, policy modeling.

1. Presentation: Online Political Participation and the Challenges for Public Management

The infusion of technology, the exponential growth of data, computational tools, social media and government platforms, create new opportunities for management and policy-making, resulting in changes in political processes, affecting the cycle and the design and development policies, and the form of participation and relationship between state and citizen.

¹ This article is the product of the author's doctoral research and reflects invested in methodological tools that follow the line of the Assessment Policy Modeling to analyze and evaluate the government's e-participation initiatives of São Paulo through the Portal São Paulo Aberta and its virtual channels - Gabinete Aberto, Gabinete de Bolso, Gestão Urbana, Planeja Sampa, Programa de Metas. From the theoretical debate with social participation and democratic innovations, the cycle of public policies, and the e-participation and tools manifested in the construction of an evaluation framework for the initiatives and their virtual channels. The dimensions and categories of analysis used for the framework construction are the policy modeling technique for understanding the models and performance metrics that are addressed here.

These activities illustrate the need for greater involvement of citizens in policy-making based on the principles of good governance, and a more participatory, open, transparent, accountable and collaborative government. This requires an interdisciplinary research and an innovative approach through the development of scenarios and policy modeling filled with a toolbox of information and communication technologies for e-participation.

The feature that we promote is to build a framework of analysis and evaluation from conceptual models that relate public policies and the tools of e-participation, following the political, regulatory specificities of each policy and the available tools and technologies that are potentially applied to expand good governance.

These research methods are used to understand the role of technological tools proposed by governments as encouraging citizen participation via the Internet, in the production of public policies. We discuss the innovation of e-participation based on the public policy cycle, with an interactive connection that links the involvement with the phase of the cycle and potentially appropriate technological tools.

Therefore, this work presents a discussion of policies modeling scenarios and simulation as a tool, techniques and research methods, based on the initiatives of e-government involvement and public research policy cycle, and can be used as a case study. Therefore, it has a replicable and adaptable research methodology as part of three main dimensions: The context and proposed the initiative of e-participation, democratic dimension with its rules and policies, and the extent of technological features and e-participation tools.

2. Goals and Research Methods

To provide better decision-making processes and greater citizen participation in the production of public policies, with the support of information and communication technologies, this article articulates the analysis of the status of the opportunities of e-participation through instruments and research methods policy modeling.

These procedures are intended to (i) construct an assessment framework and analysis of e-participation initiatives (scenario) operating on the scale of the project, democracy and technosocial characteristics; (ii) improve the cast of e-participation tools that potentially broaden public participation in virtual environments related to the public policy cycle stages.

3. E-Participation and Public Policy Production

The theoretical framework of this research used theoretical contributions coming from various knowledge fields, so it is a search for a "border". The starting point is social participation and public policy cycle located in virtual environments and created and promoted by public institutions. Contributions from Pires & Vaz (2012, 2014), Lavalle, Vera & Hevia (2006, 2010) and Kunrath (2011) were used in associating the type of institutionalized participation and its function for the cycle of public policies.

To investigate government management, its role and direction, use the heuristic model of "cycle of public policies", which stems from the fact of its phases possess certain conformity with the following elements of the political and administrative process. The Improved Models tariff analysis, condensing stages of the policy process into five stages: (i) mounting the agenda; (ii) policy formulation; (iii) decision making; (iv) implementation and (v) evaluation (Howlett & Ramesh, 1995).

This approach allows us to understand public policy and forms of social participation when connected to social participation initiatives in virtual environments governments.

The e-participation is the key concept for research and central theoretical dimension that unfold the categories and criteria of this analysis. The dynamic nature of initiatives and participation adopts the analytical and critical approach focused on the proposal for Macintosh layers & Whyte (2008), from a division of "perspective", which are the three main categories for the construction of model compression for studies.

The layers categories / analysis centers of research are structured by the following dimensions. From (i) design perspective are listed the project scope criteria - what it is, so, where? -; to (iii) socio-technical perspective are elected the characterization criteria of virtual channel - initiators, formality, methods, stakeholders - and on the technological tools - channels and e-participation technology available; and finally (ii) democratic perspectives list the criteria for levels of e-participation (ways of involvement), areas of e-participation, e-participation tools, idealized models and democracy.

To dimension of the project and for socio-technical dimension, Albrecht (et al 2008) developed a series of characterization criteria are: primer, forms of e-participation offerings, degree of formality, duration, institutionalization, target groups, stakeholders, technology and methodology.

Democratic dimension to reunite the different levels of e-participation of literature: category of information; category engagement; and active participation (OECD, 2001, 2003; Macintosh, 2003; Macintosh, 2004; Aichholzer & Allhutter, 2011).

As for the definition of the areas of e-participation and the essential tools for e-participation the following studies were used: OECD, 2001, 2003; Macintosh Et Al 2005; Saebo et al. 2008; Demo-Net, 2007, 2008; Albrecht et al. 2008; Aichholzer & Allhutter 2011.²

² The full debate and a list of all the criteria were made in exploratory research by the author, and is present in more detail in the article "Instances and mechanisms for participation in virtual environments: analysis of participatory experiences in the online political public policy" presenting at 39th Annual Meeting of the ANPOCS, Caxambu, Brazil, 2015. Available at: http://www.anpocs.org/portal/index.php?option=com_docman&task=doc_details&gid=9467&Itemid=461. This article was also carried out the analysis of an online public consultation from the idealized framework.

Regarding the reference between the various activities of e-participation and e-democracy models, use the type of Päivärinta & Sæbø (2006) based on the inclusion of citizens in decision-making and control of the agenda: (i) e- party democracy; (ii) Direct and democracy; (iii) and liberal democracy; (iv) and deliberative democracy.

Kamateri (et. Al 2015) presents, analyzes and discusses the tools and emerging ICTs that have the potential to improve policymaking as the cycle. This work is also used to identify the tools and the potential use in the public policy cycle process. Eleven categories of tools and technologies for the development of public policies were defined, each of which operates in a specific focus of application.

The criteria and categories gathered from the theoretical debate and empirical studies served to build a framework for analysis of e-participation initiatives, assisting in the organization of the collection process, data interpretation and evaluation of design and performance, and make up the scenery of the bodies and mechanisms for participation in virtual environments embodying Radar e-participation and public policy cycle.

Table 1: Framework for Analysis of the Bodies and Mechanisms for Participation in Virtual Environments (Elaboration by the author).

Description of criteria / explanation	
<ul style="list-style-type: none"> ▪ <i>Project Perspective</i> 	
<ul style="list-style-type: none"> - Title; - General description; 	<ul style="list-style-type: none"> - Origin/source of the initiative;
<ul style="list-style-type: none"> ▪ <i>Democratic Perspective</i> 	
<ul style="list-style-type: none"> - Democratic context; - Models of e-democracy; - Direction of communication / level of participation; - Forms of e-participation; - Role of public policy cycle; 	<ul style="list-style-type: none"> - Type of participatory institution-related public policy cycle; - Type and form of interface in the relationship between state actors and social actors; - Phase in the public policy cycle / Step in decision making; - Use potential phase of each cycle.
<ul style="list-style-type: none"> ▪ <i>Socio-technical perspective and characterization</i> 	
<ul style="list-style-type: none"> - Degree of formality; - Duration; - The target groups; - Stakeholders; - Methodology; - Rules of engagement (owner / end user); 	<ul style="list-style-type: none"> - Available Channels; - Technologies; - Evaluation Mechanisms; - Link tool and e-participation: Definition, Scope; - ICT and area of interest;

4. Materials and Methods for Modeling Policy Plan

For the methodology it was decided not to use a ready-made model, but to develop it by taking from other research reflections, part listed categories and analytical criteria which appear consistent with our objectives. The analytical framework for e-participation initiatives related to public policy cycle brings together all the analysis of indicators.

Careful analysis for the analysis of structure from the categories and framework criteria. Thus, the analysis of virtual channel - case study - is by three perspectives: (i) design analysis with three criteria; (ii) analysis of the democratic structure with 9 criteria; and (iii) characterization analysis

sociotécnica 12 criteria. In this sense, the framework is organized into three sections, each one corresponding to the three categories / main perspectives of analysis. Each section is subdivided constituting 24 criteria.

After applying the framework, the scenario / model will be composed (graphical representation). Based on the evaluation, criteria will be established a performance levels of e-participation for each stage of the public policy cycle, generating a performance metric on the potential use of e-participation tools.

The performance metric is composed of five progressive levels of e-participation, its composition is based on the type of interaction in e-participation, for example, the level of engagement assumes a public involvement in a process of deliberation. Therefore, by ascertaining the stage of the public policy cycle and the potentiality of the tools and scope of the project, we can find out the performance level of each case study.

However, the assessment of these elements to the performance can be conceptualized as a complete presence, incomplete or nonexistent. Logo for case study will be highlighted each of the 24 criteria contained in the framework, as Question and weight Complete presence (weight 2), incomplete presence (weight 1), non-existent or difficult examination (weight). To assess performance related to the weight of the criteria (values) with the radar measuring levels, namely the higher the weight the higher level and better performance. The set of values will be transformed to percentages and through sum and average are obtained evaluation.

Therefore, this analysis structure in the data collection tool - assessment framework - justifies attention to each of the demands of the literature regarding the potential of e-participation tools when used in some of the public policy cycle stages. The management of description and understanding of models, and performance are the next and final time of the survey.

So the models are consistent conceptual description of the political process, with each element (categories, criteria and levels) correspond both to the documentary evidence, relationships, interests and rules, and the content and hyperlinks, technology and e-participation tools and their characteristics (Scherer et al. 2013).³

Considering the policy of e-participation in forums, or mechanisms of government, as in the studies of the underlying project cases, and the construction of models and scenarios, two general stages for materials and research methods will be organized: (i) knowledge and understanding of research; (ii) application and analysis of the survey (mapping of academic research, data collection, the framework consolidation, analysis, synthesis through the Assessment Policy Modeling).

³ The literature suggests that the scenarios based on models can be narrative documents and images that provide an interpretation and insight into the case of politics (Scherer et al. 2015). Is, as a policy development process, through modeling, describing the key dimensions and stages of the approach from the e-participation tools, using techniques and methods in order to promote support for participants, shapers and makers of policies.

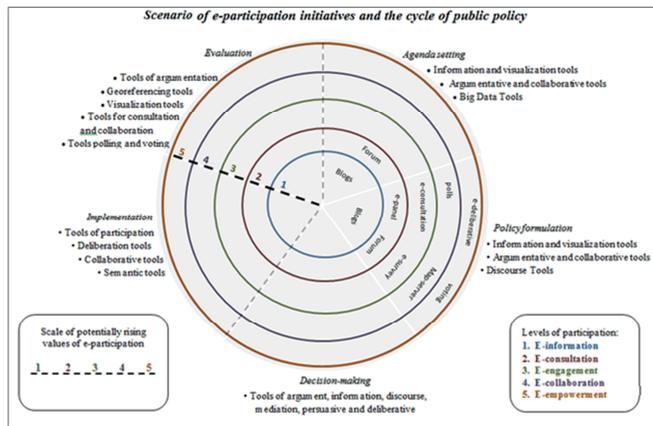
5. The Scenario and the Radar: Description, Understanding and Performance

To analyze an initiative of participation we propose the implementation of the framework for the arrangement of the descriptive and comprehensive model and performance metrics. The scenery was built from the three main categories of analysis (i) design, (ii) democratic (iii) socio-technical and their respective criteria. The next step is the inspection of a structured website (guided navigation), to verify the attributes for the purpose of the project, and levels of e-participation tools and the cycle of public policy and thus diagnostic performance. Scenario and radar act as organizers and enlightening elements of e-participation of government initiatives, and to understand the processes that potentially encourage participation.

The Scenario is a descriptive model to understand and classify what is offered by the government initiatives within the cycle of public policies in virtual environments. The graphical representation and synthesis of the evaluation framework will support understanding metric performance.

Already the Radar is the metric that determines the level of e-participation (assuming the scale is up to active participation) which determines the degree of promotion of virtual participation in each phase of the cycle. As seen in the graphic representation framework for graphical composition evolves Scenario construction that in turn renders the Radar.

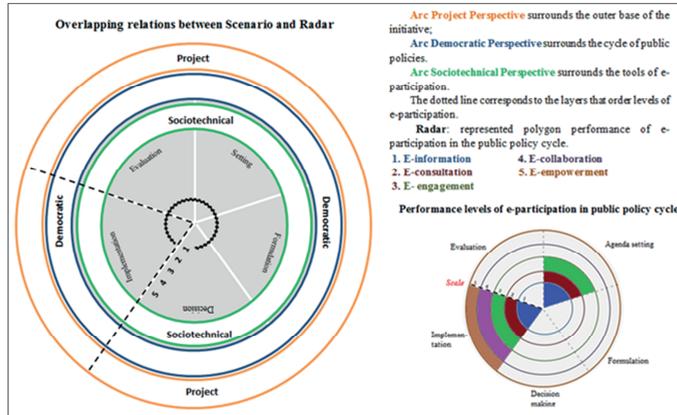
Figure 1: Scenario of e-Participation Initiatives and the Cycle of Public Policy



According to the imaging Radar, inner layer of the polygons comprises the steps of policies cycle and colored arcs are the levels of participation, and serve as a performance metric (radial growth level as progression). By completing and examining the inner layers of the polygons guided by the relationship with the arches has a metric of e-participation and the different times (step / cycle) of creation of public policies, so we know which tools of e-participation potentially greater social participation. As the case progresses in the “filling” of the categories and criteria the

corresponding part in the polygon wins coloring, i.e., the graphical representation staged performance initiative of e-participation.

Figure 2: *Overlapping Relations between Scenario and Radar*



There are five entries addressing e-participation and guidance for each case study. Thus, the radar model has the following assumptions:

- 1) Uses the activities undertaken by governments and viable forms of e-participation that potentially affect public policy.
- 2) Proposes a political framework of e-participation combined with public policies staged cycle that enriches the decisions and increases the legitimacy of decision-making.
- 3) The scale of potentially rising values argued by plotting the corresponding level of e-participation achieved in stages of the policy cycle.
- 4) Levels of e-participation representing the categories of e-participation are e-information, e-consulting, e-engagement, e-collaboration and e-empowerment.
- 5) The capabilities represented in e-participation enriches the solution of problems in a democratic way, through trial mechanisms, innovation, co-creation and co-management.
- 6) Each project needs a geometry (radar and polygons) different, due to its contextual nature, democratic normalization factors and socio-technical engineering artifacts.
- 7) The Radar model, superimposed on the descriptive and comprehensive model (scenario), and the practical activities serve to clarify the rules of the political game in the production of public policies in order to boost transparency, participation, public control and innovation.

6. Discussions and Shape Analysis of the Results: Policy Modeling for E-Participation

The organization of the theoretical and methodological framework follows the following steps, converging in policy modeling. The first step was the examination of the current state of the art to identify concepts, categories, criteria, tools and classifications of tools and technologies for use and strengthening the policy-making process. After analyzing each cleavage and debate on those

operative in the event of potential, reinforcement or influence of e-participation in the public policy cycle. And finally the selection and appointment of the dimensions / categories of analysis and its components criteria scenario analysis.

The framework presented a challenge for the research in pointing out that the new models and methods of governance are emerging and that collaboration with public policy production enabled by the ICTs, i.e., what modeling policy mechanisms can be implemented to handle effectively the involvement of citizens in decision-making.⁴

Nevertheless, not all of the tools and technologies used to support policies and governments are successfully adopted. In these circumstances the approach for policy modeling is used and government (ICT for Governance and Policy Modeling). This research instrument proposes the Policy Evaluation by quantitative and qualitative evaluation mechanisms to review the implementation of current policy.⁵

Therefore, the ICT policy model for governments includes the stimulus to develop metrics and valuation models for decision support and simulation tools that make the most precise juncture, concrete and holistic. Soon two methodological tools and mechanisms for the analysis of this research will be present: the scenery while descriptive and comprehensive model, and Radar, as a performance metric.

Collaboration for modeling policy is justified by a number of deficiencies identified in practice. For example: a lack of planning or management's inability to formulate strategies and policies in complex environments, and relying on ICT; failure to identify the essential features for simulating policies; waste on ways to efficiently and e-participation in citizen cooperation as relevant to the policy; and the lack of focus on developing an appropriate e-participation policy and you can use modeling and simulation (WIMMER et al., 2012).

The inclusion of citizens in the decision-making processes through technological innovations should aim to achieve improved governance, restructuring partner state interactions, creating a new collaboration paradigm and innovation in the processes of public administration, to develop, learn, understand and adopt "online behavior" of government. According to Edelman (et al. 2012, p.27) "in open government, several interested parties may participate in any phase of the political cycle".

⁴ According Charalabidis (et al. 2012, p. 2473) policy modeling has emerged as a generic term that refers to the application of technology with the aim of improving the complex decision-making. The policy modeling using technologies aimed at making the development of more effective and efficient policy cycle.

⁵ ICT for governments and policy modeling is a major challenge for research, especially regarding the scientific basis for modeling, strict domain and formal tools. The scientific process of modeling should allow the existing knowledge, a diagnostic effort and prescribing solutions is performed from the management cycle and the stages of the political process (organization, survey, plan control) Charalabidis et al. 2012, p. 2476).

So a new government organization logic through co-production platform can be made by the action of a transparent government, participatory and collaborative (MÜLLER, 2010, p.21).

The preliminary conclusion is that the policy modeling can provide useful knowledge for users and policy makers involved in practices that benefit both the administrative framework to social demands. Therefore, the realization of political experimentation activities based on ICT from policy modeling should promote active political participation through the capitalization of knowledge that inspires collaborative and interdisciplinary research.

References

- Aichholzer, G., & Allhutter, D. (2011). Online forms of political participation and their impact on democracy. IN: Manuscript. Vienna.
- Albrecht, S. et al.(2008). eParticipation – Electronic Participation of Citizens and the Business Community in eGovernment. Study on Behalf of the Federal Ministry of the Interior. Bremen: Institut für Informations Management.
- Bragatto, R. C. (2009). Ciberdemocracia: um mapeamento do campo. In: Seminário Nacional Sociologia & Política, 2009, Curitiba. Seminário Nacional Sociologia e Política (Online).
- Charalabidis, Y., & Lampathaki, F., & Misuraca, G., & Osimo, D.(2012). ICT for Governance and Policy Modelling: Research Challenges and Future Prospects in Europe, HICSS, 2012, 2014 47th Hawaii International Conference on System Sciences, 2014 47th Hawaii International Conference on System Sciences , pp. 2472-2481.
- Demo-Net. (2008). eParticipation Evaluation and Impact. DEMO-Net Project Deliverable, (13.3).
- _____. (2007). The Democracy Network, Introducing eParticipation, DEMO-net booklet series, 1.
- Edelmann, N., & Hochtl, J., & Sachs, M. (2012). Collaboration for Open Innovation Processes in Public Administrations. In: Empowering Open and Collaborative Governance, ed. Y. Charalabidis and S. Koussouris, Springer-Verlag Berlin Heidelberg.
- Ergazakis, K. & Metaxiotis, K. & Tsitani T. (2011). A State-of-The-Art Review of Applied Forms and Areas, Tools and Technologies for e-Participation. International Journal of Electronic Government Research, 7 (1), January-March, 1-19.
- Ferro, E., & Molinari, F. (2010). Framing Web 2.0 in the process of public sector innovation: going down the participation ladder. Eur J ePract 9(1):20–34.
- Hevia, F., & Vera, E. (2010). La perspectiva de interfaz aplicada a las relaciones sociedad civil-Estado en México. In: OLVERA, A. (org.). La democratización frustrada: limitaciones institucionales y colonización política de las instituciones garantes de derechos y de participación ciudadana en México. Ciudad de México: Ciesas, Universidad Veracruzana.
- Howlett, M., & Ramesh, M. (1995). Studying Public Policy: Policy Cycles and Policy Subsystems. Oxford University Press, Oxford.
- Kunraht, M. S. (2011). Dos casos aos tipos: notas para apreensão das variações qualitativas das instituições participativas. In: PIRES, R. R. C. (org.). Efetividade das instituições participativas no Brasil: estratégias de avaliação. Brasília: IPEA.

- Janssen, M., & Wimmer, M. A. & Deljoo, A. (2015). Policy Practice and Digital Science. Integrating Complex Systems, Social Simulation and Public Administration in Policy Research. Springer International Publishing. Public Administration and Information Technology. Vol. 10.
- Janssen, M., & Wimmer, M. A. (2015). Introduction to Policy-Making in the Digital Age. In.: Policy Practice and Digital Science. Integrating Complex Systems, Social Simulation and Public Administration in Policy Research. Springer International Publishing. Public Administration and Information Technology. Vol. 10.
- Kamateri, E., & Panopoulou, E., & Tambouris, E., & Tarabanis, K., & Ojo, A., & Lee, D., & Price, D. (2015). A Comparative Analysis of Tools and Technologies for Policy Making. In.: Policy Practice and Digital Science. Integrating Complex Systems, Social Simulation and Public Administration in Policy Research. Springer International Publishing. Public Administration and Information Technology. Vol. 10.
- Lavalle, A.; Vera, E. (2010). Precisiones conceptuales para el debate contemporáneo sobre la innovación democrática: participación, controles sociales y representación. In: LAVALLE, A.; VERA, E. (orgs.). La innovación democrática en América Latina. Tramas y nudos de la representación, la participación y el control social. Ciudad de México: Ciesas, Universidad Veracruzana.
- _____. (2004). Vida pública e identidade nacional. São Paulo: Globo.
- Macintosh, Ann. (2008). E-democracy and e-participation research in Europe. In: Digital Government. Springer US, p. 85-102.
- _____, & Whyte, A. (2008). Towards an evaluation framework for eParticipation. Transforming Government: People, Process and Policy, Vol. 2, N. 1, p. 16-30.
- _____. (2004). Characterizing eParticipation in Policy Making, HICSS, Proceedings of the 37th Annual Hawaii International Conference on System Sciences (HICSS '04).
- _____. (2003). Using Information and Communication Technologies to Enhance Citizen Engagement in the Policy Process. In: OECD. Promise and Problems of E-Democracy: Challenges of Online Citizen Engagement, OECD, Paris, pp. 19-58.
- Musso, J., & Weare, C., & Hale, M. (2000). Designing web technologies for local governance reform: Good management or good democracy? Political Communication, 17 (1), 1-19.
- Müller, Philipp. (2010). Offene Staatskunst - Bessere Politik durch. Open Government?, Internet & Gesellschaft Collaboratory.
- OECD. (2003) Promise And Problems Of E-Democracy: Challenges of online citizen engagement. Paris: OECD, 162p.
- _____. (2001). Citizens as Partners. Handbook on information, consultation and public participation in policy-making. Paris: OECD.
- Päivärinta, T., & Sæbø, Ø. (2006). Models of E-Democracy, Communications of the Association for Information Systems: Vol. 17, Article 37.
- Pires, R. R. C., & Vaz, A. C. N. (2014). Para além da participação: interfaces socioestatais no governo federal. Lua Nova, núm. 93, Septiembre-Diciembre, pp. 61-91. Centro de Estudos de Cultura Contemporânea, São Paulo, Brasil.

- Pires, R., & Vaz, A. (2012). Participação social como método de governo? Um mapeamento das "interfaces societais" nos programas federais. Brasília: Ipea. (Texto para Discussão, n. 1707).
- Pires et al. (2012). Considerações sobre a integração das instituições participativas ao ciclo de gestão de políticas públicas: subsídios à formulação de um sistema de participação. Nota Técnica n. 3. Instituto de Pesquisa Econômica Aplicada. Brasília: nov.
- Rowe, G., & Frewer, L. J. (2005). A Typology of Engagement Mechanisms, Science, Technology, & Human Values. 30(2), 251-290.
- Sæbø, Ø., & Rose, J., & Flak, L. S. (2008). The shape of eParticipation: Characterizing anemerging research area. Government Information Quarterly, v. 25, n.3, p.400 – 428.
- Sampaio, R. C. (2014). Orçamentos participativos digitais: um mapeamento mundial das experiências já realizadas e suas contribuições para e- participação e e-democracia. Tese de doutorado. Universidade Federal da Bahia. Faculdade de Comunicação. Salvador.
- Tambouris E., & Liotas N., & Tarabanis, K. (2007). A Framework for Assessing eParticipation Projects and Tools, HICCS, Proceedings of the 40th Annual Hawaii International Conference on System Sciences (HICSS '07).
- Vera, E., & Lavallo, A. (2012). Arquitetura da participação e controles democráticos no Brasil e no México, Novos Estudos Cebrap, n. 92, pp. 105-21, mar.
- _____, & Hevia, F. (2006) Relaciones sociedad civil-Estado en México: un ensayo de interpretación. Cuadernos para la democratización, Xalapa, Ciesas, n. 4.
- _____. (2006). Interfaces socioestatais, prestação de contas e projetos políticos no contexto da transição política mexicana. In: DAGNINO, E.; OLVERA, A.; PANFICHI, A. (orgs.). A disputa pela construção democrática na América Latina. São Paulo: Paz e Terra.
- Wimmer, M. A., & Scherer S., & Moss, S., & Bicking, M. (2012). Method and tools to support stakeholder engagement in policy development. The OCOPOMO project. Int J Electron Gov Res (3):98–119.
- Scherer, S., & Wimmer, M. A., & Lotzmann, Ulf., & Moss S., & Pinotti, D. (2015). Evidence Based and Conceptual Model Driven Approach for Agent-Based Policy Modelling. Journal of Artificial Societies and Social Simulation 18 (3) 14.
- _____; Wimmer, M. A., & Markisic, S. Bridging narrative scenario texts and formal policy modeling through conceptual policy modeling. Artificial Intelligence and Law, 21(4), 455–484. 2013.

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Public Value in eParticipation: The Mediating Role of Sense of Community

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Abstract: While it has been recognised that new relationships between citizens and governments are necessary due to an observed decline in social capital, the revolutionising force of eParticipation has not always lived up to its Web 2.0 promise of technologies to engage citizens in the democratic decision-making process. This research responds to the challenge by introducing the public administration paradigm of Public Value to eParticipation research in order to conceptualise and evaluate key issues of value, power, democratic participation and the quality of the decision-making process.

The community psychology term Sense of Community (SOC) is also introduced to the eParticipation research field to highlight the important mediating effects of (SOC) to critical Public Value outcomes. This research proposes SOC as a way to help create behaviour norms and meaningful engagement leading to sustainable communities of decision makers

Keywords: Public Value, Sense of Community, eParticipation

1. Introduction

In the new era of digital democracy (Gil de Zúñiga, Veenstra, Vraga and Shah, 2010), Web 2.0 has been proposed as a revolutionary force to address the realisation that new relationships between citizens and agencies of governance are necessary to avert a crisis of democratic legitimacy and accountability (Coleman and Gotze, 2001). The research area of information systems is a compelling place to examine the role of public participation facilitated by ICT, as IS lies at the crossroads between the online and offline worlds of participation namely eParticipation and Public Administration. In this way the study of Electronic or eParticipation can enable the evaluation of social media technologies to engage citizens in the democratic decision-making process.

Public Value is defined as a framework that helps us connect what we believe is valuable and requires public resources, with improved ways of understanding what our *publics* value and how we connect to them, by going beyond measuring monetary value (Moore, 1995). Using Public Value theory as a lens, this research examines the quality of the decision-making process as it reflects the legitimacy of the public policy mandate; for eParticipation this means looking for ways to improve the quality of the decision-making process. Sense of Community (SOC) is defined as

the reflection of the individuals' experience of community and the cognitive component of social capital, it has been shown to be a priori indicator of the quality of community life; and is also a facilitator of the behavioural dimension of social capital, organised participation (Mannarini and Fedi, 2009; Perkins and Long, 2002). Consequently, SOC is examined as a way to help create behavior norms and meaningful engagement leading to sustainable communities of decision-makers, as the creation of a public that can understand and act in its own interests is at the core of the Public Value paradigm, enabling citizens to be arbiters of Public Value (Moore and Fung, 2012).

2. Research Aims

This research aims to further the pursuit of creating an organized collective will or *public* by seeking the best from both the eParticipation and Public Administration research areas to create a better quality of participation (s) that enables the creation of Public Value. By introducing the public administration paradigm of Public Value to eParticipation research, key issues of value, power, democratic participation and the quality of the decision-making process are evaluated. The community psychology term Sense of Community (SOC) is introduced to the eParticipation research field in recognition of the important mediating effects of (SOC) to critical Public Value outcomes. Facilitating the creation of communities or publics as a way to increase the quality of decision-making leads to a more legitimate public policy mandate of Public Value as the output of the eParticipation process. eParticipation research also must take account of the reality of unequal access to ICT (Van Dijk, 2006) including political inequalities (Dahl and Soss, 2014) and situate the eParticipation process within the context of the social and political landscape. The object of this research is to (i) contribute to eParticipation research by exploring how Public Value theory could be used to measure the quality of the eParticipation process and (ii) determine the value of SOC to the eParticipation process with the aim of increased eParticipation leading to greater engagement of citizens.

3. Literature Review

3.1. Public Value

To rediscover the public in public administration, leading to a greater understanding of publicness, (Nabatchi, 2010) recommends that processes and mechanisms must be identified that maximize the creation of an organized collective will capable of addressing and resolving public problems. Unlike the eParticipation research area there is a rich tradition of Public Value research in eGovernment (Bannister and Connolly, 2014; Cordella and Bonina, 2012; Grimsley and Meehan, 2007; Seltsikas and O'Keefe, 2010). Public Value is a framework that helps us connect what we believe is valuable and requires public resources, with improved ways of understanding what our *publics* value and how we connect to them (Moore, 1995). In this way Public Value theory can facilitate the examination of equal access, the role of regime values (Overeem, 2015) and power relationships (Dahl and Soss, 2014) applied here to evaluate the quality of the eParticipation

process. This research introduces Public Value theory as a lens to examine the quality of the eParticipation process, with reference to Moore's strategic triangle which reflects the interdependence of a range of stakeholders in Public Value goals, authorising environment and operational capacity (Moore, 1995). It is proposed that mapping these interactions between government, citizen and bureaucracy with reference to the rights, benefits and obligations of citizens to society, the state and one another, will enable the measurement of the quality of eParticipation process.

3.2. The Value of Sense of Community

Community building is a key citizen participation area that includes the coming together and forming of online communities of eParticipation and the empowerment of such communities (Tambouris, Liotas and Tarabanis, 2007). SOC is proposed as a mediating factor to eParticipation, as SOC can provide many levels of value to eParticipation and has been found to act independently of individual level traits of gender income, etc. Additionally SOC is a strong and positive predictor of internal and external efficacy and personal and political trust (Anderson, 2010). It has been found to positively affect organizational citizenship behavior: loyalty, civic virtue, altruism, and courtesy (Burroughs and Eby, 1998) and plays a key role in fostering both civic and political participation (Mannarini and Fedi, 2009; Pavlova and Silbereisen, 2014).

The importance of SOC as a multi-dimensional construct is demonstrated by extensive empirical studies: sense of virtual community (SOVC) in a science fiction fandom community (Obst, Zinkiewicz and Smith, 2002), the sub-construct immersion (Koh and Kim, 2003), the production of trust online (Blanchard and Markus, 2004). With social networking usage (Chen, 2014; Scheepers, Scheepers, Stockdale and Nurdin, 2014; Zhang, 2010), online activities contribute to SOC, allowing the role of lurkers be understood (Abfalter, Zaglia and Mueller, 2012; Tonteri, Kosonen, Ellonen and Tarkiainen, 2011). While a consensus about the dimensions of SOC does not exist, the McMillan and Chavis Index builds on the work of (Doolittle and MacDonald, 1978) and (Glynn, 1981) to create the most used and validated measure of SOC. (McMillan and Chavis, 1986) define community as a feeling members have of belonging, a feeling that members matter to one another and to the group, and a shared faith that members' needs will be met. Each of their SOC dimensions interrelate to produce SOC Index by establishing

- Membership, which creates a sense of belonging,
- Influence, which arises a when person believes they can make a difference to their group,
- Integration and Fulfillment of Needs, which arises as values in the group are shared and needs fulfilled,
- and Shared Emotional Connection, which refers to a shared history among members of the community.

In 1996 the SOC measure was extended by emphasizing sense of belonging over boundaries, and the development of community norms, decision and power sharing (McMillan, 1996). SOC is used as a construct in this research rather than sense of virtual community as Influence and territorial elements features strongly in eParticipation communities. Unlike in (Blanchard and

Markus, 2004) sense of virtual community which describe a fandom relational community without using the Influence construct.

3.3. Influence

Influence in offline communities has been found to be a bidirectional concept; an individual must feel they have some control and influence over it, whereas, conversely, for a group to be cohesive, it also must influence its individual members (Burroughs and Eby, 1998; Obst et al., 2002). Unlike Blanchard and Markus who argued that the feelings of influence do not figure predominantly in online communities it can be observed that people participate in virtual communities for many different reasons; including to enhance their reputation (Wasko and Faraj, 2005). Generally, however, people participate in eParticipation to have their voices heard, and influence the decision-making process. Even on e-commerce sites feedback mechanisms are used to increase the effects of SOC in virtual settings on users (Tsai, Cheng and Chen, 2011). With this in mind, it is argued that Influence is an important aspect of eParticipation and that feedback also plays a key role in promoting participation, mediating the power relations between the stakeholders and affirming political efficacy.

Feedback can be viewed as the informed reply of an agency who has received legitimacy and value from the contributions of citizens; feedback could potentially reinforce these citizens sense of political efficacy, trust and feelings of citizenship. The outcome of this is a citizen who has learned from the process and is more likely to participate and co-create value in the future. In this revised view, civil society as a stakeholder is seen as a resource that can create value, and can become part of the public service value chain when given the tools and guidance (Gouillart and Hallett, 2015). It has long been recognized that virtual interactivity, including feedback mechanisms, may not only lead to changes in citizen participation in the political debate, but may also change the relationship between government agencies and citizens, therefore affecting change on the internal structures and work processes of government agencies (Fulla and Welch, 2002).

4. eParticipation

As a maturing area of study it is useful to examine both Public Administration and eParticipation literature to look for a definition; eParticipation considers the use of information and communication technologies to engage citizens, support the democratic decision-making processes and strengthen representative democracy (Macintosh, 2004). Whereas, for public administrators it is suggested that public participation is the process by which public concerns, needs and values are incorporated into governmental and corporate decision-making (Creighton, 2005), yet the ultimate goal for both research areas is better decisions that are supported by the public. Still to be considered are the contextual factors affecting the eParticipation process (Medaglia, 2011) and the duality of eParticipation as the integration of government led and spontaneous citizen-led eParticipation (Macintosh, Coleman and Schneeberger, 2009; Porwol, Ojo and Breslin, 2013; Sæbø, Rose and Nyvang, 2009). It is proposed that the challenge of engaging citizens with Web 2.0 technologies for political participation (Bridges, Appel and Grossklags, 2012; Sæbø et al., 2009), can be assisted by the proficiency of sense of belonging a subset of SOC to affect intentions to get and

share knowledge. As previous research has found that SOC mediates the relationships between social capital factors and a virtual community member's intentions to participate in a C2C virtual community (Zhao, Lu, Wang, Chau and Zhang, 2012).

As the lack of face-to-face contact in virtual communities means that members of a community must feel trust to participate in the community. SOC represents a key variable in the development of online trust, as it enables members to develop their own identity, exchange support with other members and influences members sense of belonging to the community (Anderson, 2010; Blanchard and Markus, 2004; Koh, Kim and Kim, 2003; Lin, 2008; Tsai et al., 2011). Social trust impacts participation from a history of positive past interactions that lead participants to expect further favorable interactions, therefore it important to be able to identify who is present and examine their past behavior (Preece, 2002). As identity is an antecedent of SOC, it is proposed that identity creating and making is an integral first step in building a SOC in the eParticipation process.

4.1. Identity as an Antecedent of SOC

The process of creating and learning identity is recognised as an antecedent of SOC online (Blanchard, Welbourne and Boughton, 2011). This has important implications for the creation of an eParticipation Architecture as the important questions of identification and belonging. Giddens has argued that with modernity people's sense of belonging becomes reflexive; he proposes that autobiography in its broadest sense is at the core of self-identity in modern social life (Giddens, 1991). In a similar vein, Castells network society is characterised by belonging, moving from the civil society of nations to identity becoming the main and possibly only source of meaning where people organise their meaning, not around what they do, but on the basis of what they are, or believe they are (Castells, 2011). Building on these ideas, it is proposed that identity becomes constantly redefined and shaped by interactions made possible through Web 2.0 technologies and social media. As Virtual communities are "social aggregations that emerge from the net when enough people carry on public discussions long enough, with sufficient human feeling, to form webs of personal relationships in cyberspace" (Rheingold, 1993):5). Communities of eParticipation therefore offer many opportunities for the engagement of citizens and formulating of identity creating norms, and become an important requirement for eParticipation Architecture.

Figure 1: Model of Public Value in eParticipation showing how the main main elements from the literature review interact.



Based on Moore's Public Value Strategic triangle, Figure 1 shows the Operational Capacity which determines what resources are operationally and administratively possible. Subject to regime values, the moral principles underlying the regime in which the public administrators serve (Overeem, 2015). The Authorizing Environment determines what is politically and legally possible by key public, private and political stakeholders. Legitimacy is conferred on the eParticipation process by participants, SOC sub-construct Influence is exchanged between multiple stakeholders, participants and from the organizing agency in the form of feedback. Public Value goals describe what is considered fair and valuable to the public, the participants or public are the arbiters of SOC sub-construct shared goals.

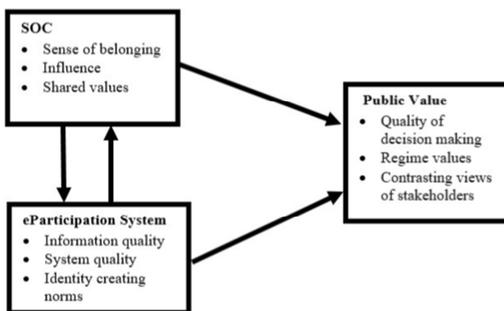
5. eParticipation Architecture

Using Public Value as a lens, an eParticipation Architecture will be assembled that is specific to the needs of the eParticipation process, using the D&M model (Delone and McLean, 2003). While recognizing that IS success measures are multi-dimensional with causal relationships between dimensions, the D&M success model has been validated in both virtual communities (Lin, 2008) and with eGovernment Web 2.0 net benefits (Scott, DeLone and Golden, 2015). SOC is introduced to the eParticipation research area to explore how SOC can overcome the barriers to participation and improve the quality of engagement. The roles of identity and communication with the organizing agency and the stakeholders in their pursuit of shared goals are explored in the constructs sense of belonging, influence and shared values from the (McMillan and Chavis, 1986) SOC Index. Questions raised by (Moore and Fung, 2012) are used to measure the quality of the decision-making process, as this is a key factor in determining the legitimacy of a mandate of Public Value, in an attempt to answer how Public Value theory can be used to assess the quality of the eParticipation process.

Information quality is recognised as a mediator between system quality, system information exchange and virtual SOC; social information exchange has also been found to positively correlate with SOC in virtual communities (Chen, 2014). Interestingly for eParticipation, it has been found in

social media communities that when community members experience a SOC it reduces the negative impact of information overload on stickiness, community members may spend more cognitive effort dealing with relevant information, thereby increasing their information processing abilities; this also occurs when members have a mutual history (Hsu and Liao, 2014). It is recognised that the success of a virtual community is also determined by the usability and sociability characteristics of the virtual community system. The usability refers to the capability of a virtual system to be used easily and effectively, and sociability is the ease by which members interact with each other in attaining shared purposes (Preece, 2001). The quality of the interaction between members of the community is highlighted by (Rheingold, 1993). This occurs where the community shares in common experiences that represent the community's values and traditions (McMillan, 1996). Leading to the proposal that there are many practical measures that can be used to design SOC into eParticipation, from recognizing the value of identity and its openness to the role of influence through feedback.

Figure 2: Schema for the proposed research model showing hypothesised relationships.



5.1. Methodology

Two eParticipation case studies will be identified, one in the US and one in Europe, to work towards overcoming a weakness in Public Value research, that of country focused national research (Bozeman and Johnson, 2015). It is argued that a multi-method approach to evaluation is necessary because eParticipation is a complex social phenomenon (Macintosh and Whyte, 2008). Validated scales from existing studies will be used to develop items for each of the proposed constructs from Figure 2; creating identity, exchanging support and SOC (Blanchard et al., 2011), information and system quality (Zhang, 2010), quality of the decision-making process (Moore and Fung, 2012), and Influence from the results highlighted by (Panopoulou, Tambouris and Tarabanis, 2010). Stage one of the data gathering analysis will involve an in depth examination of the eParticipation website and analysis of literature pertaining to each case study. Followed by semi-structured interviews with stakeholders to elicit their views on the eParticipation process. Stage two will use a questionnaire to measure the quality of the decision-making process from the perspectives of the different stakeholders, participants feeling of sense of community and engagement. Web log analysis will provide additional information on eParticipation engagement.

6. Conclusion

This research aims to contribute to the eParticipation research area by incorporating both the public administration paradigm Public Value as a lens to examine the quality of the decision-making process, and SOC as a mediating factor in eParticipation Architecture. Examining the theory behind SOC will help to explain aspects of eParticipation such as the importance of identity, and goal sharing that enable the value of citizen participation and will help to discover further practical measures that can be used to design SOC into eParticipation. Exploring the measurement of quality of the decision-making process using Public Value theory will lead to a better validated Public Value mandate as the outcome of eParticipation. The next stage of the research will draw on the interaction of the main elements from the literature review to refine the constructs and build a model to test the framework.

References

- Abfalter, D., Zaglia, M. E. and Mueller, J. (2012) *Sense of virtual community: A follow up on its measurement*, Computers in Human Behavior, 28 (2), pp. 400-404.
- Anderson, M. R. (2010) *Community Psychology, Political Efficacy, and Trust*, Political Psychology, 31 (1), pp. 59-84.
- Bannister, F. and Connolly, R. (2014) *ICT, public values and transformative government: A framework and programme for research*, Government Information Quarterly, 31 (1), pp. 119-128.
- Blanchard, A. L. and Markus, M. L. (2004) *The experienced sense of a virtual community: Characteristics and processes*, ACM Sigmis Database, 35 (1), pp. 64-79.
- Blanchard, A. L., Welbourne, J. L. and Boughton, M. D. (2011) *A model of online trust: the mediating role of norms and sense of virtual community*, Information, Communication & Society, 14 (1), pp. 76-106.
- Bozeman, B. and Johnson, J. (2015) *The Political Economy of Public Values A Case for the Public Sphere and Progressive Opportunity*, The American Review of Public Administration, 45 (1), pp. 61-85.
- Bridges, F., Appel, L. and Grossklags, J. (2012) *Young adults' online participation behaviors: an exploratory study of web 2.0 use for political engagement*, Info. Pol., 17 (2), pp. 163-176.
- Burroughs, S. M. and Eby, L. T. (1998) *Psychological sense of community at work: A measurement system and explanatory framework*, Journal of community psychology, 26 (6), pp. 509-532.
- Castells, M. (2011) *The rise of the network society: The information age: Economy, society, and culture*, John Wiley & Sons.
- Chen, C.-W. C.-S. (2014) *Building a Sense of Virtual Community: The Role of the Features of Social Networking Sites*, CyberPsychology, Behavior & Social Networking, 17 (7), pp. 460-465.
- Coleman, S. and Gotze, J. (2001) *Bowling together: Online public engagement in policy deliberation*, Hansard Society London.
- Cordella, A. and Bonina, C. M. (2012) *A public value perspective for ICT enabled public sector reforms: A theoretical reflection*, Government Information Quarterly, 29 (4), pp. 512-520.

- Creighton, J. L. (2005) *The public participation handbook: making better decisions through citizen involvement*, John Wiley & Sons.
- Dahl, A. and Soss, J. (2014) *Neoliberalism for the common good? public value governance and the downsizing of democracy*, *Public Administration Review*, 74 (4), pp. 496-504.
- Delone, W. H. and McLean, E. R. (2003) *The DeLone and McLean model of information systems success: a ten-year update*, *Journal of management information systems*, 19 (4), pp. 9-30.
- Doolittle, R. J. and MacDonald, D. (1978) *Communication and a sense of community in a metropolitan neighborhood: A factor analytic examination*, *Communication Quarterly*, 26 (3), pp. 2-7.
- Fulla, S. and Welch, E. (2002) *Framing virtual interactivity between government and citizens: A study of feedback systems in the Chicago Police Department*, *System Sciences*, 2002. HICSS. Proceedings of the 35th Annual Hawaii International Conference on IEEE, pp. 11.
- Giddens, A. (1991) *Modernity and self-identity: Self and society in the late modern age*, Stanford University Press.
- Gil de Zúñiga, H., Veenstra, A., Vraga, E. and Shah, D. (2010) *Digital democracy: Reimagining pathways to political participation*, *Journal of Information Technology & Politics*, 7 (1), pp. 36-51.
- Glynn, T. J. (1981) *Psychological sense of community: Measurement and application*, *Human Relations*, 34 (9), pp. 789-818.
- Gouillart, F. and Hallett, T. (2015) *Co-Creation in Government*, *Stanford Social Innovation Review*, 13 (2), pp.
- Grimsley, M. and Meehan, A. (2007) *e-Government information systems: Evaluation-led design for public value and client trust*, *European Journal of Information Systems*, 16 (2), pp. 134-148.
- Hsu, C.-L. and Liao, Y.-C. (2014) *Exploring the linkages between perceived information accessibility and microblog stickiness: The moderating role of a sense of community*, *Information & Management*, 51 (7), pp. 833-844.
- Koh, J. and Kim, Y.-G. (2003) *Sense of virtual community: A conceptual framework and empirical validation*, *International Journal of Electronic Commerce*, 8 (2), pp. 75-94.
- Lin, H.-F. (2008) *Determinants of successful virtual communities: Contributions from system characteristics and social factors*, *Information & Management*, 45 (8), pp. 522-527.
- Macintosh, A. (2004) *Characterizing e-participation in policy-making*, *System Sciences*, 2004. Proceedings of the 37th Annual Hawaii International Conference on IEEE, pp. 10 pp.
- Macintosh, A., Coleman, S. and Schneeberger, A. (2009) *eParticipation: The research gaps*, In *Electronic participation* Springer, pp. 1-11.
- Macintosh, A. and Whyte, A. (2008) *Towards an evaluation framework for eParticipation*, *Transforming Government: People, Process and Policy*, 2 (1), pp. 16-30.
- Mannarini, T. and Fedi, A. (2009) *Multiple senses of community: The experience and meaning of community*, *Journal of Community Psychology*, 37 (2), pp. 211-227.
- McMillan, D. W. (1996) *Sense of community*, *Journal of community psychology*, 24 (4), pp. 315-325.

- McMillan, D. W. and Chavis, D. M. (1986) *Sense of community: A definition and theory*, *Journal of Community Psychology*, 14 (1), pp. 6-23.
- Medaglia, R. (2011) *eParticipation research: A longitudinal overview*, In *Electronic Participation* Springer, pp. 99-108.
- Moore, M. (1995) *Creating Public Value - Strategic Management in Government*, Harvard University Press, Cambridge, MA.
- Moore, M. H. and Fung, A. (2012) *Calling Publics into Existence: The Political Arts of Public Management*, In *Ports in a Storm: Public Management in a Turbulent World*, pp. 180-210.
- Nabatchi, T. (2010) *The (re) discovery of the public in public administration*, *Public Administration Review*, 70 (s1), pp. 309-311.
- Obst, P., Zinkiewicz, L. and Smith, S. G. (2002) *Sense of community in science fiction fandom, Part 1: Understanding sense of community in an international community of interest*, *Journal of Community Psychology*, 30 (1), pp. 87-103.
- Overeem, P. (2015) *The Concept of Regime Values Are Revitalization and Regime Change Possible?*, *The American Review of Public Administration*, 45 (1), pp. 46-60.
- Panopoulou, E., Tambouris, E. and Tarabanis, K. (2010) *eParticipation initiatives in Europe: learning from practitioners*, In *Electronic Participation* Springer, pp. 54-65.
- Pavlova, M. K. and Silbereisen, R. K. (2014) *Supportive Social Contexts and Intentions for Civic and Political Participation: An Application of the Theory of Planned Behaviour*, *Journal of Community & Applied Social Psychology*.
- Perkins, D. D. and Long, D. A. (2002) *Neighborhood sense of community and social capital*, In *Psychological sense of community* Springer, pp. 291-318.
- Porwol, L., Ojo, A. and Breslin, J. (2013) *On The Duality of E-Participation—Towards a foundation for Citizen-Led Participation*, In *Technology-Enabled Innovation for Democracy, Government and Governance* Springer, pp. 211-225.
- Preece, J. (2001) *Sociability and usability in online communities: Determining and measuring success*, *Behaviour & Information Technology*, 20 (5), pp. 347-356.
- Preece, J. (2002) *BUILDING*, *Communications of the ACM*, 45 (4), pp. 37.
- Rheingold, H. (1993) *The virtual community: Homesteading on the electronic frontier*, MIT press.
- Sæbø, Ø., Rose, J. and Nyvang, T. (2009) *The role of social networking services in eParticipation*, In *Electronic participation* Springer, pp. 46-55.
- Scheepers, H., Scheepers, R., Stockdale, R. and Nurdin, N. (2014) *THE DEPENDENT VARIABLE IN SOCIAL MEDIA USE*, *Journal of Computer Information Systems*, 54 (2), pp. 25-34.
- Scott, M., DeLone, W. and Golden, W. (2015) *Measuring eGovernment success: a public value approach*, *European Journal of Information Systems*.

- Seltsikas, P. and O'Keefe, R. M. (2010) *Expectations and outcomes in electronic identity management: the role of trust and public value*, European Journal of Information Systems, 19 (1), pp. 93-103.
- Tambouris, E., Liotas, N. and Tarabanis, K. (2007) *A framework for assessing eParticipation projects and tools*, System Sciences, 2007. HICSS 2007. 40th Annual Hawaii International Conference on IEEE, pp. 90-90.
- Tonteri, L., Kosonen, M., Ellonen, H.-K. and Tarkiainen, A. (2011) *Antecedents of an experienced sense of virtual community*, Computers in Human Behavior, 27 (6), pp. 2215-2223.
- Tsai, M.-T., Cheng, N.-C. and Chen, K.-S. (2011) *Understanding online group buying intention: the roles of sense of virtual community and technology acceptance factors*, Total Quality Management & Business Excellence, 22 (10), pp. 1091-1104.
- Van Dijk, J. A. (2006) *Digital divide research, achievements and shortcomings*, Poetics, 34 (4), pp. 221-235.
- Wasko, M. M. and Faraj, S. (2005) *Why should I share? Examining social capital and knowledge contribution in electronic networks of practice*, MIS quarterly, pp. 35-57.
- Zhang, Z. (2010) *Feeling the sense of community in social networking usage*, Engineering management, IEEE transactions on, 57 (2), pp. 225-239.
- Zhao, L., Lu, Y., Wang, B., Chau, P. Y. and Zhang, L. (2012) *Cultivating the sense of belonging and motivating user participation in virtual communities: A social capital perspective*, International Journal of Information Management, 32 (6), pp. 574-588.

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Workshops



Plain Language: An Important Basis of E-Democracy and Open Government

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The comprehensibility of public texts and public communication is an important prerequisite for the participation of everybody in modern democratic societies. The concept of plain language (understandable texts for the general public) is very useful in this context. In this workshop I want to present and discuss the basic concepts and elements of comprehensible language, which are anchored in interdisciplinary collaboration of applied linguistics, cognitive science, usability engineering and information design. These concepts and insights are not only relevant for everyday content-based communication (e.g., at the workplace, technical writing), but also for public administration and legal texts in general.

Keywords: plain language, comprehensibility, knowledge communication, legal language, English as a lingua franca

1. Topic

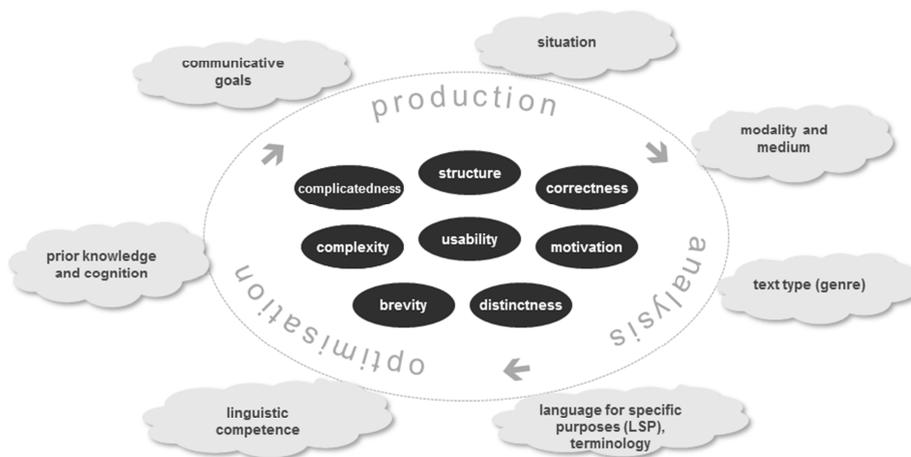
The notion of *plain language* originates from the international discussion of practitioners and researchers, and details how to make content-focused communication as understandable as possible, be it at the work place (James, 2007), in government and law (Kimble, 2012), or as a general principle for clear writing (Cutts, 2009). The definition of the plainlanguage.gov web site reads as follows:

"Plain language (also called Plain English) is communication your audience can understand the first time they read or hear it. Language that is plain to one set of readers may not be plain to others. No one technique defines plain language. Rather, plain language is defined by results—it is easy to read, understand, and use" (plainlanguage.gov, 2015).

As in the US, there are initiatives in many other countries to promote this approach, not only for public administration, but also for technical writing, and comprehensible and usable documents at the work place (e.g., process descriptions, requirements specifications, e-mail communication, forms). Two international associations promote these ideas with conferences and publications: *Clarity* (focused on plain legal language) and *Plain* (general topics). In the European tradition, the concept of *knowledge communication* - originating from communication science (cf. Eppler, 2006) - and applied linguistics approaches supplement the broad concept of plain language (cf. Lutz, 2015).

Linguistic comprehensibility research in collaboration with cognitive science and new disciplines such as information design and usability engineering can make valuable contributions towards an integrated understanding of understandable texts. In a recent book (Lutz, 2015), I developed a model which brings together these different approaches. This model consists of general conditions (only partly controllable by the communicators, shown as clouds in Figure 1), and criteria and options for shaping the text (eight dimensions of comprehensibility, shown as ellipses).

Figure 1: A Model of Text Comprehensibility (Lutz, 2015, p. 237 translated into English)



2. Description and Objectives of the Workshop

The main objectives of the workshop are:

- Showing the relevance of plain language for specific topics discussed at the CeDEM conference (especially language of administration, communication between authorities and citizens, between citizens and citizens, in the European Union and globally)
- Giving a brief overview of the model mentioned above with focus on relevant topics for CeDEM (e.g., the international use of English as a lingua franca, easy-to read and accessibility, multimodal texts, usability issues)
- Discussing the tension between necessary content complexity (which should be *optimized*, according to communicative needs and competences of target groups) and formal complicatedness (which should be *minimized*, e.g., regarding sentence length, structure, terminology)
- Providing examples for typical communication problems and discussing these topics according to specific interests of the workshop participants (see questions to be addressed)

3. Relevance of the Workshop to the CeDEM Conference

Understandable and clear language is a *conditio sine qua non* in public communication, in communication to citizens and between citizens. The capability for participation of citizens in all processes relevant to them is an important part of the self-understanding of modern democratic societies, which started already in the age of enlightenment. Interestingly enough, first efforts for the introduction of plain language in public administration go back to the time of Empress Maria Theresia and King Frederick the Great (cf. Pfeiffer et al., 1987).

Participation of everybody is still a tough challenge today. Even developed countries functional illiteracy affects about 20% of the population (see the relatively stable numbers of PISA or PIAAC studies), and especially non-native speakers (migrants) are heavily affected. In the realm of eParticipation, eGovernance and eDemocracy the situation is even worse, because people with weak literacy are typically not very strong in the handling of electronic devices and tools.

4. Questions to Be Addressed During the Workshop

The topics to be addressed in the workshop are the following:

- The concepts of plain language, knowledge communication, and criteria of text comprehensibility
- Comprehensible legal language - unrealistic dream or feasible solution?
- Usability as a key success criterion for electronically mediated texts
- The communicative value of different media and modalities
- How plain is plain? - From comprehensibility for the “general public” to easy-to-read initiatives (accessible texts)
- The importance of terminology for clear communication
- English as a lingua franca in international communication - the native speakers are the problem, not the non-natives!

Based on the interests and experiences of the participants, we will focus the discussion on three or four main topics.

5. Format of Workshop

- Plenary presentation of the main topics by the organizer (15 min)
- World Café focusing on experience exchange between the participants on 4-6 most relevant topics (2x30 min). As a suggestion from the organizer (to be adapted, according to the interests of the participants):
 - Plain language as a “human right” in democratic societies - where should we focus most?
 - Plain legal language - impossible or worth the trouble?
 - English as a lingua franca in international collaboration
 - Accessibility and easy-to-read initiatives
 - Usability (and other) methods for evaluating and optimizing plain language

- Multimodal texts in public communication: language, vision and video
- Presentation of discussions at the tables and final roundup (15 min)

References

- Clarity (2015). An International Association Promoting Plain Legal Language. Retrieved Dec. 4, 2015, from <http://www.clarity-international.net/>
- Cutts, M. (2009). *Oxford Guide to Plain English*. New York: Oxford University Press.
- Eppler, M. (2006). Knowledge Communication. In D. Schwartz (ed.), *Encyclopedia of Knowledge Management*. (pp. 317-325). Hershey, PA: Idea Group.
- Kimble, J. (2012). *Writing for Dollars, Writing to Please*. Durham: Carolina Academic Press.
- Lutz, B. (2015). *Verständlichkeitsforschung transdisziplinär. Plädoyer für eine anwenderfreundliche Wissensgesellschaft*. Göttingen: V&R unipress.
- Pfeiffer, O., Strouhal, E., & Wodak, R. (1987). *Recht auf Sprache. Verstehen und Verständlichkeit von Gesetzen*. Wien: Orac.
- Plain (2015). Plain Language International. Retrieved Dec. 4, 2015, from <http://plainlanguagesnetwork.org/>
- Plainlanguage.gov (2015). *Improving Communication from the Federal Government to the Public*. Retrieved Dec. 4, 2015, from <http://www.plainlanguage.gov/historical/index.cfm>

About the Organiser

Benedikt Lutz

Benedikt Lutz studied applied linguistics with a PhD thesis on the comprehensibility of radio news, and then he worked for 25 years in a Siemens software development department (technical writing, quality management, usability engineering, and training). Currently he works at Danube University Krems with topics and MSc courses on knowledge management, quality management, integrated management systems, text comprehensibility, and scientific writing. In his habilitation thesis (for details see <http://bit.ly/1SvHt8M>), different approaches and disciplines are brought together into a frame model of text comprehensibility, which claims to be scientifically sound as well as comprehensible and applicable for practitioners. The practical part of the book provides case studies for areas of applications: Legal texts, technical writing, and software development.



Beyond Bureaucracy: Towards the Ecosystem

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Abstract: The Beyond Bureaucracy '16 workshop aims to outline and discuss challenges along the boundaries of society, technology, and governance, which reach beyond established e-governance research priorities. Where well-established e-government / e-governance research ambitions focus on providing technology that support the work and mission of government agencies and governmental agents, "Beyond Bureaucracy" addresses the question, how technology can empower citizens and the conceptual sovereign-body to control government agencies and governmental agents. This workshop outlines the pending technological (design science) challenges, promotes the economic potentials of new technological ecosystems, and serves as a platform for pro/con deliberations on Beyond Bureaucracy thought and knowledge.

Keywords: Technological Ecosystems, Informating Governance, Liquid Democracy, Bureaucracy

Acknowledgement: The participation of participants from its member institutions in the workshop is supported by Eurasia Pacific UNINET.

1. Topic

Can we ... ?

... govern without bureaus? Can we go beyond what humankind has achieved so far in terms of governing societies – go beyond electing representatives every couple of years, who then steer the vast bureaucratic machinery which we perceive as “the state”? Can we use ICTs to enable humanity to fundamentally restructure the government of the public domain? Think about it for a while: We are the first generation in human civilization, which has a ripe set of ICTs available. Never ever in human history before could we interact in a way we can nowadays. Besides: ICTs have reached a level of maturity and penetration in the last ten years, which enables us to go truly beyond approaches we have seen so far.

In the last few decades, we have seen radical transformation in telecommunications, in transport, logistics, credit transfer, navigation, etc. But we have not yet seen transformation in the governance of public matters. Well, sure, we saw things like online tax returns, e-voting, open data. But, let's be frank – that is only using ICTs to imitate old principles of government, it is not reaching beyond the established bureaucratic culture!

Mainstream e-Governance & e-Democracy research focuses on supporting existing public governance principles, or aims to advance governance provision through visionary high-tech approaches. The objectives of mainstream e-Governance & e-Democracy can best be described as serving the needs of existing (e.g., existing law enforcement, public administration) or emerging (e.g., data privacy, environment protection, fight against terrorism) public-domain organizations; here, technology and research serves to push the limits of the 3Es (efficiency, effectiveness, economy) of the respective services.

Beyond Bureaucracy as an emerging field of research on the other hand, takes up the challenge of controlling and steering social functions by means of technology. This field searches for approaches and models towards a standardize-able sustainable *fiat* framework system upon which future social function provision could base. Like steering a remote-controlled vehicle, such system would allow future communities to steer their public domain by means of technology.

2. Description and Objectives of the Workshop

Beyond Bureaucracy: Towards the Ecosystem aims at clarifying the terminology, concepts, and implications of *Beyond Bureaucracy* research challenges. The prime objective of this workshop is to introduce this research field to the broader e-Government & e-Democracy communities, and to jointly discuss pending research challenges with regard to disciplinary focus.

The workshop will be led by Alois Paulin, whose research over the past years provided a pioneering foundation for *Beyond Bureaucracy* research in general, and for *Governance Informatization* in particular. The workshop itself will consist out of two logical parts. In the first part, a general overview over the research field, its research challenges and economic / social potentials will be provided. The second part will consist of discussions about adjacent topics, visions associated with non-bureaucratic societies, citizen self-organization, liquid democracy, and similar topics.

3. Relevance of the Workshop to the CeDEM Conference

The CeDEM conferences' main themes are e-Democracy and Open Government; both themes can be seen from two different technological perspectives. The first perspective is the perspective of government agencies and governmental agents, which aim to open themselves towards the public – to address this view, technology is researched and designed for government-side stakeholders to address the government to citizen ($G \rightarrow C$) relation. The other perspective is the perspective of citizen-side stakeholders, who aim to control government action ($G \leftarrow C$); this perspective calls for technology, which would enable direct, i.e., non-mediated, steering, and control of government.

Since the inception of the CeDEM conference, the $G \rightarrow C$ relation has been well addressed by input from social, political, legal, and technical sciences. The $G \leftarrow C$ relation on the other hand would benefit greatly from a more structured and systemic approach, which would help to cultivate a dedicated sub-community devoted to exploring the possibilities of this relation. The *Beyond Bureaucracy '16* workshop thus complements the CeDEM conference by introducing a

structure to address the research challenges of the $G \leftarrow C$ relation, and by providing focused discussions on topics related to this relation.

4. Questions to Be Addressed During the Workshop

The workshop aims at establishing a common understanding of the challenges of $G \leftarrow C$ research, the clarification of basic terms and concepts, and the discussion of aspects related to this novel intellectual sphere. More specifically, questions such as the following will be addressed:

- What is a *technological ecosystem*? / Why is it important?
- What are the objectives of *governance informatization*?
 - What are the differences between *informatization* and *computerization*?
 - Why is existing technology not enough?
- How far is the field progressed? / What are the pending research challenges?
 - What are the pending technological challenges?
 - What are the pending organizational challenges?
- How does bureaucracy stifle progress of true, technology-enabled Open Government?
- How can technology enable direct / non-mediated enactment of citizen will?

5. Format of Workshop

The workshop will be held in two parts. The first part will contain an introductory set of presentations by the workshop organizers on core *Beyond Bureaucracy* and *Governance Informatization* topics. The second part will be reserved for an interactive discussion with the workshop participants. Audience activation and active feedback will be encouraged and synthesized for further advancement of the field.

References

- Downs, A. (1967). *Inside bureaucracy*. Boston, Mass.: Little, Brown.
- Lessig, L. (2006). *Code 2.0*. New York: Basic Books.
- Paulin, A. (2015). Twenty Years After the Hype: Is e-Government doomed? Findings from Slovenia. *International Journal of Public Administration in the Digital Age*, 2(2), 1–21.
<http://doi.org/10.4018/ijpada.2015040101>
- Paulin, A. (2014). (Un-)Sustainability of e-Government: Hazards and Questions for future Research. In A. Balthasar, H. Hansen, K. Balázs, R. Müller-Török, & J. Pichler (Eds.), *Central and Eastern European e!Gov Days 2014 - eGovernment: Driver or Stumbling Block for European Integration?* (Vol. 300, pp. 307–16). Budapest: Austrian Computer Society. Retrieved from
<http://research.apaulin.com/research/2014/ceegov14-unsustainability>
- Paulin, A. (2014). Through Liquid Democracy to Sustainable Non-Bureaucratic Government - Harnessing the Power of ICTs for a novel form of Digital Government. *eJournal of eDemocracy and Open Government*, 6(2).

Paulin, A. (2013). Towards Self-Service Government - A Study on the Computability of Legal Eligibilities. *Journal of Universal Computer Science*, 19(12), 1761–1791. <http://doi.org/10.3217/jucs-019-12-1761>

Raymond, E. S. (1999). *The Cathedral & the Bazaar: Musings on Linux and Open Source by an Accidental Revolutionary*. O'Reilly Media.

About the Organiser

Alois Paulin

Alois Paulin is a postdoctoral researcher at the Vienna University of Technology, Austria, and at the Technische Universität München, Germany. He holds a Doctor of Science degree in Computer Science & Informatics and a university diploma (master equiv.) in Media & Communications. Through his PhD thesis, Alois pioneered the research field later termed *Beyond Bureaucracy*, with a focus on the technological aspects of *Governance Informatization*. His research contributions received best paper awards, or were nominated, respectively, at highly renowned international digital government conferences, such as the CEEeGov Days, or the CeDEM conference series.



Hybrid Participation in the Digital Era: Participatory Budgeting and Emerging Practices

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Abstract: Hybrid participatory processes are common nowadays. Traditional in-person activities are combined with ICT enhancement. This is improving the opportunities for citizens to be involved, but is also raising new questions about the best way to fulfil the democratic requirements, such as deliberation and inclusion. Participatory Budgeting (PB) is one of the most successful democratic innovations in the urban context that is experiencing deep changes in this sense: an increasing use of ICT solutions together with new offline methodologies. The EU has recently funded a Horizon 2020 project, EMPATIA, whose aim is to build a dedicated software platform for PB and for participatory processes in general. One of the main issues is how to design it, considering the hybrid nature of the PB today. This workshop aims to present and to share the first outcomes of the EMPATIA project in order to debate with practitioners, developers and researchers who share similar experiences and products, and to establish ideas for future collaboration.

Keywords: Participatory Budgeting, online deliberation, democracy, participation

1. Topic

The number of participatory initiatives in established and more recent democracies has increased considerably in recent years, thanks to the support of the ICTs and of new innovative methodologies. This is changing the social and political scenario, as new forms of citizens' engagement and citizens' behavior are emerging: online petitions for offline causes, offline demonstrations triggered by the use of social networks, etc. The evolution of the software and the opportunities for online participation are also changing consolidated theories: For instance, people who are supposed to avoid contacts with online communities, the "lurkers", today express their opinion in many different ways, by sharing and liking others' contribution. This means that, more than a personal behavior, it is a matter of opportunities and of available tools. However, ICTs are bringing new democratic challenges especially in terms of data ownership and private privacy, threatening the same freedom and the deliberative character of the web. Within this scenario, made of ideas, opinions, likes and sharings, Participatory Budgeting (PB) is an important case

study, for its capability to build new ways of empowering citizens at the city level engaging them on concrete projects at the urban level.

Participatory Budgeting is a democratic practice that directly involves people in making decisions on public expenditures and monitoring the implementation of them. Since the first case in Porto Alegre, started in 1989, PB spread in thousands of cities, being studied and improved all over the world. The introduction of ICT enhancements is one of the most important improvement of the original practice: Almost all the PBs are today hybrid processes where the traditional in-person participatory activities are combined with online tools. There is a large variety of PB, whose ICT enhancement differs in many different ways: Some PB practices adopt online voting platforms, others offer informal idea-gathering tools, with or without ranking features; some others try to support every stage with digital tools. However, the introduction of online participation is generally kept to a minimum, as the worries about redundancies, opportunistic behavior, and lobbying are more than any other advantage. More efforts are made to collect data and opinion in a smart way, than to build online communities and online deliberation.

2. Description and Objectives of the Workshop

The proponents of this workshop are partners of EMPATIA, a 24-month Horizon 2020 project, whose aim is to build a software platform to support and to value PB worldwide, as well as any other participatory initiative. This workshop is part of the dissemination plan of the project.

The broad goal is to present the EMPATIA project to the CeDEM community, to share the first deliverables and the first products, to discuss them and to learn from other experiences. The workshop will focus on both the software and the methodological solutions of EMPATIA, and aims to elicit requirements for the software platform from other researchers and practitioners concerned with online participation and deliberation. We are interested to learn from innovative case studies and about new software tools as well as to establish relationships for future collaboration.

3. Relevance of the Workshop to the CeDEM Conference

Participatory Budgeting is an increasing practice worldwide which is shifting from a traditional face-to-face structure towards a more hybrid nature, with internet and software tools playing a stronger role. The hybrid character proves to be a promising solution to the limits of the online participatory processes, namely in terms of inclusion and deliberation. Recent studies demonstrate how the combination of offline and online venues compensate each other's limits. Major issues that strongly influence the democratic nature of the processes are quite technical, concerning citizens authentication, security and ownership of data.

4. Questions to Be Addressed During the Workshop

The main questions to address during the workshop are the following:

- How to strengthen participation (quantity) together with deliberation (quality)?
- How to reduce redundancies in the submission of proposals from the crowd?
- How to combine the use of “smart” (mobile) devices and apps, with the needs to guarantee deliberation (reading and debate proposals)?
- What is the best tool to support deliberation in the voting stage?
- What kind of tools have to be used to enable and valorize online collaborative behavior and deliberation, with respect to the offline?
- What is the best way for citizens to effectively control the implementation of their decisions?
- How to create a broad democratic online space while coping with the need to interact with commercial and intrusive software?
- How to cope with the issue of data protection and data ownership?

5. Format of Workshop

After a brief presentation of the EMPATIA Project, the structure of the workshop will follow the two cycles of a PB: the decision-making and the implementation. We will describe the main characteristics and steps of the two cycles, present the corresponding software solutions (already adopted or just designed), discuss, get feedbacks and alternative solutions. Within the Decision-making Cycle, we will focus on the following issues:

- *Idea-gathering & filtering*: How to stimulate the aggregation vs. the redundancies of proposals, and how to preserve specificities and minorities.
- *Co-design*: How to facilitate the interaction between citizens and public offices to improve the proposals.
- *Voting*: What is the best voting system for PB and the most appropriate way to foster deliberation.

Within the Implementation Cycle we will concentrate on:

- *Detailed Planning* of project implementation, including a projected timeline, itemized budget, milestones, and work plans.
- *Monitoring of the implementation*: How to guarantee transparency and effective control by the people.

We will ask attendees to contribute to the discussion about the two cycles by presenting software platforms and tools, case studies using them, ongoing researches about any kind of methodological issues or requirements. We ask that the attendees to write a one-page position paper, describing themselves, explaining their interest on the WS and what they are going to present. Depending on the number of submissions we will organize the WS with very-short presentations, in addition to the interactive discussion.

References

- Allegratti, G. (2012). From Skepticism to Mutual Support: Towards a Structural Change in the Relations between Participatory Budgeting and the Information and Communication Technologies? In P. Mindus, A. Greppi, M. Cuono (Eds.), *Legitimacy_2.0. E-Democracy and Public Opinion in the Digital Age* (pp. 145-182), Frankfurt am Main: Goethe University Press.

- Coleman, S., & Blumler J.G. (2009). *The Internet and Democratic Citizenship: Theory, Practice and Policy (Communication, Society and Politics)*. Cambridge: Cambridge University Press.
- Convertino, G., Westerski, A., Diaz, P., & De Liddo, A. (Eds.) Special Issue on Large-Scale Ideation and Deliberation: Tools and Studies in Organization. *The Journal of Social Media in Organizations*. 2(1). Retrieved from <http://www2.mitre.org/public/jsmo/pdfs/02-01-liquid-feedback.pdf>.
- De Cindio, F. (2012). Guidelines for Designing Deliberative Digital Habitats: Learning from e-Participation for Open Data Initiatives. *The Journal Of Community Informatics*, 8(2). Retrieved from <http://ci-journal.net/index.php/ciej/article/view/918/910>.
- Peixoto, T. (2009). Beyond Theory: E-Participatory Budgeting and Its Promises for eParticipation. *European Journal of ePractice* 7 (5): 1-9.
- Sampaio, R. C., & Peixoto, T. (2014). Electronic Participatory Budgeting. False dilemmas and true complexities. In N. Dias (Ed.), *Hope for Democracy – 25 Years of Participatory Budgeting Worldwide* (pp. 413-425). In Loco.
- Stortone, S. & De Cindio, F. (2016). Hybrid Participatory Budgeting: Local Democratic Practices in the Digital Era. In M. Foth, M. Brynskov, & T. Ojala (Eds.), *Citizen's Right to the Digital City*, New York, Springer.

About the Organisers

Fiorella De Cindio

Fiorella De Cindio is associate professor in the Department of Computer Science at the Università di Milano. She taught programming languages, distributed systems foundations, and software engineering for several years. Since 2002, she has taught a class on virtual communities, now called "Internet-based Social Interaction." Since 2011, she has co-taught a class on "Digital Citizenship and Civic Hackerism" with Andrea Trentini. Early research areas were Petri nets as concurrency theory, concurrent programming languages, participatory design, and computer-supported cooperative work. In 1994, she founded the Civic Informatics Laboratory, and for twenty years, her research has focused on social interactive systems, their design, their implementation, and their deployment in real-life settings; civic participation and deliberation at the urban level; the development of software tools for the purpose. RCM, the Milan Community Network, was her first such real-world project. Since 1998, De Cindio chairs an independent Participatory Foundation. Her activity in the community earned De Cindio the City of Milan's Ambrogino d'Oro award in 2001.

Stefano Stortone

Stefano Stortone is post-doc researcher at the Università di Milano. He holds a PhD in politics from the Università Cattolica del Sacro Cuore in Milan, where he also did his undergraduate work, and an MA in democratic studies from the University of Leeds. His research focuses on democratic theory, civil society, and political participation that aim to overcome the crisis of political representation and representative democracy. He is currently studying the use of ICT for public deliberation and democratic decision-making processes. He heads the Center for the Study of Participatory Democracy and funded BiPart, a civic association and a non-profit company that both promotes and develops participatory budgeting projects for local government and civic groups, as a step toward experimenting with new, ICT-driven forms of democracy and democratic institutions.



Next-Generation Participative Futures-Building Techniques: Liberating the Virtual Commons to Design the Future Together

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Abstract: Next-generation futures-building techniques address some of the shortfalls seen in first generation approaches in e-participation as well as developing real-time, multi-perspective support for decision-makers under conditions of uncertainty. First generation approaches have fallen short of their ambitions - the “virtual commons” is increasingly captured and gamed by elite interests (purveyors of big data, etc.) and is not a neutral space. Centre for Applied Complexity (CFAC) and School of International Futures (SOIF) have together been exploring this next generation of Participative Futures-building tools: in developing human sensor-networks, building a toolkit and designing processes for policy-makers and other conveners to use these techniques effectively. This Workshop will share the research, showcase these tools and provide a live working environment for participants to use them.

Keywords: systems-thinking, foresight, strategy, participation, complexity

1. Topic

This workshop will demonstrate the work done to date by the Centre for Applied Complexity (CFAC) and School of International Futures (SOIF) around next-generation futures-building techniques. These next generation techniques address some of the shortfalls seen in first generation approaches in e-participation as well as developing real-time, multi-perspective support for decision-makers under conditions of uncertainty.

Futures-building techniques (also known as scenario-building, strategic foresight or horizon scanning) have embraced open and participative methods to look at the short- and long-term horizon in a collective manner. The potential benefit of this approach is to return agency to the citizen and participant. Communities and citizens groups can design their future together. Open participative foresight exercises provide a practical way of harnessing “people power” in a world where political energy mobilised by social media is often framed in terms of “stop” energy or as a “vetocracy”. Participative futures-building techniques engage citizens in the process of co-creation. They create positive contributions to difficult policy issues, from counter-radicalisation to obesity and infrastructure. They can also reduce conflicts around future resource allocations.

1.1. Diagnosis

However, in reality, first generation approaches have fallen short of their ambitions. The “virtual commons” is increasingly captured and gamed by elite interests (purveyors of big data, etc.) and is not a neutral space. References to gaming; astroturfing; undemocratic manipulation; recapture of web abound.¹

These widely commented-on problems mean that the potential of mass participation in futures exercises fails to be realized, or is increasingly perceived as the *tyranny of herds* rather than *the wisdom of the crowd*. The end result harms the virtual commons and undermines the potential of e-participation in its endeavour to create new space and tools for generating valuable political insights (<http://www.mercatornet.com/connecting/view/astroturf-fake-social-media-consensus-harms-politics/17387>).

Two realities need to be taken into account:

- Areas of public policy and government operate as complex adaptive systems. This means typical interventions, predictions, and large scale evidence-gathering exercises are unproductive. In a complex system, any intervention will *de facto* generate unintended consequences. The larger the intervention the larger the unintended consequence. To reduce risk, interventions need to be smaller and faster, with real-time feedback loops. This requires effective and un-gameable participative exercises. But these become more difficult as:
- Elites and powerful interests can game participation and large-scale engagement exercises of all kinds. The gaming of big data using bots, etc. skews information deliberately, whether for commercial, advocacy or recruitment purposes. Just as pernicious is the insistence by governments that conversations be held on their terms (by dictating the platform, the framing, or who is invited).

1.2. Response

Non-conventional futures-building tools, deploying sensor networks and complementary techniques, can reveal new pathways to the future. The primary function of these sensor networks is to serve their *local* network - as tools for local activism and coordination. As a result, they respect the “holistic” nature of the citizen – the relationship is not a transactional or instrumental one – they are therefore less likely to be gamed. These networks then provide wider public policy insight for the second generation tools and techniques that we use.

The process needs to be carried out in a transparent and sensitive way respecting the “ethics of intervention”: The imperative is for the convener and policy-maker to sense, probe, take risks, but in a small and tentative way. There are ethical dimensions also to the “yank” aspect of clumsy

¹ see for example https://www.washingtonpost.com/news/energy-environment/wp/2016/01/04/heres-how-scientific-misinformation-such-as-climate-doubt-spreads-through-social-media/?postshare=401451985085625&tid=ss_tw and <http://www.theguardian.com/commentisfree/2012/feb/08/what-is-astroturfing>.

“nudge” approaches. These – together with concerns about efficacy – mean that another area of focus for these tools is to

identify the dispositions of a social system to identify where a nudge would be most effective. More importantly (and ethically), we could engage the communities in more stories, ideally without external facilitation, so that the nudges were authentic to the needs of that community and sustainable over time. (<http://cognitive-edge.com/blog/nudge-or-yank-sic/>).

1.3. Objectives and Opportunities

CFAC and SOIF have together been exploring this next generation of Participative Futures-building tools:

- developing human sensor-networks
- building a toolkit for enabling the use of sensor-networks in public policy development
- designing processes for policy-makers and other conveners to use these techniques effectively

2. Description and Objectives of the Workshop

- inform participants about new tools and methods
- contribute to future developments in this space

3. Relevance of the Workshop to the CeDEM Conference

The workshop will bring insights from the domain of Complex Adaptive Systems and Foresight into the participation and technology conversation at CeDEM. There are currently unrealistic expectations on e-participation. This workshop will provide a toolkit and practical examples of how to have effective and ungamed participative conversations about the future. The approach will be helpful for activists working in their local community, for socially active campaigners at a national and international level, and for government policy and innovation leads.

As well as experiencing some of the new tools, participants will be given post-event access to use these tools as part of an extended participative research programme.

4. Questions to Be Addressed During the Workshop

The workshop will examine the nature and purpose of these second generation tools, and why they are needed. An overview of methods and toolkit will be provided. Material and examples will be shared. A live experiment will enable participants to understand how the approaches work and to experience the insights gained from them. Questions to be addressed include:

- How do you use second-generation tools?
- Why are they necessary?
- How can the participants apply this approach in their work?
- What is the link with other policy-making approaches, including behavioural insights, strategic planning, and policy labs?

- What are the ethics of intervention when convening conversations about the future?

5. Format of Workshop

The 90-minute workshop will be led by one of Alun Rhydderch, David Snowden, Cat Tully. The format is as follows:

- 20 minutes review of approach: Introduction to methods and philosophy - examining the principles of “anthrocomplexity” and foresight
- 60 minutes exercises: combining one or two techniques from side-casting, counterfactuals and ritual dissent, with Sensemaker networking software. These exercises will be live in order to demonstrate how sensor-networks can be used to develop conversations about the future.
- 10 minutes review: capturing insights
- With the agreement of the conference organisers, Sensemaker will be made available before the conference and at the conference.

References

Tully, Cat (2011) Social Media and the North African Revolutions

Kahane, A (2012) Transformative Scenario Planning

Tully, C. (2015) Stewardship of the Future. Using Strategic Foresight in 21st Century Governance. Singapore: United Nations Development Programme Global Centre for Public Service Excellence, P5.

About the Organisers

Catarina Tully

Catarina Tully is Founder of FromOverHere and Co-Founder of School Of International Futures, a not-for-profit organisation aimed at promoting the use of strategic foresight. Previously she was at the UK FCO and Prime Minister’s Strategy Unit. Before working in government, she worked in not-for-profit and business sectors. She is an Honorary Fellow of the Strategy and Security Institute at Exeter University, and is on the UN advisory board for SDG16. Cat is a board member of Academics Stand Against Poverty.

David Snowden

David Snowden is founder and chief scientific officer of Cognitive Edge. His work covers government and industry looking at complex issues relating to strategy, organisational decision making and decision making. He has pioneered a science-based approach to organisations drawing on anthropology, neuroscience and complex adaptive systems theory. He holds visiting Chairs at the Universities of Pretoria and Hong Kong Polytechnic University as well as a visiting fellowship at the University of Warwick. He is a senior fellow at the Institute of Defense and Strategic Studies at Nanyang University and the Civil Service College in Singapore. His paper with Boone on Leadership was the cover article for the Harvard Business Review in November 2007 and also won the Academy of Management award for the best practitioner paper in the same year. He previously worked for IBM where he was a Director of the Institution for Knowledge Management and founded the Cynefin Centre for Organisational Complexity.

Alun Rhydderch

Alun Rhydderch is Director of Horizon Scanning Ltd and Co-Founder of School of International Futures. In 2005 he was part of the team that set up the UK Government's Horizon Scanning Centre, where he worked until 2012, leading foresight projects on behalf of UK government departments. Alun commissioned and edited the Sigma Scan (2007-2011), a repository of horizon scanning articles relevant to public policy; conceived and edited the global trends report Dimensions of Uncertainty (2008); and published Scenario Planning: A Guidance Note (2009) on scenario planning in government. Before joining the Horizon Scanning Centre, Alun set up and ran a software development company in Prague.



Virtual Research Environments: Obtaining New Insights by Sharing Open Data for Interdisciplinary Research Purposes

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Abstract: Researchers are able to access and can use more and more data opened by governments and research organizations. Virtual Research Environments (VREs) can be used to share the data with other researchers in a secured and trusted environment. VREs can enable the reuse of the data in other disciplines to obtain new insights. However, stakeholders often have different interests and needs. The objective of this workshop is to elicit, refine and discuss requirements for a secure and trusted VRE that integrates Open Government Data (OGD) and open research data for researchers from multiple disciplines. Presentations about reusing governmental and research data will be given, and participants will discuss the conditions for sharing their public or research data with others in a VRE and how to create trust. Thereafter, scenarios for using VREs will be presented and evaluated. This provides the basis for a discussion on the prioritization of the requirements. Participants are encouraged to provide their view on requirements for a VRE that offers governmental research data as well as directions for VRE projects.

Keywords: open data, Virtual Research Environment, VRE, research infrastructure

Acknowledgement: This workshop is related to the H2020 VRE4EIC project (www.vre4eic.eu). The authors would like to thank their colleagues of this project for their input for this paper, although the views expressed are the views of the authors and not necessarily of the project.

1. Topic

The topic of this workshop concerns Open Government Data (OGD) and open research data. The objective of this 1,5 hour workshop is to elicit, refine and discuss requirements for a secure and trusted Virtual Research Environment (VRE) that integrates OGD and open research data for researchers from multiple disciplines.

2. Description and Objectives of the Workshop

Researchers can access and use more and more research data opened by the government and by publicly-funded research organizations (Zuiderwijk, 2015). They can use this data to obtain new insights, especially by combining datasets with other data. Various projects are already producing e-Research Infrastructures to give researchers access to publicly funded research and open government research data, and are developing towards Virtual Research Environments (VREs). VREs provide access to data, tools, resources from different research infrastructures, co-operation or collaboration between researchers at the same or different institutions, co-operation at the intra- and inter-institutional levels, and/or preserving data and other outputs (Carusi & Reimer, 2010). They consist of three major components:

- 1) e-Infrastructures providing Information and Communication Technology (ICT) facilities (e.g., EUDAT, www.eudat.eu/, and PRACE, www.prace-ri.eu);
- 2) e-Research Infrastructures providing for the end-user homogeneous access over heterogeneous data but also over software, resources (of the e-Infrastructure) (e.g., LifeWatch, www.lifewatch.eu/), and
- 3) the VRE with its users, who can cooperatively work through the VRE (Zuiderwijk, Jeffery, Bailo, & Yin, Forthcoming).

Examples of projects reaching towards VREs are EPOS¹ for earth/geo-physical sciences, ENVRI+² for environmental sciences and EXCELERATE³ for biological/biomedical sciences. Nevertheless, it is already clear from these existing projects that researchers who want to conduct multidisciplinary research with open research data often face various problems in existing research environments, such as issues related to data heterogeneity, user experience, and fast changes to datasets. Researchers are often willing to share their data with others under certain conditions, however, no VREs exist that meet the requirements for multidisciplinary research. This complicates the reuse of open government data by researchers in other disciplines. For instance, volcano evolution requires information from deep sea, solid earth and eco-system research, while these types of data are currently fragmented.

¹ <http://www.epos-eu.org/>

² <http://www.envriplus.eu/>

³ <http://www.elixir-europe.org/about/eu-projects/excelerate>

The objective of this 1.5-hour workshop is to elicit, refine and discuss requirements for a secure and trusted VRE that integrates Open Government Data (OGD) and open research data for researchers from multiple disciplines.

3. Relevance of the Workshop to the CeDEM Conference

The workshop is relevant for participants of the international Conference for e-Democracy and Open Government (CeDEM), since it focuses on topics that are key to this conference, including open data, open access, and open and collaborative government. The workshop is of interest to experts that CeDEM brings together in the area of open government, e-participation and e-democracy. The workshop is aimed at (potential) users of (open) (government) research data.

4. Questions to Be Addressed During the Workshop

Particular questions to the workshop participants are:

- Which functionalities are critical for using (open) (government) research data through Virtual Research Environments?
- Which non-functional requirements are critical for using this data through Virtual Research Environments?
- Have the mentioned requirements covered the needs for researchers using government data?
- Which additional requirements could there be?

5. Format of the Workshop

5.1. Presentations (30 Minutes)

The following presentations will inspire a constructive dialogue:

- Marijn Janssen: Challenges for information sharing of open data by researchers. Marijn Janssen will present trust and privacy as key challenges that exist for sharing Open Research Data with others. Trade-offs and considerations will be discussed.
- Anneke Zuiderwijk: Using multidisciplinary research data: The VRE4EIC project. The key objectives of a project addressing challenges related to the use of research data are presented. The project is called VRE4EIC, which stands for A Europe-wide Interoperable Virtual Research Environment to Empower Multidisciplinary Research Communities and Accelerate Innovation and Collaboration. The H2020 VRE4EIC project (<http://www.vre4eic.eu/>) aims to develop a reference architecture and prototypes to be used for future VREs including building blocks that can be used to improve existing VREs. The project addresses the key data and software challenges in supporting multidisciplinary data driven sciences⁴.

⁴ www.vre4eic.eu

5.2. Brainstorming (20 Minutes): Needs for Providers and Users

To support the release and use of open data by researchers, it is essential to obtain insight into the way open government data is provided, used and reused by researchers at present. A closer examination of current trends and practices of the use and reuse of this data will create consciousness of problems and gaps that are associated with these trends and practices. We therefore ask the participants to discuss the needs of (potential) providers and users of (open) research data in groups of three to five persons. Each group chooses a different topic of discussion, such as funding requirements, collaboration requirements, data and service management requirements, and computational tools or service requirements. In addition, each group is asked to develop a scenario concerning how researchers can share and use data on a VRE if all the identified requirements would be met. Participants of the workshop are asked to participate in the discussion, because they might (potentially) use open government data for research purposes.

5.3. Discussion of Brainstorming Session (20 Minutes)

The group discussion functions as a basis for a plenary discussion. The findings of the group discussions will be discussed plenary by presenting some first results of the scenario development by the participants. This discussion and presentation provide participants with insight in the way that open data is currently used by researchers and it shows the key requirements that researchers have. The results of this discussion will be used to develop and further specify the requirements of the VRE4EIC research environment.

5.4. Discussion and Questions to Be Addressed (20 minutes)

The remainder of the workshop is dedicated to discussion, interaction and gathering ideas from the audience on requirements for the use of open government data by researchers and directions for VRE projects.

References

- Carusi, A., & Reimer, T. (2010). Virtual Research Environment Collaborative Landscape Study. Retrieved January 2, 2015, from <http://www.jisc.ac.uk/publications/reports/2010/vrelandscapestudy.aspx#downloads>
- Hossain, M.A., Dwivedi, Y.K., & Rana, N.P. (forthcoming). State of the Art in Open Data Research: Insights from Existing Literature and a Research Agenda. *Journal of Organizational Computing and Electronic Commerce*. DOI: 10.1080/10919392.2015.1124007.
- Zuiderwijk, A. (2015). Open data infrastructures: The design of an infrastructure to enhance the coordination of open data use. 's-Hertogenbosch: Uitgeverij BOXPress.
- Zuiderwijk, A., Jeffery, K., Bailo, D., & Yin, Y. (forthcoming). Using open research data for public policy making: Opportunities of Virtual Research Environments. To be presented at the Conference on E-Democracy and Open Government (CeDEM), Krems an der Donau, Austria.

About the Organisers

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Dr. Anneke Zuiderwijk is a researcher at the Faculty of Technology, Policy, and Management at Delft University of Technology. She holds a PhD (with honor) in open data infrastructures. Her research focuses on open data and data infrastructures. Recently, she was ranked as one of the most prolific researchers in open data research by Hossain, Dwivedi and Rana (2015). More information: <http://www.tbm.tudelft.nl/over-faculteit/afdelingen/engineering-systems-and-services/sectie-ict/medewerkers/anneke-zuiderwijk-van-eijk/>.

Marijn Janssen

Marijn Janssen is a full Professor in ICT & Governance and head of the Information and Communication Technology section of the Technology, Policy and Management Faculty of Delft University of Technology. He is Co-Editor-in-Chief of Government Information Quarterly, Associate Editor of the International Journal of Electronic Business Research (IJEER), Electronic Journal of eGovernment (EJEG), International Journal of E-Government Research (IJEGR), Decision Support Systems (DSS) and Information Systems Frontiers (ISF). He was ranked as one of the leading e-government researchers in a survey in 2009 and 2014 and has published over 320 refereed publications. More information: www.tbm.tudelft.nl/marijn.

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Yi Yin MSc is a researcher at the Faculty of Technology, Policy, and Management at Delft University of Technology. He holds an MSc in Systems Engineering, Policy Analysis and Management and BSc in Computer Science. His research focuses on data-driven security, privacy and trust policies.

Keith Jeffery

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 the Science and Technology Facilities Council. Keith holds three honorary visiting professorships, and is a Fellow of the Geological Society of London and the British Computer Society. Keith is past president of ERCIM and euroCRIS.

Daniele Bailo

Dr. Daniele Bailo is an Engineer in Computer Science at Istituto Nazionale di Geofisica e Vulcanologia (INGV), where he works for the European Plate Observing System integration plan as e-Infrastructure designer. Topics of expertise include e-infrastructure design, interoperability of systems, team coordination, metadata standards for interoperability, Web2.0 technologies, big data and noSQL databases, web application development with OO frameworks.



Policy versus Reality in Open Access Publishing in Academia, Industry, and Beyond

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Abstract: Sustainable research and innovation strongly depend on reliable data, which are easily accessible. Open Access publishing plays a key-role in this environment. Yet, journal subscription charges by publishers can be a hurdle, especially for smaller institutes, 3rd-world countries, and individual researchers, while conflict of interest prevent companies and states to release knowledge and data from their repositories. The workshop therefore aims at shedding light from multiple perspectives on this topic and to reveal possible solutions and best-practices in academia, industry, and beyond.

Keywords: Open Access, Open Innovation, Open Research, Open Data, Policies

1. Topic

The general topic of *Open Access* is broad and covers various fields. While often linked to scientific publications only, it has many more dimensions that have to be considered.

In **academia**, Open Access is foremost related to publications and their availability to the public without fees of any kind. Researchers have found strong evidence that the factor of a publication being open access has significant impact on its citation numbers (Lawrence, 2001; Harnad & Brody, 2004). In a time where the visibility and credibility of a scientist strongly depends on quantitative metrics such as impact factors or citation counts (Brody, 2013), this aspect cannot be ignored. Many journals offer so-called green open access, which is the free access to publications via self-archiving by the authors (Björk et al., 2014). While this is a convenient method for keeping the cost regarding publications low, it affects the quality of the available versions. This is due to the fact that authors are not always allowed to provide the final publication, but pre-versions, which could be incomplete or erroneous in comparison to the final paper. In addition, many publication venues are offering also a golden Open Access approach. This approach provides the public with free access, but imposes publication fees of several hundred up to several thousand Euros per article on its authors. While these fees are usually covered by the authors' institution, this can be a problem for smaller institutes or institutes in developing countries.

In **industry**, Open Access is one key component in the paradigm shift from closed research and development environments towards Open Innovation principles. The idea behind this approach is to open up one's own development processes and share data and knowledge with others. By doing so, "narrow-minded" environments can be freed and innovation and product cycles can be accelerated via introducing new ideas, concepts, and best practices (Chesbrough, 2006). Yet not every involved party sees only positive aspects about this shift. There are also voices claiming that there is the potential pitfall of diffusing relevant knowledge (Rivette & Kline, 2000) and to disclose company essentials (Kline, 2003).

Beyond the two aforementioned fields, another area worth mentioning is the **public sector**. Due to EU-enforced regulations regarding the necessity to publish public sector information¹ to foster innovative business ideas and EU-based economy as a whole, issues arise such as data privacy, conflicts of interests and challenges regarding data publishing and data curation.

2. Description and Objectives of the Workshop

The workshop addresses current discussions and controversial topics regarding Open Access in various application domains such as academia, industry, or the public sector. The main objectives of this workshop are twofold: i) we intend to compare established open access policies with reality, and ii) we want to collect data and experiences from the workshop participants, in particular their approach towards open access, the role and influence of institutions in their field of activity, and their driving motivation behind following the open access paradigm.

3. Relevance of the Workshop to the CeDEM Conference

The CeDEM conference series focuses on the agenda of open government, fusing topics such as e-democracy and e-participation and bringing together open government experts from academia, politics, government and business to elaborate on innovations, issues, ideas, and challenges in today's digital society. This also reflected in this year's track composition. A dedicated track is announced regarding **open data, transparency and open innovation**. As Open Data can build the basis for various engagements in democratic processes, challenges regarding the production, delivery and quality control have to be solved. In a second track, which is entirely centred on the topic of **Open Access**, the related emerging models on forms of cooperation and knowledge sharing away from single scientific lighthouses towards an entangled network of science. By addressing issues found in both tracks and also in the overall theme of the conference, the envisioned workshop supports participants from a very broad expert base.

¹ DIRECTIVE 2013/37/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 26 June 2013 amending Directive 2003/98/EC on the re-use of public sector information. Online: <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32013L0037&from=DE> (08.02.2016)

4. Questions to Be Addressed During the Workshop

The main goal of this workshop is to shed light on various aspects of open access, also coming from different viewpoints. In order to encourage the participants to include their questions as well, we provide them with an initial set of questions, which can then be enriched by their own aspects. The following pool of questions regarding Open Access (OA) will be provided to the audience:

- What policies do you use?
- What policies do you know of?
- What good and/or bad experiences do you have with OA?
- What would you like to see in future?
- Who pays for OA?
- What are the policies in your institution versus what is the reality of working with OA?
- Which OA activities do you take part in?
- Where do you publish OA?
- Difference practitioners/industry domain and researchers? What are the regulations for publishing? Some White Papers are OA per default?
- What is the motivation behind OA publishing? Why not use OA? Reputation? Role of institution? Role of publisher? Finances? Repositories?
- What is the role of communities or of a specific area of research?
- What is the responsibility of publishers within the realm of OA?
- What is your approach regarding platforms like Researchgate or archive X?
- What is your approach regarding self-archiving?
- Does one approach fit all disciplines?
- How valuable is OA and how can we communicate it?

5. Format of Workshop

The workshop consists of two parts. It will start out with a short introduction to the overall topic, followed by a brief talk from Karin Siebenhandl of the Danube University Krems regarding its Open Access policies.

Afterwards, the participants will be presented with a pool of initial questions (see section 4) regarding the topic Open Access publishing. The participants will be split into groups, each group

dedicated to particular view points on the topic, e.g. “academia”, “industry”, “policies” and “beyond”. Each of these groups should aim to answer the crowd-selected questions (from the list above).

The workshop finishes with a discussion, where the groups present and compare their results regarding the elaborated questions.

References

- Björk, B. C., Laakso, M., Welling, P., & Paetau, P. (2014). Anatomy of green open access. *Journal of the Association for Information Science and Technology*, 65(2), 237-250.
- Brody, S. (2013). Impact factor: Imperfect but not yet replaceable. *Scientometrics*, 96(1), 255-257.
- Chesbrough, H. W. (2006). The era of open innovation. *Managing innovation and change*, 127(3), 34-41.
- Harnad, S. & Brody, T. (2004). Comparing the impact of open access (OA) vs. non-OA articles in the same journals. *D-lib Magazine*, 10(6).
- Kline, D. (2003). Sharing the corporate crown jewels. *MIT Sloan Management Review*, 44(3), 89.
- Lawrence, S. (2001). Online or invisible. *Nature*, 411(6837), 521.
- Rivette, K.G. & Kline, D. (2000). *Rembrandts in the attic: Unlocking the hidden value of patents*. Boston: Harvard Business Press.

About the Organisers

Noella Edelmann

Noella Edelmann completed her Psychology Degree at the University of Strathclyde, UK and her Masters' Degrees on Organisational Psychology at the University of London, UK and the on E-Government at the Danube University Krems, Austria. Noella is a research fellow at the Department for E-Governance and Administration at the Danube University, her main research interests are the psychological aspects of behaviour on the internet and Open Access. She is Co-chair of the Conference for E-democracy and Open Government and managing editor of the international Open Access eJournal for E-Democracy and Open Government (JeDEM).

Judith Schoßböck

Judith Schoßböck is a research fellow at the Centre for E-Governance at Danube University Krems, Austria and managing editor of the OA eJournal JeDEM (jedem.org). Among her research interests are e-democracy, online activism, digital literacy, open government and occasionally cyber utopia or dystopia. She was inter alia involved in a study on the internet skills of 14-year-old youths in Austria and the development of a youth participation platform on which four European countries cooperated. She currently works on a project researching electronic identification in e-participation.

Thomas J. Lampoltshammer

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Open Space



Hack The Government! Empowering Citizens to Make Meaningful Use of Open Data

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Abstract: Citizens' use of Open Data is often limited to the use of apps. The design of the (app based) public service as well as the interpretation of the data is done for them. The organization of local hackathons can promote citizens' data literacy and better use of available Open Data for service transformation purposes. This promises to nicely combine citizen intelligence with participatory innovation with and by public service beneficiaries as the "next wave" of inclusive (e-)Government practice. In the proposed workshop, we simulate the organization and dynamics of a Hackathon based on the evidence at hand.

Keywords: hackathons, Open Data, public service innovation, inclusive Government, citizen participation

Acknowledgement: The organization of this workshop has been made possible in part by the EU contribution under the H2020-ICT-2015 programme to the project entitled Open4Citizens (Ref. No. 687818). However, the opinions expressed herein are solely of the authors and do not engage any European institution.

1. Topic

Although a large quantity of data is being made available by public administrations in open form, the usability and utility of those datasets heavily depend on the file format attributed by the publishing organisation on the one hand, and the possibility to generate meaningful applications out of the published data on the other. As usability and/or utility are not that often guaranteed, this prevents Open Data from becoming a new Commons, a valuable public resource that support a new generation of services.

However, we are aware that a growing number of experiences from both EU and non-EU cities and regions explicitly deal with these issues in a proactive manner, and the results documented therein confirm the intuition that once some specific barriers are removed, the value and potential

of Open Data can be seriously enhanced. The examples we have in mind have successfully realised the goal of letting citizens, not-for-profit organisations, public authorities, IT experts, start-up companies and many other stakeholders work together to the development of new services and applications based on Open Data. It is therefore important that the knowledge created by those experiences is more broadly disseminated and clearly understood – not only by IT experts or businesses, but also citizens and public administrations.

For this reason the Open4Citizens project is proposing this workshop as an opportunity to raise awareness about an emerging phenomenon – including, but not being limited to, Hack Days, Design Jams, Gov/Service Jams, ICT Living Labs and other similar forms of public-private interaction carried out at regional and City level in Europe and overseas.

2. Description and Objectives of the Workshop

2.1. What Will the Organizers Take Home

We would like to collect fresh evidence and inputs that support the definition of a best practice for participatory Open Data management and the joint definition of new applications for public services between governments and citizens.

2.2. What Will the Participants Take Home

The workshop aims at offering a proof-of-concept for the feasibility of Participatory Prototyping to finalise the use of Open Data as a resource for a new generation of public services. It also aims at providing an overview of available methodologies and strategies to support citizens' participation in the development of such services.

3. Relevance of the Workshop to the CeDEM Conference

There is a perfect matching with the key topics of the conference (Open Data / Government and eParticipation / eDemocracy).

4. Questions to Be Addressed During the Workshop

The workshop will propose some crucial questions emerging from the Open4Citizens project:

- What are the best existing practices of citizen involvement in public service co-design around Europe and internationally?
- Particularly; what are the scope and potential of Hackathons and similar participatory forms of co-development of applications in the government domain?
- What are the most common issues emerging from the earliest cases?
- How can Hackathons or other forms of local participation be organized in order to support citizens' involvement in the creation of a new generation of public services?

5. Format of Workshop

We foresee the need of occupying one slot of 50 minutes in the following manner.

10' – Introduction to the workshop and discussion of objectives

20' – Group work simulating the organization and dynamics of a Hackathon

- Ideation phase
 - motivation and drivers
 - stakeholders to be engaged
 - planning and budgeting
 - resources and financing
- Preparation phase
 - venue and logistics
 - equipment and installations
 - catering and support services
 - third party involvement
- Execution phase
 - alternatives: The topic could be pre-defined, or defined by the audience.

20' – Restitution of results (discussion and conclusions)

References

- van Waart, P., Mulder, I. & de Bont, C. (in press). A Participatory Approach for Envisioning a Smart City. Forthcoming: in *Social Sciences Computer Review*. First published online on October 21, 2015 as doi:10.1177/0894439315611099.
- van Waart, P., Mulder, I. & de Bont, C. (2015). Participatory Prototyping for Future Cities. In: *Proc. of PIN-C 2015: Reframing design, the 4th Participatory Innovation Conference, 18-20 May 2015* (pp. 337-343), The Hague, the Netherlands.

About the Organisers

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Researcher on Frugal Government at the Department of Architecture and Urban Studies of Politecnico di Milano (Italy), he holds a notable experience in the domains of eParticipation and Living Labs both at theoretical and pragmatic level. He is author of several papers and EU funded projects in those domains.

Grazia Concilio

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Ingrid Mulder

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Louise Klitgaard Torntoft

Research assistant at the Department of Architecture, Design and Media Technology of the University of Aalborg (Denmark), she is drawing on a relevant combination of interdisciplinary skills that help enable the empowerment of citizens to make more meaningful use of open data.

Marc Aguilar

Living Labs researcher at the i2cat Foundation, a Barcelona-based research and innovation center. His professional and research interests include: social entrepreneurship and innovation, qualitative market research, digital ethnography, user experience research, and futures studies.



Speed Dating on Smart Contracts

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Abstract: The workshop enables its participants to dive into the future potential of Contract Law associated with technical innovations of blockchain technology. While the latter is mostly known as the technical foundation of the crypto-currency Bitcoin, another field of application has recently come into focus: Smart Contracts. The possibility of self-executing, fully automatized contracts asks not only for the adaptability of the law to the rules of a digital world, but also challenges the foundation of a modern state: its duty to protect the exercise of party autonomy. In a concept of speedy one-on-one-discussions, the workshop tries to build interdisciplinary bridges between law and computer science in order to access new fields of research.

Keywords: smart contracts, blockchain, contract law, crypto currency, speed dating

1. Topic

The idea and the terminology of a “Smart Contract” goes back to the computer scientist and lawyer Nick Szabo who defined it as a

“computerized transaction protocol that executes the terms of a contract.” (Szabo, 1994).

Crypto-currencies are one example of what Szabo understood as Smart Contracts (Szabo, 1997). With the introduction of Bitcoin (BTC) and the underlying technical concept of blockchain technology (Nakamoto, 2008), Szabo’s idea has become reality. In 2016 we can say that BTC has stood the test of time.

The next logical step is exploring the possibilities of executing conclusive contractual relationships in accordance to the principles of Contract Law. Start-Ups are already pioneering in this field. Ethereum, for instance, intends to provide a system based on blockchain technology in order to allow a programmer to write contracts in source-code (Buterin, 2014). Also IBM has announced an open-source-platform with protocols for Smart Contracts (MacMillan, 2015). Furthermore, legal scholars have attempted to transform the fundamental legal structure of a financial contract into a state-transition logic that can be formalized mathematically as a finite-state machine (Flood/Goodenough, 2015). The State of Vermont is the first political subdivision to draft a law considering to implement blockchain technology “for electronic facts and records” (Law No. 51, 2015, p. 7). All of this shows that Smart Contracts are worth investigating scientifically.

1.1. Legal Perspective: Basics of Contract Law

The workshop will be based on the regulations of the "Bürgerliches Gesetzbuch" (BGB) – the Civil Code of the Federal Republic of Germany. The BGB looks back on more than a century of applications in every day life and has thereby shown a high degree of flexibility dealing with social and technological transformations. Although Smart Contracts are – in contrast to the other technical innovations such as telephone, fax or e-mails – designed for a minimum or even the absence of human interaction, the organisers presume that the abstract framework of the BGB, however, has the regulatory potential to be applied to Smart Contracts, too. A sales contract of computer software is chosen as a practical and didactic example. The workshop will briefly introduce the essential stages of a contract which the technical design of a Smart Contract needs to include in order to be effectively in accordance with the law.

1.2. Technical Perspective: the Concept of Blockchain

Originally intended as a peer-to-peer electronic cash system, Satoshi Nakamoto introduced the idea of blockchain technology and called it Bitcoin (Nakamoto, 2008). The blockchain can be seen as a publicly available, decentralized database storing transactions between users. As a central trusted authority is missing, the task of verifying transactions and testing their validity is delegated to a consensus mechanism based on cryptography. A blockchain consists of an ordered set of unique blocks, with each block having a predecessor, except for the first block (genesis block). The order of blocks is a result of how a new block is found: It can only be "mined" by someone, contributing computational power to the blockchain network. In order to do so, one has to solve a computationally difficult riddle which is only possible, if one knows the unique identifier of the latest block. At any time, the latest valid block is used to store all new transactions. Transactions, which are added to the latest block, are validated by the blockchain network. Every participant has its own copy of the publicly available blockchain. As the concept is based on consensus and mutual trust, every participant checks every transaction for its integrity and validates it publicly by adding it to his own copy of the blockchain. In the case of Bitcoin this process of validation checks if the sender possesses sufficient funds to make the transaction. The content and context of real world implications to be represented in a blockchain transaction is limitless in theory, including the complex execution of different kinds of contracts - if the stages of a legal contract are (and can be) translated into states and events of a finite-state machine.

2. Description and Objectives of the Workshop

The workshop focuses on the technical and legal challenges of Smart Contracts, i.e., legally binding agreements solely concluded using digital technology and being executed automatically. The goal of the workshop is to guide the participants through a comprehensive process of designing a simple Smart Contract. The central task will be to develop a model of a Smart Contract using the properties of blockchain. By solving problems together, technical and legal experts can get a closer insight in each others' methodology and concepts. Ultimately, the workshop tries to identify the parameters for future research on Smart Contracts.

3. Relevance of the Workshop to the CeDEM Conference

One of the core duties of a democratic state (in a market economy) is to secure the enforcement of private contracts between its citizens. Over the past decades, the legislative bodies and legal scholars have created a vast amount of regulations and concepts in order to define what a contract is, what its content has to look like and how conflicts in a contractual relationship have to be solved. All of this is based on the assumption that communication between the two parties takes place orally or in written form. However, the technical innovations have rendered it possible – though with some restrictions – to create a self-executing contract: Smart Contracts can be formed and processed on a fully automatic scale through a digital agent on a blockchain network. Human interaction becomes dispensable. The topic of Smart Contracts poses questions to the fundamentals of a democratic state as a regulator and monitor of the exercise of party autonomy – and thus can be seen as an “Emerging Issue in E-Democracy and Open Government”.

4. Questions to Be Addressed During the Workshop

The following questions shall be addressed during the workshop:

- Is there a way of implementing the guidelines/specifications of legal into source code?
- Can the stages of a (standard) legal contract be translated into states and events of a finite-state machine?
- Is the blockchain technology suitable for modelling Smart Contracts? If not, what is lacking?
- If the mere formation of a Smart Contract becomes the equivalent of its content and execution (which take places later on the time scale), where are interfaces for human interference required? How can and should they be implemented?
- What is the role of the law, of lawyers and the courts in a world of Smart Contracts?

5. Format of the Workshop

After a brief introduction of the basic technical facts about blockchain technology and the fundamentals of Contract Law by the organisers (5 min. each), the participants are requested to engage in an interactive format of one-on-one discussions with each other. For this purpose, they will be split up into two groups: technical and legal experts. According to the principles of “Speed Dating“, they will rotate from one partner of the opposite group to another, the organisers will provide specific questions that build upon each other to be discussed in each iteration. The one-on-one format allows an intense and personal encounter with another point of view. At the same time it represents the typical situation of concluding a contract. The regular rotation ensures a flow of thoughts within the group, while the successive structure of the questions guarantees continuity and a common ground for each new round. The format tries to avoid common disadvantages of a group discussion such as domination by particular participants and digressive comments.

References

- Back, Adam; Corallo, Matt; Luke, Dashjr; Friedenbach, Mark; Maxwell, Gregory; Miller, Andrew; Poelstra, Andrew; Jorge, Timón; Wuille, Pieter (2014). *Enabling blockchain innovations with pegged sidechains*. Open Science Review. Retrieved January 6th 2016 from <http://www.opensciencereview.com/papers/123/enablingblockchaininnovations-with-pegged-sidechains> (2014).
- Buterin, Vitalik (2014). *Ethereum White Paper – A Next-Generation Smart Contract and Decentralized Application Platform*. Retrieved January 6th 2015 from <https://github.com/ethereum/wiki/wiki/White-Paper>.
- Flood, Mark; Goodenough, Oliver (2015). *Contract as Automaton – The Computational Representation of Financial Agreements*. Office of Financial Research Working Paper Series, 15-04.
- Kosba, Ahmed; Miller, Andrew; Shi, Elaine; Wen, Zikai; Papamanthou, Charalampos (2015). *Hawk: The Blockchain Model of Cryptography and Privacy-Preserving Smart Contracts*. Cryptology ePrint Archive, Report 2015/675, 2015.
- MacMillan, Robert (2015). *IBM Adapts Bitcoin Technology for Smart Contracts*. The Wall Street Journal Online, 16.09.2015. Retrieved January 6th 2015 from <http://www.wsj.com/articles/ibm-adapts-bitcoin-technology-for-smart-contracts-1442423444>.
- Nakamoto, S. (2008). *Bitcoin: A peer-to-peer electronic cash system*. Consulted, 1(2012), 28.
- Szabo, Nick (1994). *Smart Contracts*. Retrieved January 6th 2016 from <http://szabo.best.vwh.net/smart.contracts.html>.
- Szabo, Nick (1997). *Formalizing and Securing Relationships on Public Networks*. First Monday, Volume 2, Number 9 - 1 September 1997. Retrieved 6th January from <http://firstmonday.org/ojs/index.php/fm/article/view/548/469>.
- Lessig, Lawrence (2000). *Code is Law: On Liberty in Cyberspace*. Harvard Magazine 2000. Retrieved 6th January from <http://harvardmagazine.com/2000/01/code-is-law-html>.

About the Organisers

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