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Online Lurking: Definitions, Implications, and Effects on E-participation

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Declaration: I hereby declare that this doctoral thesis, my original investigation and achievement, submitted for the doctoral degree at Tallinn University of Technology, has not been submitted for any other degree or examination.

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Online-"passimine": definitsioonid, järelmid ja mõju e-osalusele

NOELLA EDELMANN

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LIST OF ORIGINAL PUBLICATIONS

This thesis is based on the following original publications:

I. **Edelmann, N.** 2013. "Reviewing the Definitions of 'Lurkers' and Some Implications for Online Research." *Cyberpsychology, Behaviour, and Social Networking* 16(9), 645-649. (1.1, citations 26).

II. **Edelmann, N.** 2016. "What is Lurking? A Literature Review of Research on Lurking." In G. Riva, B. Wiederhold and P. Cipresso (eds). *The Psychology of Social Networking*. Vol. 1: Personal Experience in Online Communities. Warsaw/Berlin: De Gruyter Open, 159-174. (3.1).

III. **Edelmann, N.** and P. Cruickshank. 2011. "Introducing Psychological Factors into E-Participation Research." In A. Manoharan (ed.). *Rutgers University, USA, E-Governance and Civic Engagement: Factors and Determinants of E-Democracy*. Hershey, PA: IGI Global, 338-361. (3.1, citations 6).

IV. **Edelmann, N.**, P. Parycek and J. Schossböck. 2011. "The Unibrennt Movement: A Successful Case of Mobilising Lurkers in a Public Sphere." *International Journal of Electronic Governance* 4(1-2), 43-68. (1.1, citiations 6).

V. **Edelmann, N.** 2012. "Lurking and De-Lurking in E-Participation." In G. Bradley, D. Whitehouse and A. Lin (eds). *Proceedings of the IADIS International Conference ICT, Society and Human Beings 2012 and e-Commerce 2012*. Lisbon, Portugal 17-23 July 2012: IADIS Press, 151-155. (3.1).

VI. Sachs, M., J. Höchtl and **N. Edelmann**. 2012. "Collaboration for Open Innovation Processes in Public Administration." In Y. Charalabidis and S. Koussouris (eds). *Empowering Open and Collaborative Governance: Technologies and Methods for Online Citizen Engagement in Public Policy Making*. Heidelberg: Springer, 21-39. (3.1, citations 18).

VII. **Edelmann, N**., R. Krimmer and P. Parycek. (2017). "The Value of Lurking in E-Participation." In L. Terán, A. Meier (eds). *Proceedings of the Fourth International Conference on eDemocracy & eGovernment (ICEDEG)*, Quito, Ecuador: IEEE, 19-21 2017, 86-93. (3.1).

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VIII. **Edelmann, N.** 2014. "Definitions and Meanings of Online Lurkers." In M. Khosrow-Pour (ed.). *Encyclopedia of Information Science and Technology*. 3rd edn. Hershey, PA: IGI Global, 6438-6445. (3.2, citations 1).

IX. Cruickshank, P., **N. Edelmann** and C. Smith. 2010. "Signing an e-Petition as a Transition from Lurking to Participation." In J. Chappellet,

O. Glassey, M. Janssen, A. Macintosh, J. Scholl, E. Tambouris and M. Wimmer (eds). *Electronic Government and Electronic Participation*. 2010 edn. Linz: Trauner, 275-282. (3.4, citations 34).

X. **Edelmann, N**. and P. Parycek. 2011 "Collaborative Behaviours in E-participation." In P. Parycek, M.J. Kripp and N. Edelmann (eds). *Proceedings of the International Conference for E-Democracy and Open Government*. Krems: Donau-Universität Krems, 119-130. (3.4)

INTRODUCTION

Focus and Aim of the Thesis

Online participation is popular, and businesses and public institutions alike want online citizens and amateurs to actively participate, as the internet not only leads to increased economic, social and cultural benefits (van Dijk and van Deursen 2014; Tapscott et al. 2007) but also allows people to transcend geographic boundaries and interact with others who share common interests. The internet seems to be able to overcome a number of difficulties found in offline situations – to the extent that it is even seen as the "glue" that helps people stay together, enabling them to collectively and collaboratively solve a range of social and societal problems (Preece 2000; Schuler 2010) – and allows anyone who is able to connect to the internet to be an active participant, a content creator instead of a passive viewer (Rainie and Wellman 2012). When discussing the internet and its development, the word "participation" is one of the most important keywords, and when in 2006 Time Magazine nominated "You" as the person of the year (Grossman 2006), "you" implied all the internet users participating online, generating and producing online content, chatting, sharing, emailing, blogging, socialising, creating Wikis; representing hours of human activity, behaviours and "irreplaceable human attention" (Gitlin 2007, 4).

The online environment is an accepted part or way of life for many, yet online participation is not evenly distributed among users (Kim 2000; Preece and Shneiderman 2009), and online user behaviours are diverse, with long-tail distributions (Anderson 2009; Hogg and Szabo 2011). Research on online participation has grown alongside increased internet activity, and researchers from a variety of academic disciplines, such as psychology, social, education, medical, political, information and communication sciences, IT and law, study online participation. A typical research question is "We want to know what kind of users they are when it comes to participation in online communities. Are they active or passive participants?" (Isakovič and Sulčič 2011, 365), and, as research often focuses on visible online participation, such as number of clicks, postings, the answer is usually that levels of online participation are low and that inactivity characterises the online environment (Nielsen 2009).

The use of the internet and of online social media, networks, tools and user-driven applications has seen massive growth. Users have responded and reacted in a wide range of ways, sometimes in unintentional or unconventional ways, and a more refined approach to online participation that relies on research, evaluations and models that go beyond dichotomies such as post versus non-post (or click versus non-click), visible versus invisible, active versus passive, valuable and non-valuable participation is needed. Some researchers have

addressed this complexity; for example Schäfer (2011), who shows the different ways people participate online and the implications this has for digital culture, or Malinen (2015), who reviews studies of online participation and concludes that not only is there no clear definition of online participation, but also that most of the research evaluates online participation in terms of its quantity where "active user participation has been identified as a key component to any successful online community" (229).

Much research still draws on or develops definitions and models of online participation that focus on active participation understood as visible participation, relying on a dichotomy of active and passive online participation. Research on online participation still classifies participants according to the amount or type of participation, with a minority of "active" users and a majority of "passive" or "inactive users", the latter collectively described as "lurkers" (**I**, **II**, **VIII**), drawing conclusions based on potentially unrepresentative segments of the population. This has led to a big gap in understanding lurkers and their activities in several online contexts. The focus of this thesis is on the online behaviours subsumed under the label "lurking", often considered to be a negative behaviour in the online context and seen as the detrimental use of the online environment or online tools. The thesis aims to fill the research gap that stems from research that focuses and analyses visible online participation only (such as postings, comments, likes) rather than consider the spectrum of online activities that may not be visible yet still have an impact and which has led to simplified categorisations of online behaviours. These categorisations of online activities are often too broad and so make it difficult to understand who does what online, why, and how this influences participants' lives, their community and society at large.

This thesis addresses lurking in the context of research on online participation and e-participation and addresses the research gap by answering the following three research questions:

1. How is lurking defined?
2. What are the implications of the definitions of lurking used in research?
3. How does online lurking impact e-participation?

To answer the research questions, this thesis is structured into three separate sections, where each section answers one of the above research questions.

The first part of this thesis answers the research question "How is online lurking defined?" by reviewing the literature. The literature review follows principles of classification research and brings together the observations gained. This classification is non-numerical and non-exhaustive, it provides not only an overview of the definitions as used in the literature, it also highlights controversies and research challenges. The answer to the research question provides many definitions of lurking. These definitions are classified and presented as a taxonomy. Whilst academics generally agree that lurking is

understood as the most common online behaviour, the taxonomy shows many other definitions and interpretations of lurking behaviours (**I**, **II**, **VIII**). These definitions are classified into four categories: definitions that see lurking as negative behaviours, negative definitions that describe lurking as inactivity, as legitimate behaviours or as active behaviours. The taxonomy is summarised in Table 1, and, given that lurkers are seen as representing the largest group of users in online participation, this section concludes by emphasising the importance of "knowing your lurkers" (**VII**) and being aware of the different definitions used in the research literature.

The second research question, "What are the implications of the definitions of lurking used in research?", is answered in Section 2. The categorisation and analysis of the definitions reveals that the choice of definition affects the aims of the research, how research is conducted, and the way research results are interpreted and implemented (**I**, **II**): Negative definitions see lurking as detrimental and will suggest encouraging participation by changing online behaviours ("de-lurking strategies") (**V**), whilst definitions that see lurking as a legitimate behaviour suggest that lurking represents legitimate and valuable online roles (they are learners, readers, listeners), and participants' behaviours do not need to be changed (**I**, **II**, **V**). Research that sees lurking as an active behaviour with extensive (online and offline) network effects will suggest developing strategies that encourage more lurking (**IV**). The choice of definitions therefore affects how research results are implemented in the development of the internet and online environments. Research that uses definitions of lurking as a valuable behaviour or as a range of active behaviours, shows how lurking is part of online participation and contributes social capital (**IV**, **VII**, **IX**). Rather than trying to change people's behaviours, force visible participation (**V**) or try to attract those who are not interested (the "ignorers") (**III**), this thesis proposes that Takahashi, Fujimoto and Yamasaki's (2003) definition of lurking provides a useful approach to understanding lurkers, their activities and how they contribute to online environments (**II**, **IX**).

The third research question, "How does online lurking impact e-participation?" looks at lurking specifically in the e-participation context. E-participation represents both a dimension of online participation and the larger concept of e-democracy that enables, encourages, broadens and deepens political participation and democratic citizenship (**III**, **IV**, **X**). It was chosen for analysis in this thesis, as researchers often claim low levels of online participation in e-participation initiatives, due to, amongst other reasons, lurking. E-participation is an online context that requires collaborative behaviours (**VI**, **X**), and this thesis aims to show that lurkers do not represent the disinterested public and that they can contribute to the aims of e-participation more than is assumed by evaluations that rely on assessments of the "active participants" and by counting the number of visible contributions (**IV**). By using definitions of lurking as an online behaviour that is legitimate, valuable and active, lurking can be viewed as enhancing democratic principles and contributing to a vibrant, inclusive,

transparent and responsive democratic society (**IV**, **VI**, **VII**). In e-participation, as well as other forms of public participation, or in open and collaborative production processes in governments and public administrations (**VII**, **X**), lurkers can participate and contribute by taking an interest, sharing information and content, connecting, linking and hyperlinking, providing support and engaging in behaviours that affect peer production, collaboration, innovation and ensure the transparency of e-participation and government processes, tenets central to e-democracy and a functioning and inclusive society (**VI**, **X**). In this section, e-participation is first described in terms of its aims. This is then followed by a brief overview of the focus of research in e-participation, and it is shown how the use of negative definitions of lurkers has led to the development of de-lurking strategies in e-participation that aim to increase visible participation. The impact lurkers can have on e-participation presented here is based on an analysis of e-petitions and the results from a case study of e-participation (**IV**). It shows that e-participation relies on the mobilisation of lurkers but that research is furthered by adopting definitions of lurking as a valuable and active behaviour (**IV**, **VII**).

The thesis concludes with a fourth section, "Recommendations for Evaluating E-participation". It provides some relevant questions for research on online participation and e-participation. Although some suggestions are made based on the answers in this thesis, future research may benefit by considering these questions and finding further answers to them.

The thesis comprises an introduction and ten published research articles. The articles have been selected as they address the research questions but also mirror a development in the author's understanding of lurkers, online participation and e-participation. Through individual efforts (**I**, **II**, **V**, **VIII**) as well as with colleagues at the Department for E-Governance and Administration, Danube University Krems, Austria (**IV**, **VI**, **VII**, **X**), the Ragnar Nurkse Department of Innovation and Governance, Tallinn University of Technology, Estonia (**VII**) and Edinburgh Napier University, Scotland **(III**, **IX**), lurkers are defined, and the implications of using the definitions in research on online participation (**I**, **II**, **VIII**) and e-participation (**III**, **IV**, **V**, **VII**, **X**) are investigated. The ideas and analyses have been presented at PhD workshops and international conferences (**V**, **VII**, **IX, X**), where valuable feedback was gained.

The following publications (**I**, **II**, **VIII**) aim to answer the first two research questions:

1. How is lurking defined?
2. What are the implications of the definitions of lurking used in research?

The article "Reviewing the Definitions of 'Lurkers' and Some Implications for Online Research" (**I**) focuses on the many definitions of lurking and concludes that most definitions see lurking as a problematic behaviour that needs to be changed. Beside the necessity to see lurking as an important dimension of

online participation, it also considers the role of definitions in research and raises the question whether the online environment always benefits by turning lurkers into posters.

Research often focuses on the small core of participants who generate much of the visible content, and the article "What is Lurking? A Literature Review of Research on Lurking" (**II**) reviews the definitions of lurking and shows how lurkers can be seen as valuable and active participants by choosing the appropriate definition when conducting research on online participation.

The article in the appendix "Definitions and Meanings of Online Lurkers" (**VIII**) categorises definitions of lurking as a negative behaviour or as a positive behaviour. It concludes that lurking represents a form of online participation and communication that has wide-reaching effects and consequences.

The following articles (**III**, **IV**, **V**, **VI**, **VII**, **IX**, **X**) address the third research question:

3. How does online lurking impact e-participation?

The article "Introducing Psychological Factors into E-Participation Research" (**III**) represents the author's first attempt to apply a small selection of psychological approaches to the context of e-participation. In this paper, the aim is to move away from technological/technical explanations, suggesting that, in e-participation, more emphasis should be on the individual. It also includes a first attempt to show how lurkers do not represent the "ignorers" in e-participation.

"The Unibrennt Movement: A Successful Case of Mobilising Lurkers in a Public Sphere" (**IV**) is a case study of an e-participation initiative in Austria. The evaluation includes lurkers, showing the impact they have on the e-participation initiative. As it was shown that lurkers contribute to the impact and success of the initiative, this case study highlights the need to include lurkers in the evaluation of e-participation and the importance of selecting positive definitions of lurking.

In "Lurking and De-Lurking in E-Participation" (**V**), lurkers' roles and impact in e-participation are considered. It also looks at de-lurking strategies, those strategies that aim to increase participation by turning lurkers into posters, and considers 1. whether the aim of e-participation should be to achieve the perfect information arena and 2. whether de-lurking is always the best strategy to achieve this.

The article "Collaboration for Open Innovation Processes in Public Administration" (**VI**) considers how lurkers engage in online collaborative behaviours and how they could contribute value to innovation in open collaborative government or public administration.

"The Value of Lurking in E-Participation" (**VII**) is a conceptual paper that emphasises a definition of lurking as active and explores how lurkers can contribute value to e-participation. By considering that a variety of online behaviours are possible but not always visible, it shows how citizens are involved in the co-creation of public value, which nevertheless necessitates an evaluation of e-participation that includes lurkers.

"Signing an e-Petition as a Transition from Lurking to Participation" (**IX**) is an article in the appendix that considers e-petitions as a tool for democratic input. The users of e-petitions are seen as being involved in a participatory process, and lurking is considered to imply a positive choice to pay attention to what is happening in a community.

The article in the appendix "Collaborative Behaviours in E-participation" (**X**) describes the online behaviours that are relevant in e-participation, such as collaborative behaviours and hyperlinking. It also draws up the potential limits of online collaboration as well as the tensions that arise when individual needs meet group needs.

The thesis research was kick-started in 2010 to find a way of improving the usability and user experience in e-participation and developing a de-lurking strategy for increasing participation (the preliminary title was "A User Experience Approach to Citizen Participation"). Whilst reading the literature, it became increasingly clear that online participation can be conceptualised in many different ways, and that one of the main "problems" are the "lurkers". A great deal of research and solutions have been proposed on how to solve the problem of low levels of online engagement, a problem also found in e-participation. Further analysis of the literature revealed not only many ways of being and participating online, but that lurking also can be defined in many ways, and the choice of definitions has an impact on the research, its outcomes and how the results are implemented. This is the research gap that the thesis contributes to: Online lurking, like any human behaviour and activity, is a complex phenomenon, and negative approaches are too broad, do not do justice to the online participants and do not help the development of the internet in general or specific instances such as e-participation. The Ragnar Nurkse Department of Innovation and Governance, Tallinn University of Technology, in Estonia or rather, E-Stonia (Vinkel and Krimmer 2017), provides the ideal "digital" setting to consider the questions raised in this thesis and to conduct research on lurking. Research was also conducted at the Department for E-Governance and Administration, Danube University Krems in Austria. Like Estonia, Austria has an advanced digital society and government; both countries are noted for their advances in electronic democracy, electronic government and administration.

1 Online Participation and Lurking

To answer the first research question "How is lurking defined?", it is important to begin by setting the context: online participation in general.

For many the online environment is an accepted part or way of life, and the internet offers several ways to contact and interact with others or access information (**II**, **III**): Figure 1 shows the number of active internet and social media users in relation to the world's total population in January 2017.

Figure 1: Key Statistics for the world's internet, mobile and social media use in 2017.
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Online participation and social-media activities include forming personal networks, connecting and linking to others, participating in discussions, creating communities; they can be used as tools or channels for voicing opinions, sharing information and may even encourage participation in real life (Horrigan 2001; Putnam 2000). People go online to chat, argue, engage in intellectual discourse, exchange knowledge, share emotions and provide emotional support, plan, brainstorm, gossip, feud, fall in love, find friends or lose them and play games. Participation in online activities can confer social and psychological benefits, provide support, information and opportunities for connection (**III**, **IV**). Figure 2 shows the current most popular tools used for such activities and the number of people using online tools and user-driven online applications, tools that seem to provide almost infinite choices (Anderson 2009; Katz 1997; Statista 2017). Successful outcomes of online participation and collaboration are possible, even though online participants have never met face to face, and they can achieve high performance, productivity and quality, as well as more efficiency and improved attendance (Abreu 2000; Brandon and Hillingshead 2007; Cascio 2000). It has even been suggested that the internet may be the "glue" that helps

[1] http://www.smartinsights.com/social-media-marketing/social-media-strategy/new-global-social-media-research/ (last accessed 14 April 2017).

people stay together and that it supports the collective help necessary for solving a range of social and societal problems (**IX**).

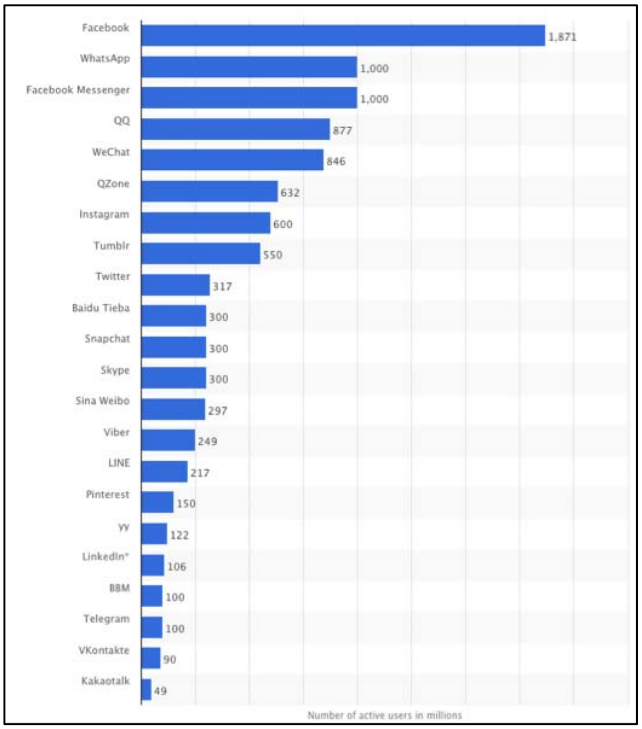

Figure 2: Top Social Network sites by the number of active users 2017: Social network sites worldwide ranked by number of active users (in millions, as of January 2017).
Reprinted with permission: www.smartinsights.com[2].

The distinction between interaction and content production has increasingly blurred as users go to online sites such as YouTube, Facebook or Digg to produce and share knowledge and information, write blogs, create Wikis, produce and combine services (mash-ups, apps), organise and engage in discussion (Archmann 2010; Slot and Frissen 2007). What is particular about the new "architecture of participation" is that it not only encourages users to contribute but to gain control over information, the process of production and diffusion (Governor et al. 2009, 22) and to collaborate extensively (**VI**, **X**).

[2] http://www.smartinsights.com/social-media-marketing/social-media-strategy/new-global-social-media-research/ (last accessed 14 April 2017).

1.1 Uneven Participation

Users have responded to the internet in a wide range of ways, sometimes in unintentional or unconventional ways (**III**). The online environment is an accepted part or a way of life for many, but online user behaviours are extremely diverse, so online participation is not evenly distributed among users (Joyce and Kraut 2006) and contains long-tail distributions among participants (Hogg and Szabo 2011): Individuals connect and share information with others at varying levels of involvement (**I**, **II**, **V**).

The research from many disciplines looks at online participation, considers who the participants are and why they engage in or like certain behaviours or activities (or not). This research will often focus on visible online participation, such as number of clicks, postings, content produced and will often lead to conclusions, such as (exemplified here by results from Tan et al. 2011):

- There is a concentration of activity among a few top users;
- The focus of attention is on a small number of the submitted content;
- Few active users form most of the links in the community networks.

Other researchers also classify users according to the amount or type of participation and conclude that low levels of participation or inactivity characterise the online environment **(I**, **II**, **VIII**). Nielsen (2006) describes online participation using the 90-9-1 rule: 90% of the users read or observe (but do not contribute), 9% of the users contribute from time to time, and 1% of the users participate a lot and account for most contributions. The 90-9-1 rule is often re-stated in diverse ways. The "1% rule" states that the number of people who create content on the internet represents approximately 1% (or less) of the people actually viewing that content (McConnell and Huba 2006). This proportion is found in several online environments; for example, in Open Source, 4% of the participants provide 50% of the answers on a user-to-user help site (Lakhani and Hippel 2003); in Wikipedia 2.5% of the users contribute 80% of all content (Tapscott and Williams 2006); on a typical online social network, the top 10% of users account for 30% of all production, and on Twitter, the top 10% prolific Twitter users account for over 90% of all tweets (Heil and Piskorski 2009). A study on social media (Williams et al. 2012) reveals that 80% of their research sample see themselves as spectators rather than active users on social media. Without giving precise numbers, Kim (2000) suggests that in online participation, the more active the users are (understood as regularly replying and posting comments), the less there are of them, whilst lurkers, those who do not post, represent the majority. Preece and Shneiderman (2009) present the Reader-to-Leader Framework of online participation that shows that online leaders typically contribute the largest number of comments and are the most active, but represent the smallest number of participants, whilst the majority are lurkers and are not active. Most research (by, e.g., Forrester Research 2010; Isakovič and Sulčič 2011) concludes with similar classifications, with a minority

of “active” users and a majority of “passive” or “inactive users”, the latter often described as “lurkers”.

So, the question is: Who or what are lurkers?

1.2 A Taxonomy of Definitions of Lurking

Many researchers describe the most common or popular online behaviour or users engaged in mass media, web 1.0 and web 2.0 as “lurking” or “lurkers”, respectively (**I**, **II**, **VIII**). Lurking is the most popular activity among online participants, and many people spend many hours lurking (**I**, **II**). It is made possible by technology that allows access without being visible or having to publicly participate (Joinson 2001; Nonnecke and Preece 2003) and leaves no obvious traces (Whittaker et al. 1998). Participants lurk due to various social and psychological reasons (**III**), deciding which online resources to use (Nielsen 2010), how to use the tools, how to interact with others and what goals are to be achieved.

The review of the research presented below (**I**, **II**, **V**, **VIII**) is based on a clear premise: They do not represent the ignorers (**III**), the unplugged (Ferro and Molinari 2010), the unconnected or those who “are out of the loop, socially and otherwise” (Sypher and Collins 2001, 101). They are also not online trolls or spammers and they are not non-users. Non-users are those citizens who do not use any type of information or communication technologies due to a lack of financial resources (Martin and Robinson 2007), poor education or lack of skills (Livingstone 2004), emotional reasons (van Dijk 2005), because they resent using it (Selwyn 2006) or because they simply do not want to (**I**, **II**, **VIII**). Lurkers, however, do use the technology, go online, visit sites and social platforms in addition to other activities (**IV**).

The analysis of the literature shows that there are many opinions, understandings and definitions about lurking and that these definitions vary considerably. The definitions can be categorised into four main groups, such as “negative definitions” that see lurking as a form of abuse or misuse of technology, as deviant or unpleasant behaviours that prevent the development of online environments and need to be changed or kept away. A second group of “negative definitions” describes lurkers’ inactivity in numerical terms, while a third group defines lurking as a legitimate and socially acceptable behaviour in online environments. Finally, a fourth group sees lurkers as “active” participants who contribute value to various online contexts in diverse ways.

The taxonomy excludes some definitions found in the literature; for example, research that presents a combination of definitions suggesting that the authors do not have a clear understanding of lurking (e.g. Munzel and Kunz 2014, 57):

"lurkers are less interested in most of the activities. Lurkers are primarily first-time writers").

1.2.1 Lurking as Negative Online Behaviours

The verb "to lurk" derives from slang for a method of fraud and means to lie in wait (as in ambush), to move furtively or to sneak, to go unnoticed, to exist unobserved or unsuspected, and synonyms are hiding, sneaking, crouching, prowling, snooping, slinking, skulking or concealment (Free Online Dictionary 2016; Oxford Dictionaries Online 2017). These dictionary definitions probably led to the term having a pejorative connotation in the online context, where lurking is seen as being inappropriate online behaviour or representing the detrimental use of technology (Butler et al. 2008). Lurkers are seen as eavesdroppers (Webopedia n.d.), as unnecessary for communication, as an obstruction or as cyber-tricksters "lurking the Web and luring the gullible" (OECD 2003, 145).

The term "lurker" is often used to describe someone who observes what is going on but does not participate (Smith and Smith 2014) or remains silent:

> "… Lurker does not participate in normal forum discourse, but he's out there … watching, reading every message. He is usually quite harmless, and more often than not his silence reflects a natural reticence rather than sinister motives. If a fight breaks out he will quietly observe to avoid revealing his position." (Reed n.d., n.p.)

As lurkers tend to be the majority in the online environment – from 50 to 99% of the online group, depending on the research – their silence leads them to be called the "silent majority" or the "non-public audience" in an electronic forum (Matikainen 2015; Nonnecke and Preece 2000; Preece and Shneiderman 2009; Stegbauer and Rausch 2002), although it is known that they read the group's postings regularly (Online Jargon File 2017, no page ref.) or observe others (Willis 2016). They may also be seen as those who do not interact with other members of online communities, as bystanders, "TV zappers" or "aimless www surfers" (Stegbauer and Rausch 2002, 263), passive (Kendal et al. 2017), inactive, introverted, hard to involve or non-public participants.

According to Ledyard (1995), people in a wide range of settings contribute less to the public good but consume more than their fair share of common resources. In information-sharing environments, Ling et al. (2005) suggest that people will exert less effort on an online collective task than on a comparable individual task, so they describe lurkers as social loafers. Lurkers are also seen as free-riders or free-loaders who take without reciprocating (Smith and Kollock 1999) or without contributing (Hippel 2005), someone who wants something for nothing (Nonnecke and Preece 2000). Lurkers are thus "characterised by a reluctance, or lack of readiness, to contribute" (Cranefield et al. 2011, 487), and

their behaviours are deemed to be antisocial and unacceptable as these threaten the existence of the online group and its activities (Cher Ping and Seng Chee 2001). Antin and Cheshire (2010, 128) note that some scholars see them as "the scourge that prevents successful collective efforts" exhausting bandwidth (**I**, **II**, **VIII**).

1.2.2 Lurking as Negative Online Behaviours: Non-posting Behaviour

Lurkers are deemed as inactive or non-productive participants of online communities (Casey and Evans 2011; Leshed 2005). Quantitative studies of online participation look at how much participants contribute online (or not). Lurking is associated with non-posting behaviour, but definitions regarding the amount of online contributions vary (**II**). Studies define lurkers as participants who "never" post (Nonnecke et al. 2006; Preece et al. 2004), who have not posted in recent months (Nonnecke and Preece 2000), who post infrequently (Ridings et al. 2006), who have not made a contribution in the first 12 months after subscribing to a list (Stegbauer and Rausch 2002), provide one post per week (Hara et al. 2000), contribute less than four posts (Park and Conway 2017) or less than the average number of postings (Taylor 2002). (In comparison, active users may be defined as those who communicate or post more than five times per month, for example, see Haas et al. 2007).

1.2.3 Lurking as Legitimate Online Behaviour

Some argue that characterising readers as free-riders is inappropriate, that it should be defined as a legitimate form of participation and contribution: "if everyone chose to free-ride, Wikipedia would not exist" (Antin and Cheshire 2010, 127). As lurkers represent the largest group, ignoring, dismissing or misunderstanding lurkers distorts how we understand online participation. Lurking defined in positive terms shows lurkers to be valid participants, capable of supporting others and contributing to knowledge and innovation, and, like other online behaviours, it involves a complex set of behaviours, rationales and activities in an online environment that is rich and diverse with many possibilities and options (Anderson 2009; Mackness et al. 2013).

Some online groups support lurking because it helps potential new users get a feeling for the group, the kind of people who participate in it and how it operates (van Uden-Kraan et al. 2008). It enables new members to learn community norms, see whether their concerns are relevant to the community, receive help as well as support and learn vicariously by reading the experiences other participants report (Arnold and Paulus 2010). Lurkers may work at knowing and understanding the group, are often committed to the group, and will eventually

know the topics, the conversations and key players of the online community well (Soroka and Rafaela 2006), thus lurkers may even be experts in certain areas.

All users need to read before they can engage in any other activity, so lurkers are active (reading, listening, learning) rather than ignoring the material (**III**). The majority of lurkers (53.9%) choose not to post because "just reading/browsing is enough" (Nonnecke et al. 2006, 13). Reading should not be considered a passive activity or one to be understood as taking advantage of others' efforts. Muller (2012, n.p.) describes lurkers as "social readers", participants engaged in "social reading", where reading is not a solitary, unconnected, unproductive action, but a social activity that occurs in a social context, involves and contributes to the social worlds of readers, authors and organisations. Lurking can be defined as listening, lurkers as listeners. This is an important role, especially for others, as "if everyone is talking, is anybody listening?" (Goggin and Hjorth 2009, 2). In many contexts lurkers serve as listeners, representing the audience, engagement and receptiveness that encourages others to make public contributions (Smith and Smith 2014), and thus this is a legitimate form of participation.

In later research, Nonnecke and Preece (2003) suggest that lurking is a strategic and personal activity that involves a "complex set of actions, rationales and contexts" (116), driven by the individual's needs, goals, reasons and personal background. The lurking activity is carried out methodologically and strategically; it may change according to the context, and individuals can explain the choice of method and strategy they follow.

1.2.4 Lurking as Active Online Behaviour

Lurkers may not post visible comments, but several researchers define lurkers as active online participants and believe that their activities represent valuable online participation and contributions.

Willett (1998) went beyond a simple differentiation between posters and lurkers. His approach includes the notions of "active lurkers" and "passive lurkers", where "active lurkers" are those who make direct contact with posters in an interactive environment or propagate information or knowledge gained from it, whilst "passive lurkers" read for their own use only. Rafaeli, Ravid and Soroka (2004) use Social Network Analysis to study online communities on the assumption that both reading and posting in a forum creates a social network where all participants, both "active" and "passive", acquire and contribute to social capital by accessing and providing valuable information, learning the social norms of the relevant virtual community and getting to know the participants. In their Social Communication Network (SCN) model, social capital is created by all the online activities in a community, that is, online participation that includes all participants (both active and passive) and reflects

all the connections, relationships and participation needs. Takahashi et al. (2003) further develop these ideas and show that lurkers also have a strong and wide influence outside an online community. They propose a classification of lurkers that sees them as "propagators" of information and knowledge, as "practitioners" or users of the online content and even as an "active lurker candidate", where the online community affects the lurkers' thoughts. Lurkers are seen as active members, useful and valuable participants, able to support and contribute to online communities and innovation.

Using similar social-network principles, other researchers, such as Gossieaux (2010) suggest that lurkers are the "hidden asset" in online communities, and Harquail (2010) describes them as active participants who forward content and information from one community to another, using a variety of different channels (e.g. telephone, in conversation, by email). Sanders (2010) proposes the term "love cats" to describe lurkers, as they are people who share knowledge freely and with good intent, serving others, facilitating relationship building and adding to group learning.

1.3 Conclusion: Defining Lurkers

There is a range of definitions in the research literature on online participation and lurking, from lurkers as "free-riders" (Smith and Kollock 1999) to "love cats" (Sanders 2010). The definitions are summarised in Table 1.

Table 1. A Classification of Definitions of Lurking

Definitions of Lurking			
Negative Definitions I	**Negative Definitions II ("non-posting behaviour")**	**Legitimate Behaviour**	**Active Online Behaviour**
▪ Bystander behaviour (Reed, n.d.) ▪ Free-riders (Smith and Kollock 1999) ▪ Social loafers (Cher Ping and Seng Chee 2001) ▪ Aimless www surfers (Stegbauer and Rausch 2002) ▪ Cybertricksters (OECD 2003)	▪ Have not posted in recent months (Nonnecke and Preece 2000) ▪ Provide 1 post per week (Hara et al. 2000) ▪ No contribution in the first 12 months after subscribing to a list (Stegbauer and Rausch 2002) ▪ Contribute less than the average number of postings (Taylor 2002)	▪ Strategic Behaviour (Nonnecke and Preece 2003) ▪ Audience (Soroka and Rafaela 2006) ▪ Learner (van Uden-Kraan et al. 2008) ▪ Listeners (Crawford 2009) ▪ Readers (Arnold and Paulus 2010)	▪ Actors in Networks (Rafaeli et al. 2004) ▪ Active Lurker Takahashi et al. 2003) ▪ Hidden asset (Gossieaux 2010) ▪ Love cats (Sanders 2010) ▪ Sometimes an active stance and well-founded user intention (Lutz and Hoffmann 2017)

Definitions of Lurking			
Negative Definitions I	**Negative Definitions II ("non-posting behaviour")**	**Legitimate Behaviour**	**Active Online Behaviour**
▪ Non-public (Andrews et al. 2003) ▪ Non-productive participants (Leshed 2005) ▪ Introverted behaviour (Amichai-Hamburger 2005) ▪ Do not actively and visibly contribute (Nielsen 2006) ▪ Non-public audience (Preece and Shneiderman 2009) ▪ Observe others (Willis 2016) ▪ "By proxy" support (Hanna and Gough 2016) ▪ Can hardly be considered "active" (Papandonatos et al. 2016) ▪ Free Online Dictionary (2016), Oxford Dictionaries Online 2017) ▪ Passive (Kendal et al. 2017) ▪ Silent (Online Jargon File 2017)	▪ "Never" post (Nonnecke et al. 2006) ▪ Post infrequently (Ridings et al. 2006) ▪ Less than four submissions (Park and Conway 2017)	▪ Social Readers (Muller 2012) ▪ An active choice (Milligan et al. 2013) ▪ Active observers (Mackness et al. 2013) ▪ Imagined audience (Svensson, forthcoming) ▪ Valuable and valid participants (Mousavi et al. 2017)	

The classification of the definitions shows that there are some positive definitions that see lurkers as engaging in a legitimate behaviour or an active behaviour, but most of the definitions are negative. These are the (negative) definitions used in recent or current research and focus on what lurkers are not: not active, not public, not visible, and they do not contribute. Therefore, when conducting research on online participation, it is important to "know your

lurkers" (**VII)**, that is to carefully decide upon the definition of online participation and lurking to be used in research. Whilst some recent research takes a more differentiated approach to "the dark side of online participation" (Lutz and Hoffmann 2017, 1), definitions of online lurking tend to be negative and based on relatively broad models of online participation, making it difficult to understand who does what online and why (**I**, **II**, **VIII)**. Studies of the internet need to carefully consider the range of possible online behaviours and their outcomes, rather than considering all online actions and their results to be uniform. In addition, whilst some research may slowly be abandoning negative definitions, the term "lurker" seems to have stuck.

2 Implications of the Definitions of Lurking Used in Research

The second research question "What are the implications of the definitions of lurking used in research?" has been considered before (**I**). The taxonomy in Section 2 summarises the definitions of lurking found in research, but its analysis reveals how the choice of definitions affects research: The definition chosen determines the research, how results are interpreted, and which solutions are suggested or implemented (**I**, **II, VIII)**.

Research results are used to develop models of online participation and to design improvements of the internet based on their purpose (for example, create, share and aggregate information; maintain social relationships; provide help; solve problems). The analysis of the categories within the taxonomy of definitions shows that the choice of definitions of lurking may lead to several types of research conclusions:

1. Research that uses negative definitions aims to encourage or increase online participation by changing lurkers' behaviours ("de-lurking") or prohibiting their access to specific online sites or platforms (**V**);
2. Research that sees lurking as a legitimate behaviour suggests that heterogeneity in online participation is the norm and to be expected, and lurking (learning, reading, listening) is a normal and even necessary behaviour that supports and contributes to online participation (**I**, **II**, **III**, **VII**, **IX**);
3. Research that sees definitions of lurking as an active online behaviour suggests that lurking activities are not only valuable but need to be encouraged and supported as they have a beneficial impact across online and offline environments and networks (**I**, **II**, **IV**).

2.1 Increasing Online Participation by De-Lurking

The success of the community often seems to depend on active participation in terms of visible participation such as discussion, interaction, postings and contributions. The number of "active" users, "active" user involvement, "active" user participation are often seen as the main indicators (see Figure 1) of online success, performance and profitability (Laugwitz et al. 2010; Zalmanson and Oestreicher-Singer 2016), sometimes considered to be even more important than profitability (Krasnova et al. 2008). Not everyone needs to contribute for an online initiative to be successful, but several researchers suggest that online initiatives with a large proportion of non-contributors or non-participants may have difficulties providing the necessary services and be unable to support its participants (van Velsen et al. 2009; Wimmer and Holler 2003). Research that relies on a definition of lurking as a behaviour that is unsuitable, negative and

represents an inappropriate use of the internet will focus on strategies that increase visible online participation: "de-lurking strategies" (**V**).

Developing online initiatives, attracting and getting people to return to a website poses challenges (**III**, **IV**). De-lurking strategies try to encourage visible participation and contribution by changing participants' online behaviours, ensuring the appropriate use of the online infrastructure and controlling or reducing its detrimental use (Butler et al. 2008). Such strategies may be, for example, rewarding to those who contribute (Smith and Kollock 1999), improving design, usability and interoperability, making participation easy and fun (Blythe et al. 2003; Hassenzahl 2010; Nielsen 2009), managing online interaction (Amichai-Hamburger and McKenna 2006), considering the role of leaders and moderators (Blanchard and Markus 2004), motivating commitment (Joyce and Kraut 2006) and dealing with controversies (Preece and Shneiderman 2009; **V**). Further strategies encourage people to participate online by increasing the visibility of their and others' contributions, through recognition, celebrating status and reputation (Preece and Shneiderman 2009). Some researchers emphasise that any activity and participation should be encouraged, even the "banal use" of the internet, such as posting videos of cats (Shirky, quoted in Garber 2010, n.p.; **I**, **II**).

Another approach is to consider the psychological dimensions of online participation (**III, IX**) or political-communication theory (**IV**). Much can be gained from applying psychological theories to understand online participation, given that the internet seems to be able to support an individual's need for expression of individuality, satisfy the need to belong and relate to others or a group, find groups and social roles that suit them, achieve self-expression and self-actualisation (**III**, **IV)**. Psychological and cyberpsychological approaches continue to be used to help support, encourage, motivate and increase online participation (Correa 2010; Joinson 2003; Laugwitz et al. 2010; Matikainen 2015; Sun et al. 2014) by reducing online lurking.

2.2 Valuable Lurking in a Heterogeneous Online Environment

Heterogeneity in online participation is to be expected (Soroka and Rafaela 2006), and it has functions as participants engage online in different ways or for different reasons (**I**, **II**, **VIII**). The process of digital inclusion is not yet concluded (see Figure 1): It is estimated that in 2020, 60% of the world's population will be able to access the internet (ITU 2016). But more online access will not necesarrily lead to homogenous online behaviours: Some voices will be more dominant, some marginalised (Beck 2002); a great part chooses to lurk, and some might never be seen. Several definitions consider lurkers as engaging in a legitimate and valuable form of online participation that ensures the functioning of online environments (**V**, **VII**).

Some scholars suggest that lurkers not only contribute less, but that they also receive fewer or unclear benefits from their participation (Amichai-Hamburger 2005; Hanna and Gough 2016; Taylor 2002). Yet lurkers do derive value in different ways from their activities, are satisfied with their online experiences and the benefits they gain; otherwise, they would not engage in lurking (Merry and Anoush 2012). They derive value and benefits in many ways (**II**); Katz (1998, n.p.), for example, notes that lurkers "cruise from site to site in peaceful anonymity, picking up perspective, information and insight" and use this information for their own personal or organisational activities. People lurk because it is an activity they enjoy or because they are learning, reading, listening, sharing, forwarding or engaging in some other way. Vicarious learning is important, it represents a positive activity and a powerful way of acquiring knowledge and guiding future behaviour (Bandura 1986). Other benefits are interest, and, by using social networks, lurkers gain personal and social benefits by visiting other members' profiles and reading others' personal information. Lurkers scan for information that is important, inspiring, useful; they follow up on ideas they find, draw attention to broken links, seek advice and opinions, communicate with others using alternative channels such as email or Skype.

At the same time, lurkers are not depriving other contributors of resources or depleting the community, rather, their behaviours can help maintain the community's infrastructure and promote it. It can be an acceptable and even beneficial behaviour supported by online sites so that newcomers and potential participants learn the norms of the group and get a feeling of how the group operates (Butler et al. 2008; van Uden-Kraan et al. 2008). Lurking may even be desirable for very busy groups: If all users were to participate and contribute visibly, it could cause repetition of queries and an overload of postings (Soroka et al. 2003). By avoiding posting – in busy communities, participants may not want to add to a cluttered and confusing interface – lurkers are being helpful and altruistic (Haythornthwaite 2009). Wallace (2011) states that even without contributing, they provide value by encouraging their peers to join, understanding and discussing the issues, pushing community administrators to deliver content that may increase engagement and participation. Their diverse activities may even be necessary for enabling communication, by paying attention as listeners, being the indicator of the value and reliability of a text or providing information that helps complete a task (Antin and Cheshire 2010) or being the justification and target for online activities (Crawford 2009; Soroka and Rafaela 2006). Mousavi, Roper and Keeling (2017) suggest that lurkers are not only valuable participants but valid participants, too.

2.3 Encouraging Active Lurking

Online users lurk in information or collaborative online environments, and some researchers consider this to be an active behaviour (**I**, **II**, **VIII**) that contributes value to the online context in different ways (**V**, **VII**) and is an activity that needs to be encouraged (**IV**).

Takahashi et al.'s (2003) definition (Section 1.2.4) is of particular importance here. The online environment has become more complex since they conducted their work, offering yet more opportunities for involvement, collaboration and information-sharing, but their work was pivotal in showing the different roles online lurkers have, how central they are to increasing the value, social capital and impact of a community beyond its members and boundaries. Lurkers are the indirect contributors of the online community's influence beyond its boundaries; they are the ties and connections in networks and communities, and thus they can represent a source of ideas, information, innovation and collaboration. The lurker is not a non-user, a passive reader, a failure or a free rider but a positive and active participant with an active role (**IV**). Takahashi et al.'s (2003) research concludes that a clearer understanding of participation and lurking within online networks allows lurkers to occupy a more critical position as a resource for a community or network.

Lurkers need to be encouraged to engage in activities they like, as they can act as community advocates, have access to critical information that can help save time and take better decisions, learning and saving information for their job or personal life (Ogneva 2011), they share content and influence others using online and offline channels and networks (**IV**, **VII**, **IX**). Other researchers have also used the definition of the lurker as an active participant, propagating knowledge gained from one community or organisation to another or continuing the conversation elsewhere. Lurkers' activities make content available beyond the members of a mailing list or social network, transfer knowledge between online groups, identify context-specific knowledge needs and opportunities, promote new ideas, facilitate knowledge and content uptake, translate, recombine and adapt knowledge to make sure it fits the new context (Cranefield et al. 2011). Lurkers cross boundaries, broker knowledge and connect social spaces online and offline that would otherwise be separated from each other.

2.4 Conclusion: Implications for Research

There is research that includes lurkers without defining them (e.g. Czerkawski 2016), but most research either uses previously established definitions or develops new ones. What are the implications of the different definitions of lurking for research? First, the definitions determine whether lurking is to be viewed as a positive or negative behaviour and the value attributed to their activities and behaviours. Second, the definition chosen for research affects how the research is conducted, and how results are understood and implemented in the development of online environments. Table 2 summarises the implications the categories of definitions of lurking have on the strategies to help develop the internet and the aims of these strategies.

Table 2. Implications of the Definitions of Lurking Used in Research

Lurking			
Categories of Definitions of Lurking in Research			
Negative Definitions I	Negative Definitions II ("non-posting behaviour")	Legitimate Behaviour	Active Online Behaviour
Implications of the Use of Definitions of Lurking			
Strategy to Help Develop the Internet			
De-lurking strategies	De-lurking strategies	Heterogeneity in online participation is to be expected	Encourage lurking
Aim of the Strategy			
To increase active participation and turn lurkers into posters	To increase active participation and turn lurkers into posters	Lurking is a normal and necessary behaviour	Lurking has a beneficial impact on and across online and offline environments as well as networks

Counting the number of visible postings and contributions will not adequately describe what is happening in the online environment; numerical evaluations may even misrepresent the online environment. Given the premise "that everyone is likely to lurk at least some of the time and frequently most of the time" (Nonnecke and Preece 2000, quoted in Nonnecke and Preece 2003, 112), it is hard to evaluate online participation by counting visible postings or outcomes: It leads to a model of online participation seen as a dichotomy between those who participate and those who do not (and those who do not are assumed to be free-riders), a view that is too simplistic. This dichotomy has encouraged the notion that lurkers do not participate, are not "active" members; they do not contribute and are not as valuable as those who contribute visible content. Whilst public posting represents one way of communicating and one way in which the community may benefit, it is not the only way – online participation has many meanings and manifestations, and its outcomes are complex (Leshed 2005; Lutz and Hoffmann 2017). Definitions of online participation need to go beyond lurker/poster, active/passive as they cross between online/offline, public/private, formal/informal divisions. Suggesting that the majority of users, lurkers, are in a "fixed behaviour pattern" (Stegbauer and Rausch 2002, 267) places online participants into absolute, either/or categories and misinterprets what it means to be participating online. Ignoring or dismissing lurkers distorts how we understand online life as well as leading to mistakes in the way sites and policies for online participation are organised and designed.

Should the aim always be to increase online participation (**V)**? Society increasingly expects that everybody should be using online tools, but people will always have diverse ways of engaging online, deciding how and with whom to

engage and when to switch off and be unavailable, unhearing and unheard. Research on online technology has focused on ensuring users have an (online) voice and so has focused on the extent that technologies are used so that individuals can express themselves freely in cyberspace (Crawford 2009). Crawford suggests that too much emphasis has been placed on ensuring that individuals express themselves freely when they are online, and that freedom of expression seems to only rely on visible postings, yet lurkers' roles and activities such as reading, listening or being the audience may certainly represent a legitimate and active form of online participation, contribution, co-operation and collaboration. Online participation extends rather than replaces face-to-face communication (Haythornthwaite 2005), so offline and online networks depend on lurkers as "ties" to connect subgroups, resources, information, opportunities, ideas, social spaces and networks.

3 The Impact of Lurking on E-participation

This section answers the research question "How does online lurking impact e-participation?" In research on e-participation, most of the research has concluded that lurking is a reason for low levels of e-participation.

To answer the research question, it is necessary to briefly address the specific context, as e-participation does not refer to participation in online communities in general (**III)** but represents both an instance of online participation and digital democracy. Research and evaluations of e-participation initiatives often focus on visible contributions ("active participation") as valuable and reflecting citizen engagement (**III**, **V**, **VII**,). Lurking, on the other hand, has been defined as passive or non-participation, and research often concludes that it is the cause of low levels of e-participation. Research thus uses and relies on models of online participation that define lurking as a behaviour that is negative, unproductive and needs to be changed. Results from research based on these negative definitions will often be used to develop de-lurking strategies that aim to reduce lurking and increase visible online participation (**V**). But the use of a different definition of lurking can show that lurking contributes to achieving the aims of e-participation (**IV**, **IX**). On the basis of an analysis of e-petitions (**IX**) and a case study analysis of an Austrian e-participation initiative that uses Takahashi et al.'s (2003) definition of lurking that sees lurkers as active, it is possible to conclude that lurkers can have an impact on an e-participation initiative and help achieve the aims of e-participation (**IV**).

3.1 E-participation

Public participation includes citizen activities such as voting in elections, working in campaigns, participating in community affairs, contacting public officials, making donations, or attending political meetings. E-participation, instead, represents the use of ICT by several stakeholders, such as governments, elected officials, media, political parties, interest groups, civil-society organisations, international governmental organisations, citizens and voters within the political processes of local and global communities, states, regions or nations; as well as being considered part of (the larger) e-democracy (Clift 2003). The internet has been given an important role in shaping new and different opportunities for political engagement, enabling government agencies to restructure their interactions with citizens and to include citizens' perspectives in the development of policies and public services (Fountain 2001; Archmann 2010; **IV**, **VII**, **IX**). Innovative online technologies are to provide new opportunities for political engagement and decision-making, facilitating and enabling contact among individuals and with governments, public administrations and politicians. Online communication tools promise interactivity and "coproduction on an unprecedented scale" (Linders 2012, 446;

III, **IV**, **VII**), and Skype, chatting, voice-over-IP-communication, file sharing, email, online discussions, file repositories, blogging, Facebook and Twitter have found their way into administrative and decision-making processes. Both governments and citizens are to benefit from it: For citizens, the benefits are awareness, acceptance and commitment to policies, whilst for governments, it is an increase in decision-making quality and legitimacy (**IX**). The overarching aims of e-participation are often described as (Macintosh 2004):

1. Reaching a wider audience and enable broader participation;
2. Supporting participation through a range of technologies that cater to the diverse technical and communicative skills of citizens;
3. Providing relevant information in a format that is both more accessible and more understandable to the target audience and enable more informed contributions; and
4. Engaging with a wider audience and enabling deeper contributions and supporting deliberative debate.

E-participation initiatives focus on raising the public's interest for politics and achieving deliberation, engagement, voting (Charalabidis et al. 2009; Parycek and Edelmann 2009; Toots et al. 2016; Vinkel and Krimmer 2017). But there are often several more aims, such as fostering the desire to vote (Linders 2012; Mossberger et al. 2008), raising the public's interest for citizenship, strengthening citizenship (Avdic et al. 2007; Panopoulou et al. 2009), achieving egalitarian citizenship, deepening democracy (Flew 2007) and positive social change (Surman and Reilly 2003), increasing social-capital-building activities (Kavanaugh and Patterson 2001) and empowering civil society (Maier and Reimer 2010). E-participation is used as an indicator of governance challenge rather than a means to an end only (Andersen et al. 2007), to modernise government service delivery, increase government efficacy and quality of the services (Levy 1997; Castells 2003; Mossberger et al. 2008) but may also be a way of reducing transaction and coordination costs (Smith and Dalakiouridou 2009). Governments and public administrations have also realised that they need to assess citizens' needs, expertise, professional skills to develop adequate policies, content, solutions and find answers (Fountain 2001; Surowiecki 2004; Huijboom et al. 2010). Schuler (2010) describes this as the possibility for government to access society's "civic intelligence" (1), that is, the citizens' capacity to (help) find innovative solutions to the problems society faces and that governments seem unable to resolve. As can be seen in Figure 3, e-participation initiatives are found all over the world (**IV**).

Figure 3: Mapping Participatory Innovations (April 2017). Reprinted with permission: Project EMPATIA[3].

Given ongoing concerns about the democratic deficit, issues of public trust and citizenship, there is staunch government support for e-participation initiatives. In Europe, for example, the European Commission encourages the Member States to experiment with innovative e-participation schemes and tools to increase participation in democratic processes (**IV**). Several online-participation opportunities and initiatives have been funded and organised by governments (**III**) on the assumption that "citizens are enthusiastic about getting involved, especially if it is made quick and easy with user-friendly tools" (European Commission 2009, 3) (**VII**). E-participation is supported or initiated by governments ("top-down"), for example, e-petitions in the UK[4] (**IX**), online participation platforms and apps in Austria[5], the USA[6] or Brazil (Peixoto 2009) and Estonia[7]. Political figures from all over the world use social-media tools so that they and their activities can be followed and supporters can provide direct feedback, comment or approve them (e.g. by "liking" on Facebook), as seen in Figure 4.

[3] www.empatia-project.eu (last accessed 14 April 2017).
[4] http://epetitions.direct.gov.uk/ (last accessed 14 April 2017).
[5] https://www.digitaleagenda.wien/; https://www.wien.gv.at/sagswien/ (last accessed 14 April 2017).
[6] www.whitehouse.gov/OpenForQuestions; www.peertopatent.org; http://www.cityofvallejo.net/cms/One.aspx?portalId=13506&pageId=7492168 (all last accessed 14 April 2017).
[7] https://e-estonia.com/component/i-voting/ (last accessed 14 April 2017).

Figure 4: Sebastian Kurz (Austrian Foreign Minister): Public Facebook Page, currently 488,519 "likes" as of April 2017[8].

Citizens also use platforms, tools, social media and networks to engage in strategic political and societal behaviour, to participate and contribute (Mullany 2011). Different civil-society groups use e-participation initiatives ("bottom-up") to increase their societal involvement and impact, campaigning and engaging in political online protest and dialogue (Schuler 2016), coordinating action or participating in a "smart mob" (where people use online and mobile networks to assemble suddenly in a public space, perform an unusual act for a brief time, then disperse, see Rheingold (2002), lobbying, or even engaging in more extreme activities such as "hacktivism" and "cyberterrorism" (Denning 2001, 70; **IV**, **VII**, **IX**). E-participation initiatives can be organised to petition, report and discuss public civic issues[9], to gain an overview of government activities[10] or as a response to political events, e.g. in Tunisia and Egypt[11], Hong Kong[12], Austria[13] or Hungary[14].

3.2 E-participation Research and Evaluation

E-participation is viewed as a relationship or a partnership between government and citizens, where citizens actively engage in the process and content of policy-

[8] Source: www.facebook.com/sebastiankurz.at (last accessed 14 April 2017).
[9] www.fixmystreet.com; in the UK, or www.maerker.brandenburg.de in Germany, www.townhallapp.io, https://www.foe.co.uk/page/bee-cause (all last accessed 14 April 2017).
[10] www.fedspending.org, www.theyworkforyou.com, www.whatdotheyknow.com (all last accessed 14 April 2017).
[11] #Protest; #Gaza (both last accessed 14 April 2017).
[12] #UmbrellaRevolution (last accessed 14 April 2017).
[13] http://unibrennt.at/ (last accessed 14 April 2017).
[14] http://www.reuters.com/article/us-hungary-soros-protest-idUSKBN17B0RM (last accessed 14 April 2017).

making (Macintosh 2004). Citizens are to be active actors, contributors and co-creators in participation processes and the development of innovative public services (Chadwick 2006). The focus of these e-participation initiatives is on achieving "active" citizens and "active" participation or engagement, where "active" is associated with visible behaviours and contributions rather than any lurking behaviours (**V**).

E-participation projects are considered successful if they are able to reach a few thousand users. Research on e-participation (**III**, **IV**, **IX**) emphasises the mobilising power of the internet but often concludes that levels of activity in e-participation are low (**V**). Evaluations based on the number of contributions provide several explanations for low levels of e-participation (**V**, **VII**). One reason is the complexity of e-participation. It has many aims: The policy-making process requires several stages, levels of engagement and behaviours and involves many stakeholders and tools (**IV**, **VII**). Figure 5 below shows the four stages of e-participation, defined as information, consultation, co-operation, co-determination.

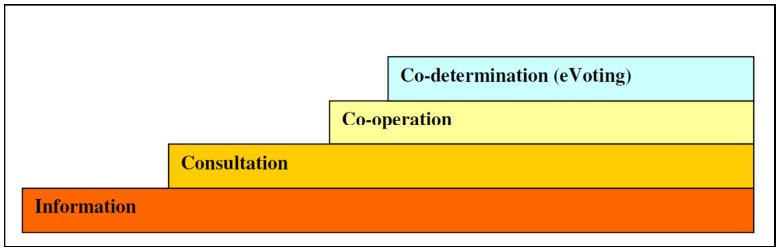

Figure 5: A Model of E-participation: Four Stages of E-participation (Parycek and Edelmann 2009).

Information is seen as providing the basis on which further participation possibilities evolve, and transparency (possible through the use of ICTs) as indispensable for taking informed decisions, citizen engagement and new forms of public-private partnerships. With consultation, the involved parties (citizens, companies, NPOs) can express their opinion and provide answers to the questions posed, make proposals or official statements on submitted drafts. Communication flows between the public, representatives in legislation (MPs) and/or the stakeholders in public administration, but the extent of civil society's influence on the decision can differ considerably. At the level of co-operation, the state and civil society allow participants to have their say. Achieving a high impact in e-participation requires intense, electronically supported communication between all stakeholders and the people responsible for planning and the public. E-participation may result in co-determination, when citizens take a decision.

Low levels of participation may be a response to the assumption that "if you build they will come" (Mayer-Schönberger 2009, 7). Technologies and methods are developed without knowing which stakeholders are to be involved, what their needs may be and how to generate value for the stakeholders (**VII**).

Dalakiouridou et al. (2008) note that although initiatives and measures seem to provide citizens with more opportunities to be informed, e-participation seems to be a one-way information flow rather than a genuine two-way engagement or collaboration, so citizens still feel scarcely able to shape their future and do not engage. Verdegem and Verleye (2009) note the lack of skills inside public administrations to work with e-participation processes as well as a digital and cultural divide concerning the use of e-government and e-participation services. Variance may be due to participants' political interests, educational levels and technological skills (Ferro and Molinari 2010), or, as suggested by Maier and Reimer (2010), other barriers can be the participants' lack of motivations, lack of shared interests, lack of feedback to their contributions, unclear roles and lack of political support for the outcomes of an initiative.

These evaluations focus on numerical assessments, that is, the number of postings or the number of active participants, where "active" is understood as "visible" content or posts. This "active" online participation is valued more than other forms of online participation. Lutz and Hoffmann (2017) even see a positivity bias, suggesting that political research and literature often view active participation only as beneficial to the quality and legitimacy of political decision-making. In the context of e-participation, lurkers are only considered the non-participants or passive participants, who do not contribute and are not engaged. Therefore, the focus of research and the results gained are used to develop de-lurking strategies, that is finding ways to encourage visible participation and contribution rather than considering the impact the role of lurkers and the activities they engage in may have on e-participation.

3.3 De-Lurking Strategies in E-participation: Changing Online Behaviours

Governments and countries around the world are adopting strategies to better use technologies and to achieve objectives such as more engaged citizen participation, greater efficiency, deeper transparency and higher service quality. The use of e-participation leads to material consequences, such as the introduction of technology into public organisations, restructuring resources and responsibilities, and requires online behaviours and participation activities, such as contribution, crowdsourcing, citizen sourcing, citizen coproduction or collective action (**VII**).

Although it is known that many different types of online behaviours are possible and necessary, the focus of most e-participation initiatives and their evaluations has been on visible participants and content (e.g. Aichholzer et al. 2016) rather than on lurkers. E-participation research is often based on models of online participation that defines lurkers as non-participants or where participants' "civic involvement" is described in categories such as "inactive", "passive", "active" and "super-active" (Nam 2012, 92). Krabina (2016) takes a

more detailed view of activities in e-participation (from "unawareness" to "impact participation" in eight steps, 77) but regards passive participation as non-participation, whilst "active participation" represents "taking deliberate action" (78). Whilst this model is a more refined model of online participation in e-participation, it, nonetheless, still does not consider the impact lurkers' roles, activities and behaviours may have on e-participation.

These evaluations inform the development of e-participation or strategies for increasing active (visible) participation, for example, by increasing transparency and making more public information about government policy and practice available online (Osimo 2008; Coleman and Blumler 2009; Huijboom et al. 2010); and by providing open data sets, online tools and spaces for the discussion of public issues in a convenient and accessible way (**V**, **VII**, see also Edelmann et al. 2008). Social media are used to help discover and attract members, exchange information, make decisions, make individual contributions and show support for individual political figures. Other strategies are the provision of single-site platforms for multiple e-participation initiatives (Schossboeck et al. 2016) to promote the visibility of the initiative (Ciciora 2010), as well as the usability and interoperability of the tools (Scherer et al. 2011; Wimmer and Holler 2003). Others focus on making e-participation fun, dealing with controversies, rewarding contribution with social recognition, rating and reputation (**VI**), requiring minimum levels of contributions in order to be considered a member or making the fulfilment of tasks more manageable and chunked into bite-size pieces (Tapscott et al. 2007). Some strategies for de-lurking encourage seeing participants as equal stakeholders and focus on local, municipal or regional topics rather than larger national or international issues as well as delivering the promises made (**VI**) or even brokering discussions between the stakeholders (Ruston McAleer et al. 2016). Additional suggestions that have been made to increase visible participation are emphasising the benefits of e-participation, improving the quality, accessibility and exchange of information, as well as ensuring the accountability, transparency of the e-participation process with designated and responsible leadership (**VI**). These strategies are intended to encourage citizens' visible participative online behaviours, such as posting and responding to messages, organising and being involved in discussion, contributing knowledge and content (Cornwall and Coelho 2007).

These strategies undoubtedly help improve and develop e-participation initiatives, but will more citizens be "active" and contribute more visible content? De-lurking strategies may not catch the "ignorers'" interest and may not necessarily result in the desired behaviours, better or more e-participation (**III**, **V**, **X**), particularly when participants try to attract attention or interaction by being more outrageous than others. De-lurking may result in political engagement that leads to division and isolation, where each participant sits alone, staring at the monitor, so that "participation in political life takes place in a detached and lonely room" (Ostling 2010, 3), or to the fragmentation of

citizens into self-interested groups and echo chambers, spaces where people look for those with whom they agree so as to reinforce their own opinion and reiterate what their friends say (Sunstein 2006; Boyd 2008; Weinberger 2008).

Whilst it is unrealistic to assume that universal participation can be achieved, and achieving the participation of 1% of citizens in any e-participation initiative would generally be considered a stunning success (**III**), the use of positive definitions of lurking may raise the number of citizens interested in political issues (in comparison to the "ignorers"; **III**) and their activities may be seen as affecting the success of e-participation.

3.4 Lurking in E-participation

Ideally, e-participation should be a space for democratic citizenship, a space for interaction between citizens, government officials and elected representatives, with meaningful impact(s) on political outcomes, legitimating and improving decision-makers' actions (Pisano and Verganti 2008; Coleman and Blumler 2009). Achieving the aims of e-participation (see Section 3.1) can require:

1. The display of information that provides valuable data and information to citizens;
2. The provision of online services and tools for interaction with citizens so that they can discuss and share ideas and solutions;
3. The provision of multiple channels for participation so that citizens can exchange data and knowledge, add value and information quality to services and be of value for both citizens and organisations alike;
4. The provision of opportunities for collaboration based on a relationship that produces trust (Sandoval-Almazan and Gil-Garcia 2012).

The internet enables government agencies to restructure their interactions with citizens (**VII**, **IX**), and e-participation serves as an instrument to facilitate contact points, increase the exchange of data and facilitate more frequent contact (Andersen et al. 2007), but e-participation is also about achieving value by engaging in online activities that all participants (and this includes lurkers) like. "Successful e-participation initiatives depend on the successful mobilisation of citizens" (**IV**, 44), and mobilisation should encourage all participants and lurkers to participate in the ways they like, using different tools or channels, engaging in diverse roles or behaviours. In e-participation, like online participation in general, many different online activities are possible, some of them are activities that lurkers like or prefer to engage in: taking an interest, learning, reading, networking, linking and hyperlinking, sharing and making information and content available to others in other social spaces that can be online or offline (**IV**, **X**). Visible online participation is not the only way to fulfil the aims of e-participation and to make it successful – online lurking can contribute to the aims and success of e-participation too (**IV**, **VII**).

Lurking has only been considered marginally in e-participation, and even then, only with the aim to encourage t to engage in visible participation. Given that a substantial proportion of the participants in e-participation initiatives seem to prefer to lurk rather than visibly participate (**IV**, **V**, **IX**), models and definitions of online participation must be more refined and reflect all the users involved, not just those who engage in visible online behaviour, to see how they connect and contribute at local, organisational and national levels. A range of lurking behaviours (reading, using, sharing, learning) can impact e-participation, but the initiatives and policies need to be evaluated accordingly (**III**, **IV**, **VII**). Lurkers can be defined in several ways (Section 1) (**I**, **II**, **VIII**), and evaluations need to consider that a definition that views lurkers' activities as active, valuable and as contributing to social capital, e.g. as defined by Takahashi et al. (2003), can show that e-participation reaches and engages more citizens, has more impact and achieves the aims set (Section 3.1) to a greater extent than assumed (**IV**, **VI**, **X**).

Several factors are important for e-participation to be successful, and the analysis of e-petitions (**X**) and the case study of an e-participation initiative (**IV**) reveal that two factors are particularly important: the internet infrastructure itself and encouraging lurkers to participate in those activities they like. The analysis of e-petitions shows how lurkers' actions such as reading or other activities that do not rely on visible participation can be seen as contributing to the aims of e-participation (**X**). The case study (**IV**) reveals that e-participation relies on the mobilisation of lurkers and that an evaluation needs to include lurkers and consider the definition of lurkers to be used.

3.4.1 E-petitions: Lurking as a Legitimate Behaviour

Lurkers' contribution can be seen with e-petitions (**III**, **IX**). It has been argued that e-petitions can be a device to transform established representative democracies into more participatory democracies (Lindner and Riehm 2008). Petitioning is seen as a mechanism for making democratic inputs, where the participation activities are directed towards influencing the decisions of elected representatives. Previous studies of e-petitioning focus on the technical and institutional perspectives, and, for these reasons, it is useful and important to understand the factors influencing the decisions made by individuals (or groups) about whether to participate in the political system by initiating, signing or observing a petition. Therefore, there is a need to understand and model the citizen's decision-making process around the use of e-petitioning systems. Several psychological approaches can help understand such processes (**III**, **IX**).

Social Cognitive Theory (SCT) broadens the analysis by focusing on perceived outcomes and the concept of self-efficacy – defined as beliefs about one's ability to perform a specific behaviour. Unlike efficacy, which is the power to produce an effect (in essence, competence), self-efficacy is the belief

(whether accurate or not) that one has the power to produce that effect. Expectations of positive outcomes of behaviour are meaningless if we doubt our capacity to successfully execute the behaviour at all; conversely, previous bad experiences can create a self-reinforcing cycle of expectations of negative outcomes. This could provide a model for understanding why citizens choose to sign a petition or remain an observer. Clear parallels have been drawn between Computer Self Efficacy (CSE) and Political Self Efficacy (PSE) (Caprara et al. 2009): Where CSE is concerned with the self-perception of the ability to produce an intended result with computer-based systems, PSE is concerned with citizens' perceptions of their own ability to bring about intended results in dealing with politics and public authorities.

The concept of prosocial behaviour can also help in understanding the actions and motivations of individuals in the online context. Prosocial behaviour is defined as behaviour that is voluntary, intentional and has benefits for another person (Eisenberg and Miller 1987) and can include donating money, computer power, software and documentation, time and attention, information and emotional support. Different groups may use different technologies depending on the context and the subject being discussed, as is the case with signing an e-petition, often associated with an offline group activity such as a local issue-based campaign. Individuals participate for altruistic or conformist reasons, to boost their self-esteem (McLureWasko and Faraj 2000), self-enhancement (Allport 1937) and self-efficacy. All behaviour is motivated in some way, and individuals will engage in a particular behaviour in order to achieve a desired end (Atkinson and Birch 1970). Different motives and goals may underlie the same surface behaviour, and the social and psychological consequences of participation may be different for different users (i.e. some participate to gain information or support, others to communicate), so the motivations and goals for using the online resources will determine how they will be used.

E-petitions have gained success in some countries (such as the UK and Germany) as a simple yet effective e-participation tool which provides a first step for those who want to interact with and influence democratically-elected assemblies, from their Local Council to the European Parliament. Internet-based e-petition systems have already been introduced in some EU member states both at national and, increasingly, local levels in order to make it easier to gather signatures from a wider audience and ensure participation without requiring visible commenting or contribution, so lurkers' participation activities (reading and signing the petition, or forwarding it to others) can exert an influence.

Lurking should not be defined or seen as a negative form of behaviour: Lurking needs to be understood as a valuable and legitimate behaviour, as it implies a positive choice to pay attention to what is happening in a community. E-participation needs to move beyond the lurkers and to focus on the even larger group of "ignorers" (**III**) as well as to try to bring these citizens to take an interest in the democratic decision-making process.

3.4.2 Case Study "unibrennt": Lurking as an Active Online Behaviour

Case studies are an important method of study as they provide an in-depth study of contemporary phenomena using multiple sources of evidence from the real-life context (Yin 1994). The Austrian e-participation initiative "unibrennt" (**IV**) was analysed using a case study methodology that also included the role of the lurkers and was based on a definition of lurkers that sees them as active participants (Takahashi et al. 2003).

The unibrennt movement started in October 2009 with the occupation of the University of Vienna's main auditorium (Audimax) and lasted for about three months, provoking an extensive media echo nationally and internationally. The initiative managed to be present in the Austrian media well past the time of the occupation, as projects and events continue to be announced on the initiative's website. On 29 October 2010, a documentary film was released, and further actions to celebrate the occupation's anniversary have been organised since.[15] The bottom-up e-participation initiative was rewarded with the "Award of Distinction" of the Ars Electronica festival in the category "digital communities" in 2010. At the beginning, a rhetoric of enthusiasm was observed and some even proclaimed a modern revolution which would transform the world. Participants' aims were the (re-)democratisation of universities, anti-discrimination policies in all educational institutions and less economisation of education. The significant trigger of the initiative was a perceived threat to education (e.g. knock-out exams, inflexible curricula, less freedom of choice due to the Bologna process). However, after the difficult "Bildungsdialog" (a dialogue between Austria's political representatives and student delegates) held on 25 November 2009 and the promise that financial aid in the form of 34 million Euro would be fast-tracked, the auditorium was cleared by the authorities after 60 days of occupation (two days before Christmas).

The internet itself, serving as infrastructure, was a crucial factor in this e-participation initiative, as it strengthened the interrelationship between offline and online activities. The case study shows that the internet and online social media were not used solely for online communication and mobilisation but also for combining these activities with offline actions. Between 23 October 2009 and 31 December 2009 (midnight) 95,743 tweet messages were sent from 8,898 different Twitter accounts referring to the terms "unibrennt" or "unsereuni" (most of the time as hashtags) (Herwig et al. 2010). "Unibrennt" was clearly more accepted than "unsereuni" with 74,144 entries against 47,911, and 30% of the Twitter accounts provided 80% of the network's content. Twitter streams and all real-time communication (e.g. a blog parade listing all blog articles) were integrated into the main website www.unsereuni.at – "Our Uni" – which is still

[15] E.g. 2014 saw the celebration of 5 years of unibrennt (see http://unibrennt.at/; last accessed 14 April 2017).

active and serves as infrastructure for organising protests, listing events and discussion. The interactive website, sometimes visited by 10,000 users per day, together with fast communication provided by online social networks, helped the initiative to be present and bundle competences. The news media referred to the student protest as "student protests 2.0"[16], that "the revolution is Twittered"[17] and used other similar slogans, but offline and online activities were clearly interrelated. During the occupations, online social media were not used solely for online communication and mobilisation, but also for combining these activities with offline actions: Twitter, Wikis and livestreams mobilised participants who were outside the online community, and participants could join in and solidarise from their private homes during an online demonstration; minutes, documents, information sheets and press articles were distributed online and collaboratively edited. In combination with Facebook, personal networks were used to spread information, create solidarity among the students, identify with and engage in the protest. All social networks undisputedly played a vital role, and the e-participation initiative managed to build a highly participative infrastructure that could be recognised all over the web.

E-participation needs to be based on a radically transparent flow of information and low entry barriers for new members. In the context of this e-participation initiative, most users were encouraged to actively use the new online tools and networks for political activities for the first time, in whatever way they wanted, as readers, contributors or collaborators (**IV**). Participants joining the bottom-up initiative were not necessarily web 2.0 users or experts, but they were encouraged to try the new online infrastructure. Using Takahashi et al.'s (2003) definition of "active lurkers", lurkers' online activities and the value they contributed could be assessed. Twitter is an open network, and lurkers may be those who do not own an account and just read others' messages. They might, however, tell other people about what they have found out or know, in offline or in other online networks. Likewise, they could also own an account for a while without immediately sending their own tweets. The threshold to participate (e.g., by "retweeting" a message) is then very low, and the structure of microblogging systems promotes this low effort. Besides Twitter and Facebook, other social media channels like YouTube or ustream.tv were used and integrated into the interactive main website. By integrating different media in the main website, the joint impact of these media in mobilising students and other people solidarising with the initiative was centrally collected. The live stream was particularly important to invalidate the articles produced by traditional mass media that claimed that the participants' main reason for participation was to party. On the other hand, this makes it difficult to analyse the different tools in relation to one another as multi-media channels were deployed simultaneously. The traditional mass media's interest in the initiative

[16] http://derstandard.at/1256743585736/Studentenproteste-20-The-revolution-is-twittered (last accessed 14 April 2017).
[17] Ibid.

may even have encouraged the influence of social-media channels by addressing the role and use of social media for the initiative.

The technical tools, such as live streams and online demonstrations, promoted reciprocal exchange and created bonds with those who could not participate on site. Feedback could be accessed via other channels and feedback systems, where participants integrated questions asked via social networks into the public debate. The communication opportunities added to the participants' commitment and a broader and more sustainable dialogue. Mobilisation was promoted, as users considered their activities and contributions to be important to the group's performance. As users brought up their own ideas and suggestions or engaged in other contributive, collaborative or participative activites, they gained more responsibility and assumed an unspoken obligation towards the group.

The unibrennt initiative enabled a lot of participants to identify with the movement, and a broad range of goals was formulated independently from political orientation. Participants were well educated (and therefore more likely to be interested in politics) and had the necessary internet skills and capabilities, but nonetheless, students' political views within the movement were very heterogonous, sometimes even following contradictory sub-goals. Subsequent solidarity by outside organisations (e.g. kindergarten teachers), public media[18] and politicians resulted in a high number of diverse participants, who were also involved in the initiative. With the many technical options available to take content from the initiative and pass it along to other channels, the movement encouraged active lurkers; for example, as propagators of the brand unibrennt or to share the information regarding the initiative to other online and offline social spaces or networks. This transformation was expressed by the students as they stated that many of them had not used web 2.0 options to forward information to others before.

The case-study analysis evaluated the e-participation initiative including lurkers' activities as part of the assessment and using a definition of lurking as an active online behaviour. The analysis concludes that lurkers played a crucial role and that mobilising them to engage in activities they liked represented a crucial factor in the success of the initiative. Table 3 shows how the unibrennt initiative, based on a definition of lurkers as active participants, was able to achieve the aims of e-participation (e.g. as defined by Macintosh (2004), using the means suggested by Sandoval-Almazan and Gil-Garcia (2012).

[18] E.g. the newspaper *Der Standard* (see http://derstandard.at/; last accessed 14 April 2017).

Table 3. Unibrennt Initiative: Achieving the Aims of E-participation

Aims (Macintosh 2004)	**How to Achieve the Aims of E-participation** (Sandoval-Almazan and Gil-Garcia 2012)	**"unibrennt" E-participation Initiative**
1. To reach a wider audience and enable broader participation;		• Encourage participants to participate in diverse ways and engage in activities they like; • Mobilise lurkers to engage in those behaviours they like; • Interrelationship between offline and online activities;
2. To support participation through a range of technologies that cater to the diverse technical and communicative skills of citizens;	The provision of online services and tools for interaction with citizens so that they can discuss and share ideas and solutions; The provision of multiple channels for participation so that citizens can exchange data and knowledge, add value and information quality to services, and be of value for both citizens and organisations alike;	• Website www.unsereuni.at; • Twitter #unibrennt; • Facebook; • Demonstrations; • Livestreams; • YouTube; • ustream.tv; • Personal online networks;
3. To provide relevant information in a format that is both more accessible and more understandable to the target audience and enable more informed contributions;	The display of information that provides valuable data and information to citizen;	• Minutes, documents, information sheets and press articles distributed online and collaboratively edited; • Transparent flow of information;

Aims (Macintosh 2004)	**How to Achieve the Aims of E-participation** (Sandoval-Almazan and Gil-Garcia 2012)	**"unibrennt" E-participation Initiative**
4. To engage with a wider audience and enable deeper contributions and support deliberative debate.	The provision of opportunities for collaboration based on a relationship that produces trust.	• Contributing to and using the content; • Engage in behaviours participants like: reading, learning, using content and links in other contexts; • Low entry barriers for new members; • Sharing, forwarding, propagating encouraged; • Solidarise and identify with the initiative; • Reciprocal exchange; • Formulate goals; • Include others.

3.5 Conclusion: The Role of Lurkers in E-participation

This section answers the third research question, "How does online lurking impact e-participation?" It is an important question as e-participation represents both an instance of digital democracy and participation, and researchers claim that, like online participation in general, it is dominated by low levels of participation and that de-lurking strategies are needed to increase active (understood as visible) participation. Evaluations of e-participation are often based on models of participation where visible behaviour is equated with active behaviour, on the number of "active" participants and the number of visible contributions made. Given that numbers of both active participants and postings contributed are low, these results are often used to develop strategies that increase e-participation by changing lurkers' behaviour and encourage visible contributions.

Lurkers can influence e-participation initiatives and help achieve their aims. To see the extent of this impact, evaluations of e-participation need to consider lurkers as participants and use a definition of lurkers as valuable and active online participants. Lurkers' contribution to e-participation was shown by theoretically analysing how lurkers may play a role in e-petitions (**III**), whilst

the results from a case study analysis of an e-participation initiative show that including lurkers in the evaluation and adopting Takahashi et al.'s (2003) definition of active lurking, lurkers can be seen as one of the crucial factors in the success of an e-participation initiative (**IV**).

4 Recommendations for Evaluating E-participation

Lurkers increasingly play a role in research on online participation, as can be seen in the reviews on lurking (**I**, **II**, **VIII**), and the development of more refined models of online participation (Krabina 2016; Malinen 2015; Sun et al. 2014). Lutz and Hoffmann (2017) argue that there are many nuanced dimensions of "non-, passive and negative participation" (1), that, as can be seen in Figure 6, participants may engage in both willingly and unwillingly ("agency") and with both intentional and unintentional positive and negative effects ("valence"):

Table 1. Typology of online (non-)participation.

	Activity			
	High: Participation		Low: Non-participation	
Agency / *Valence*	*A. Intentional: Active*	*B. Unintentional: Passive*	*C. Intentional: Active*	*D. Unintentional: Passive*
1. Desirable: Positive	A.1. **Positive active participation** Constructive engagement	B.1. **Positive passive participation** Incidental contribution	C.1. **Positive active non-participation** Abstention	D.1. **Positive passive non-participation** Lack of awareness or motivation
2. Undesirable: Negative	A.2. **Negative active participation** Destructive engagement	B.2. **Negative passive participation** Involuntary imposition	C.2. **Negative active non-participation** Silencing, self-censoring	D.2. **Negative passive non-participation** Exclusion

Figure 6: A typology of online (non-)participation (Lutz and Hoffmann 2017, 9). Re-printed with permission.

Online participation and e-participation are quintessentially human and rely on several types of users and participation, behaviours, connections and relationships. Future research and policy development could benefit from considering the following questions and the answers gained from this thesis:

Who are the lurkers? In e-participation research so far, lurkers are often defined in negative terms (lack of engagement, lack of contribution, non-productive) and used as a reason to explain why e-participation initiatives fail to achieve the aims set (**III**, **V**, **VII**). This definition limits their online role and contribution, and, as shown in this study, being online and active is possible in many ways, making the active versus passive dichotomy too simplistic with too much focus on visible participation as the only way of participating that leads to positive effects.

Is universal participation desirable? Despite the potential of e-participation systems to widen the pool of participants in the decision-making process, achieving the participation of 1% of citizens in any e-participation initiative would generally be considered a stunning success, yet it remains unrealistic to assume that universal participation can be achieved or indeed is desirable (**X**).

Involvement and even excellent mobilisation may not lead to a (re-)democratisation and sustainable participation in general (**IV**). Whether political goals will be met by further initiatives will depend on future political culture and communication.

Is increasing visible participation by changing lurkers' behaviours the right strategy? The answer may be that increasing visible participation will not necessarily make an e-participation initiative more successful or valuable (**III**, **IX**). Sunstein (2006) argues that more active participation does not necessarily mean that political participation is improved, and several researchers such as Boyd (2008), Gladwell (2010) and Sifry (2010) are even more critical, arguing that the use of ICT and social media to encourage participation and democracy is an illusion used for political campaigning. Encouraging visible participation may lead to behaviours and activities that may be undesirable, harmful or detrimental.

How should participation and lurking be evaluated? E-participation is often viewed as a relationship (or improving the relationship) between citizens, government, public administrations and other stakeholders. Based on the answers gathered from the thesis' research questions, positive definitions of lurking, Social Network Theories and Analysis should be used to evaluate online lurking and e-participation (**IV**, **VII**). Social Network Theories and Analysis focus on the participants, the connections, ties and relationships between them and how they connect to other social spaces and resources. These methods and approaches are increasingly implemented to improve systems and information flows in public administrations and may also help evaluate contributions made by participants and stakeholders in e-participation.

5 Conclusion

English-language dictionary definitions of lurking in the real world have made it an equally negative behaviour in the online world (**I**, **II**, **VIII**). This thesis tries to fill the research gap that stems from research that considers lurking to be a negative online behaviour and values visible online participation (such as postings, comments, likes), leading to simplified categorisations of online participation.

The goal of this thesis is to deepen the understanding of online participation by considering lurking in online participation in general and specifically in e-participation, and answers the following three research questions:

1. How is lurking defined?
2. What are the implications of the definitions of lurking used in research?
3. How does online lurking impact e-participation?

Section 1 shows that the question "*How is lurking defined?*" has many answers, and a taxonomy allows it to quickly gain an overview of the definitions used in research. The definitions can be classified into groups: definitions that see lurking as a negative, lurking as non-productive online behaviour, as legitimate online behaviour and definitions that see lurking as an active online behaviour (**I**, **II**, **VIII**).

This taxonomy of the definitions provides the basis to answer the second question, "*What are the implications of the definitions of lurking used in research?*" and the answer is discussed in Section 2. The analysis of the categories of definitions within each category shows that the choice of definitions affects the aims of research as well as the implementation of research results used for the development of the internet and online environments. Research results based only on evaluations of visible online behaviour will often be used to develop de-lurking strategies that aim to change lurkers' online behaviours. Becker (1963) suggests that deviance is not the quality of a bad person but the result of someone defining someone else's activity as bad; therefore, in this thesis, it is suggested that the use of positive definitions of lurkers will encourage seeing lurking as an important and legitimate role in the online environment or as an active online behaviour that has valuable and extensive (online and offline) effects that should be encouraged. Careful consideration is required when deciding on a definition of online lurking or using previous research (**I**, **II**, **VIII**).

The importance of a more refined depiction of online participation is highlighted by answering the third question, "*How does online lurking impact the aims of e-participation?*" Here lurking is considered in the e-participation context, a particular dimension of online participation. E-participation was chosen as researchers often claim that low levels of online citizen participation

are due to lurking. Section 3 considers how it is necessary to take into account the many ways people interact, create content and share knowledge in public matters (Janssen and van der Voort 2016), and this must include lurking. The analysis and case-study work presented here shows that lurkers do not represent the disinterested public and that a positive definition of lurking and their contributions might be one of the crucial success factors in e-participation (**VII**).

When answering the second and third questions, the necessity of avoiding the dichotomy of online participation as "active" versus "passive" becomes clear (**I**, **II**). Only by including lurkers' activities a more complete depiction of online participation as a "holistic, polycontextual communication environment comprising diverse engagement spaces – differentiated online and offline communication contexts, within a larger community ecosystem" (Cranefield et al. 2011, 489) is possible. People lurk because it is an activity they enjoy or because they are learning, reading, listening, forwarding or engaging in some other way. The taxonomy of definitions shows that lurking does not need to be understood as being passive, free-riding or social loafing. Lurking, defined and understood as a positive online behaviour, can be helpful and can provide value and social capital to online participation and e-participation. The use of positive definitions of lurking also allows a more complete depiction of online participation. It is proposed in this thesis that by adopting Takhashi et al.'s (2003) definition of lurkers as active participants, an analysis of lurkers' extensive online and offline activities and network effects in both online participation and e-participation is possible and even necessary (**IV**, **VII**).

The analysis provided in this thesis identifies and organises disjointed empirical research, highlights research results and relationships that already exist in research, and, hopefully, the answers provided to the research questions will help other scholars and researchers gain leverage by using them in other contexts.

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SUMMARY

Online participation is popular, and businesses and public institutions alike want online citizens and amateurs to actively participate as the internet leads to increased economic, social and cultural benefits (van Dijk and Deursen 2014; Tapscott et al. 2007). The internet and social media seem to allow anyone who is able to connect to the internet to be a content creator (Rainie and Wellman 2012), an active participant rather than a passive viewer. For many the online environment is an accepted part or a way of life, but users have responded to it in a wide range of ways, sometimes in unintentional or unconventional ways. Yet research often concludes that in online participation the minority of users are "active" and the majority of users are "passive" or "inactive", the latter often described as "lurkers". So the question is: Who or what are lurkers?

The research presented in this dissertation represents extensive theoretical and analytical work, such as literature reviews, analyses of theories and models and case study work conducted since 2010 at the Department for E-Governance and Administration, Danube University Krems (Austria), Leeds Metropolitan University (UK) and the Ragnar Nurkse Department of Innovation and Governance, Tallinn University of Technology, Estonia. The thesis not only reveals that lurking can be defined in many ways but that it includes a range of online and offline behaviours and that the choice of definitions has an impact on the research, its outcomes and how the results are implemented. The taxonomy of the definitions and its analysis represent an important contribution, as it shows that online participation and lurking are complex online phenomena and that negative approaches do not do justice to the online participants. The research articles selected not only address the research questions but also mirror a change in the author's understanding regarding the role of lurkers, online participation and e-participation.

There is a big gap in research to help understand lurkers and their activities in several online contexts. The focus of this thesis are those online behaviours subsumed under the label "lurking", often considered to be a negative behaviour in the online context and seen as a detrimental use of the online environment or online tools. The thesis aims to fill the research gap by addressing lurking in the context of research on online participation and e-participation and addresses the research gap by answering the following three research questions:

1. How is lurking defined?
2. What are the implications of the definitions of lurking used in research?
3. How does online lurking impact e-participation?

This thesis comprises an introduction and ten published research articles. They address the following topics: definitions of lurking (**I**, **II**, **VIII**), the implications of the different definitions of lurking used in research (**I**, **II**, **VIII**), and different dimensions of e-participation. The ideas and analyses in these

articles have also been presented at PhD Workshops and international conferences (**V**, **VII**, **IX**, **X**), where valuable feedback was gained.

The first part of this thesis answers the research question "How is lurking defined?" and provides a taxonomy of the definitions of lurking used in research. The literature review follows principles of classification research and brings together the observations gained. This classification is non-numerical and non-exhaustive; it provides an overview and a taxonomy of the definitions of lurking used in the literature, and it highlights controversies and research challenges. Whilst researchers generally agree that lurking is the most common online behaviour, they provide various definitions and interpretations of lurking behaviours (**I**, **II**, **VIII**). These definitions are classified into categories that see lurking as negative behaviours, as legitimate behaviours or as active behaviours.

The second part of the thesis addresses the research question, "What are the implications of the definitions of lurking used in research?" The taxonomy of the definitions, the categorisation and analysis of the definitions reveal that the choice of definition impacts the aims of the research, how research is conducted and the way research results are interpreted and implemented (**I**, **II**, **VIII**): Negative definitions see lurking as detrimental and will suggest encouraging participation by changing online behaviours ("de-lurking strategies", **V**), whilst definitions that see lurking as a legitimate behaviour suggest that lurking represents legitimate and valuable online roles (they are learners, readers, listeners), and participants' behaviours do not need to be changed (**I**, **II**, **VIII**). Research that sees lurking as an active behaviour with extensive (online and offline) network effects that is beneficial and valuable will suggest the development of strategies to encourage more lurking (**IV**). The choice of definitions therefore affects how research results are implemented in the development of the internet and online environments. Rather than trying to change people's behaviours, force visible participation (**V**) or try to attract those who are not interested anyway (the "ignorers") (**III**, **IX**), this thesis proposes that Takahashi et al.'s (2003) definition provides an ideal basis to understand lurkers' activities and how they contribute to online environments (**IV**, **IX**).

The third research question, "How does online lurking impact e-participation?" considers lurking in the e-participation context. E-participation represents both a dimension of online participation and the larger concept of e-democracy that enables, encourages, broadens and deepens political participation and democratic citizenship (**III**, **IV**, **VI**, **IX**, **X**). It was chosen for analysis in this thesis as researchers often claim low levels of online citizen participation, and that e-participation initiatives fail because participants lurk rather than engage or participate actively. As shown in this thesis, using definitions of lurking as an online behaviour that is legitimate, valuable and active, lurking can be viewed as enhancing democratic principles and contributing to a vibrant, inclusive, transparent and responsive democratic society (**IV**, **V**, **IX**). The conceptual analysis of lurking in the context of e-

petition processes (**IX**) and the results from a case study of an e-participation initiative (**IV**) show the impact lurkers have on e-participation, that the mobilisation of lurkers, based on definitions of lurking that see it as an active behaviour and a strategy that encourages more lurking, may represent one of the crucial factors in e-participation.

Lurkers play a role in research on online participation, as can be seen in the taxonomy of definitions of lurking (**I**, **II**, **VIII**), yet research on lurking in e-participation remains limited and mainly one-dimensional. It is suggested that the following questions need to be asked more often in research on e-participation:

Who are the lurkers? There are many ways of being online and active, and the active-passive dichotomy with its focus on visible participation as the only way of participating that has positive effects is too simplistic.

Is universal participation desirable? Achieving the participation of 1% of citizens in any e-participation initiative would generally be considered a stunning success, yet it remains unrealistic to assume that universal participation can be achieved or indeed is desirable. Involvement and even excellent mobilisation may not lead to a (re-)democratization and sustainable participation in general.

Is increasing visible participation by changing lurkers' behaviours the right strategy? The answer may be that increasing visible participation will not necessarily make an e-participation initiative more successful or valuable. Encouraging visible participation may lead to behaviours and activities that may be undesirable, harmful or detrimental.

How should participation and lurking be evaluated? As e-participation is often viewed as a relationship or improving the relationship between citizens, government, public administrations and other stakeholders, positive definitions of lurking and methods based on Social Network Theories and Analysis may be ideal for evaluating the contributions made in e-participation.

KOKKUVÕTE (Summary in Estonian)

Online-osalus on populaarne; samas sooviksid nii era- kui ka avalik sektor näha nn online-kodanike ja tavakasutajate veelgi suuremat aktiivsust, kuna internet aitab luua lisaväärtust nii majanduslikus, sotsiaalses kui ka kultuurilises plaanis. (van Dijk ja Deursen 2014; Tapscott et al. 2007). Internet ja sotsiaalmeedia pakuvad kõigile, kel on internetiühendus, võimaluse olla sisuloojaks (Rainie ja Wellman 2012) ning käituda pigem aktiivse osaleja kui passiivse vaatlejana. Online-maailm on paljude jaoks loomulik elu- ja toimimiskeskkond, mis on toonud kaasa tavapärasest erinevaid ja sageli ka toimijaile endile teadvustamata käitumismustreid. Asjakohastes uurimustes jõutakse tihti järeldusni, et veebikasutajatest väiksem osa on aktiivsed ja suurem osa passiivsed kasutajad, nimetades viimsid ka luurijateks (lurkers), isegi kui selline järeldus ei pruugi põhineda esinduslikul valimil. Niisiis tekib küsimus, kes või mis need luurijad on?

Käesoleva väitekirja raames tehtud uurimistöö hõlmab mahukat teoreetilist ja analüütilist baasi, sealhulgas ülevaateid ilmunud kirjandusest, teooriate ja mudelite analüüse ning juhtumikirjelduste uurimusi, mida on alates 2010. aastast tehtud Kremsi Danube Ülikooli E-valitsemise ja avaliku halduse osakonnas (Austria), Leedsi Metropolitan Ülikoolis (Suurbritannia) ja Tallinna Tehnikaülikooli Ragnar Nurkse innovatsiooni ja valitsemise instituudis. Lisaks sellele, et veebis luurimisele on võimalik anda mitmeid erinevaid definitsioone, toob väitekiri välja ka selle, et luurimine kätkeb endas tegevusi nii internetis kui ka väljapool netikeskkonda. Uurimistööst nähtub, et luurimisele antud definitsioon mõjutab seda, milline teaduslik lähenemine valitakse, milliseid tulemusi saadakse ja kuidas saadud tulemusi rakendatakse.

Definitsioonide taksonoomia ja selle analüüs on oluliseks täienduseks senistele uurimustele, kuna ilmneb, et internetis osalemine ja luurimine on väga mitmetahulised online-käitumise fenomenid, mille puhul pelgalt negatiivne lähenemine oleks online-osalejate suhtes ülekohtune. Kõik töös esitatud teadusartliklid käsitlevad püstitatud uurimisküsimust ja peegeldavad samas ka autori arusaamade muutumist luurijate rolli, online-osaluse ja e-osaluse käsitlemisel.

Arusaam luurijatest ja nende tegevusest erinevates online-kontekstides on siiani olnud väga kesine. Käesolev uurimustöö keskendub erinevatele online-käitumistele, mida saab koondada ühisnimetaja „luurimine“ (lurking) alla. Liiati suhtutakse online-kontekstis luurimisse sageli negatiivselt, pidades seda online-keskkonna ja selle võimaluste lörtsimiseks.

Väitekirja eesmärgiks on seda vajakut parandada, uurides luurimist online-osaluse ja e-osaluse kontekstis ning andes vastuse kolmele alljärgnevale uurimisküsimusele:

1. Kuidas luurimist defineeritakse?
2. Kuidas mõjutab definitsioonide erinevus luurimist käsitlevaid uurimusi?
3. Kuidas mõjutab luurimine e-osalust?

Väitekiri koosneb sissejuhatusest ja kümnest avaldatud teadusartiklist. Artiklite fookuses on järgnevad teemad: luurimise definitsioon (**I**, **II**, **VIII**), definitsioonide erinevuse mõju luurimise uurimisele (**I**, **II**, **VIII**) ja e-osaluse erinevad aspektid. Teadusartiklites toodud ideid ja analüüsi on tutvustatud doktoriseminaridel ja rahvusvahelistel konverentsidel (**V**, **VII**, **IX**, **X**), kus on saadud väärtuslikku tagasisidet.

Väitekirja esimene osa keskendub küsimusele, kuidas luurimist defineeritakse ning toob välja senistes uurimustes kasutatud definitsioonide liigituse. Ülevaade kirjandusest on koostatud teadusuurimuse klassifikatsiooni põhimõttest lähtuvalt ja seal on toodud välja asjakohased tähelepanekud. Antud klassifikatsioon on kvalitatiivne ja piiritletud, esitades ülevaate kirjanduses kasutatavatest luurimise definitsioonidest koos vastava liigitusega ning tuues välja vastuolud ja aspektid, mis uurimistööd komplitseerivad. Kuigi vastava valdkonna uurimistöödes ollakse üldiselt üksmeelel selles, et luurimine on kõige levinum online-käitumise viis, antakse luurimislaadsele käitumisele palju erinevaid definitsioone ja seletusi (**I**, **II**, **VIII**). Definitsioonid on jagatud kategooriatesse: luurimist kui negatiivset käitumist kirjeldavad, luurimist kui legitiimset käitumist kirjeldavad ning luurimist aktiivseks käitumiseks liigitavad definitsioonid.

Väitekirja teine osa keskendub küsimusele, kuidas mõjutab erinevus definitsioonides luurimist käsitlevaid uurimusi. Vaadates lähemalt definitsioonide taksonoomiat, liigitamist ja analüüsi, on selge, et konkreetse definitsiooni valik mõjutab nii uurimusele seatud eesmärki, uurimuse läbiviimist kui ka uurimistulemuste interpreteerimist ning rakendamist (**I**, **II**, **VIII**). Negatiivsed definitsioonid kirjeldavad luurimist kui kahjustavat tegevust ning leiavad, et oleks vaja julgustada aktiivsemat osalemist läbi online-käitumise muutmise (nn luurimisvastased strateegiad, **V**). Need definitsioonid, mis kirjeldavad luurimist kui legitiimset käitumisviisi, väidavad, et luurimine on igati õigustatud ja tunnustatud online-roll, mille puhul luurijad on õppijad, lugejad ja kuulajad, kelle käitumist muuta pole vaja (**I**, **II**, **VIII**). Need uurimustööd, mis käsitlevad luurimist kui aktiivset käitumist, millel on märkimisväärne mõju nii online- kui ka offline-keskkonna võrgustikes, kirjeldavad seda mõju positiivse ja väärtuslikuna ning pakuvad välja luurimist julgustavaid strateegiaid (**IV**). On ilmne, et see, kuidas uurimistulemusi rakendatakse interneti ja online-keskkonna arendamisel, sõltub paljuski definitsiooni valikust.

Selle asemel, et püüda muuta inimeste käitumist, sundida neid avalikult osalema (**V**) või proovida kaasa tõmmata neid, keda asi ei huvita (ignoreerijad) (**III**, **IX**), väidab käesolev doktoritöö, et Takahashi at al. (2003) definitsioon on ideaalne lähtekoht luurijate tegevuse mõistmiseks ja paremaks arusaamiseks sellest, kuidas luurijad online-keskkonda panustavad (**IV**, **IX**).

Kolmas uurimisküsimus, kuidas mõjutab luurimine e-osalust, käsitleb luurimist e-osalemise kontekstis. E-osalus hõlmab käesoleva uurimistöös nii online-osalust kui ka e-demokraatiat laiemalt, mis võimaldab, julgustab, avardab ja süvendab poliitilist osalemist ja demokraatlikku kodanikukäitumist (**III**, **IV**, **VI**, **IX**, **X**). See uurimisküsimus sai väitekirjas analüüsimiseks valitud põhjusel, et teadlased toovad sageli välja kodanikuosaluse loidust online-keskkonnas ja e-osaluse suurendamisele suunatud algatuste luhtumist, kuna osalejad pigem luurivad kui näitavad üles sisulist huvi ja aktiivselt kaasa löövad. Nagu käesolevast doktoritööst nähtub, võimaldab luurimise defineerimine tegevusena, mis on legitiimne, tunnustatud ja aktiivne, kuvada seda kui demokraatlikke põhimõtteid toetavat tegevust, mis soodustab dünaamilist, kaasavat, läbipaistvat ja kodanikke kuulda võtvat demokraatlikku ühiskonda (**IV**, **V**, **IX**). Luurimise kontseptuaalne analüüs e-petitsiooni menetlemise protsessis (**IX**) ja ühe e-kaasamise algatuse juhtumianalüüs (**IV**) toovad välja, milline on luurijate mõju e-osalusele ja ka selle, et luurijate mobiliseerimine, tuginedes luurimise kui aktiivse online-käitumise definitsioonidele ja strateegia, mis toetab luurimise laiemat levikut, võiksid olla üheks e-kaasamise võtmeteguritest.

Luurijatel on online-osalust käsitlevates uurimustes oma kindel roll, nagu seda näitab ka luurimise definitsioonide jaotus (**I**, **II**, **VIII**). Siiski on jäänud senised uurimused, mis vaatlevad luurimist e-osalemise kontekstis, suhteliselt pinnapealseks ja ühekülgseks. Sestap oleks vaja, et edaspidistes e-osalust käsitlevates uurimustes püstitataks senisest enam alljärgnevaid küsimusi:

Kes on luurijad? Online-aktiivsusel on väga erinevaid vorme, seetõttu oleks liialt lihtsustatud lähenemine võtta osaluse kirjeldamise aluseks dihhotoomia aktiivne-passiivne, mille kohaselt on nähtav osalemine ainus positiivse mõjuga osalemise viis.

Kas eesmärgiks on universaalne osalemine? Ükskõik millise e-osalust võimaldava ettevõtmise puhul peetakse juba 1% kodanike kaasumist erakordseks õnnestumiseks, siiski ei ole realistlik eeldada, et õnnestus saavutada 100% osalus või et seda peaks üldse eesmärgiks seadma. Suur kaasatus ja ka väga kõrge osaluse määr ei pruugi viia suuremas plaanis (re-)demokratiseerimise ja jätkusuutliku aktiivse osalemiseni.

Kas nähtava osaluse suurendamine, muutes luurijate käitumist, on mõistlik strateegia? Siin võib öelda, et suurem nähtav osalus ei pruugi muuta e-osalust võimaldavat ettevõtmist edukamaks või olemuselt paremaks. Nähtava osaluse kannustamine võib tuua kaasa käitumise ja tegevused, mis võivad olla soovimatud, kahjustavad või nurjavad.

Kuidas tuleks osalust ja luurimist hinnata? Arvestades, et e-osalust käsitletakse sageli kui suhte kvaliteedi väljendust või suhete parandamise võimalust kodanike, valitsuse, riigiasutuste ja teiste huvigruppide vahel, võivad luurimise positiivsed definitsioonid ja meetodid, mis lähtuvad sotsiaalsete võrgustike teooriatest ja analüüsi metoodikast osutuda ideaalseks lähtekohaks e-osaluse mõju hindamisel.

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Reviewing the Definitions of "Lurkers" and Some Implications for Online Research

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Abstract

Little research focuses on lurking in the online environment or considers lurking as a valid and important form of online behavior. This may be due to the fact that there are a number of definitions, and most of them focus on a lack of participation or contribution or see it as a problematic behavior that needs to be changed. Such definitions have given lurkers a negative connotation. They need to be considered as an important factor in online research, starting with a clearer and more positive definition of lurking. It is also necessary to understanding why users decide to lurk, what activities lurkers engage in, and whether the online environment is more valuable by turning lurkers into posters.

Introduction

In 2006, TIME Magazine nominated "You" as the person of the year,[1] where "you" are all the users of the Internet driving Internet development by producing user-generated content and through a variety of participatory activities such as chatting, sharing, e-mailing, blogging, socializing, and creating. While public online participation may represent one form of online behavior, there are other forms that are often neither considered nor fully understood in online sciences and research. One such behavior is lurking. Lurkers often represent the largest portion of the online environment. Yet the term has many meanings, often negative ones. This paper has several main aims. First, it provides a review of some of the definitions used in research literature. Second, lurking is not always a passive behavior, but active participants who are very much in a position to support others (people, communities) in the online environment. Third, while Shirky[2] emphasizes that any activity and any form of participation should be encouraged, research should not always be about finding ways to encourage a lurker to engage visibly, but first of all about recognizing and understanding lurking.

Definitions of Lurking

Lurking is a popular activity among online users, made possible by technology that provides users access without having to be visible or publicly participate[3] and leaves no traces.[4] Yet "it is not even clear what lurking means."[5] This is one of the many challenges in studying lurking, as there are many definitions, and researchers often develop their own new definition.

Lurking is usually associated with nonparticipation, and definitions of lurking are often related to nonposting behavior, although these definitions vary in numerical terms. Lurkers are those who post infrequently,[6] who do not make a contribution in the first 12 months after subscribing to a list,[5] who have not posted in recent months,[7] or who never or only occasionally post a message.[3,7–9] The term "lurker" is often used to describe someone who observes what is going on but doesn't participate or remains silent, and is thus associated with observation, silence, inactivity/passivity, invisibility, or bystander behavior. They are described as a passive or invisible, hard to reach or hard to involve population in online communities, nonpublic participants,[8] inactive and silent,[10] even though they can make up more than 90% of the online group.[11] Lurkers are seen as those members who log into a community, read blogs and discussions, but don't contribute.[11,12]

Lurking has negative connotations—someone who does not participate "but he's out there…watching, reading every message…If a fight breaks out he will quietly observe to avoid revealing his position."[13] The most famous and most influential definition of lurking sees them as free-riders who take without reciprocating.[14] Lurkers are those people who hang around, want something for nothing, and are not committed to the community.[15] Lurking erodes the online community[16] and threatens the online groups and its activities: "the existence of 'lurkers' may lead to [the] group fading, as some active participants may be disheartened to continue with the discussion when they fail to get any feedback, verbal or non-verbal, from others."[17] Lurkers are seen as unnecessary for communication, an obstruction, as "the scourge that

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prevents successful collective efforts,"[18] exhausting bandwidth. Since the goal of most online communities is discussion and interaction, may there be some justification for a negative view of lurkers? Success of social media and online tools depends on active participation and contributions, enticing current members back and new ones to join.[19] Lurkers are seen as participants that hide and assume false identities,[16] receiving the benefits of belonging to the group without giving anything back. So online communities try to organize themselves to prevent lurking or encourage active posting.

Defining Lurking: Implications for Research

Research needs other definitions of lurking, definitions that see it as a form of normal online behavior. Defining lurkers in positive terms can show that they are valid participants, capable of supporting online communities and contributing to innovation, and that lurking, like other online behaviors, involves a complex set of behaviors, rationales, and activities.[20] A redefinition of lurking can also help to show that lurking is not only normal or positive, but also an active, participative, and valuable form of online behavior. Redefining lurking so that it can be useful for research will have to begin by considering why people lurk.

Why lurk? Reasons for lurking

One reason for lurking is that is easy.[16] But online research needs to consider other reasons users choose or prefer to lurk. It might well be that some lurkers are free-riders, but many lurk for other reasons, including pro-social and altruistic reasons.

Nonnecke and Preece[3] urge that lurking be seen as a behavior reflecting the users' needs and reasons, and these can be personal (entertainment, curiosity, and learning), to satisfy information needs, to learn about the group, to maintain privacy and safety, to reduce noise and exposure on the site, to act within constraints, and to act in response to group dynamics.

In any medium, certain people learn to dominate, and groups tend to move in directions driven by dominant personalities.[21] Some participants are more impulsive, others more cautious. Some don't feel the need to make themselves heard when others represent their opinions. Some feel they get what they need without intruding and some feel shy. At the same time, lurking may depend on the context rather than it being an individual trait.[5]

Focusing on users' individual motivations may also help understand why users lurk. Preece et al.[22] suggest that participants and lurkers may choose to go online for similar reasons, but lurkers do not expect to receive or give answers in the same way as posters. Preece et al. also found that few lurkers actually intend to lurk from the onset, and that lurking may also be a reaction to the online community or the style of interaction found there. As online participation requires processing capacities—and people only have finite resources for such processing —Haythornthwaite[23] suggests that lurking may be a reaction to information overload, that is, lurkers are reacting to or trying to avoid contributing to the chaos often found in online communities. But online participation and collaboration can often be impeded by group processes,[24] including coercion by the majority, reluctance of minority members to speak out because of the fear of other participants' reactions,[25] communication apprehension, opinion dissonance, or even social loafing.[26]

Lurkers as valuable participants

Traditional approaches have the effect that the lurking community members are dismissed as not being as valuable as contributing community members. While public posting represents one way of communicating and one way the community may benefit, lurking can be a positive and helpful behavior, a way of giving, receiving, providing/obtaining support, or learning. Lurking is the most popular online behavior, and given that lurkers may actually spend many hours lurking, they are well informed, familiar, and emphasize with others, even if they never visibly post or reply directly. As a behavior common to the majority of online users in information or collaborative environments,[18] it is necessary to understand and define lurking behaviors in terms of how it can be beneficial and valuable. Furthermore, in future, they may be visible users and provide key revenue sources and vital information, so they do not need to be dismissed.[6,15]

Some online groups encourage lurking because it helps new users get a feeling for the group, the kind of people who participate in it, and how it operates.[27] At the same time, lurkers may learn vicariously by reading the experiences other participants report.[28]

Lurking as active behavior

A clear premise is necessary: lurkers are not nonusers. Lurkers do use the technology and visit sites. Nonusers, on the other hand, are those who do not use any information and communication technologies for a number of reasons, such as a lack of financial resources or lack of skills, poor education, emotional reasons, or simply because they resent using it.[29,30]

One reason why the majority of lurkers choose not to post is because they are reading and browsing, and that may be enough for them.[8] All users need to read before they can engage in any other activity.[31] So lurkers are active as they reading rather than ignoring the material,[32] and by reading they are not taking advantage of others' efforts.[18,33] Muller[33] describes lurkers as "social readers," where reading is not a solitary, unconnected, unproductive action but a social activity that occurs in a social context, involves other people, and contributes to the social worlds of readers, authors, and organizations. He makes everybody a lurker, as all users read before engaging in another activity.

Lurking can also be defined as listening.[34] In many contexts, lurkers serve as conventional mass media audience. Yet at the same time, lurkers obviously derive value from their activities, otherwise they would not engage in them.[12] Crawford[35] uses lurking to analyze the different ways of participating online, and proposes lurking-as-listening as a metaphor for paying attention online.

As active rather than passive participants, lurkers are goal driven, engage in different activities, and employ a range of strategies. Active posting is not the only way to be part of a community, and lurking is more than not posting or just reading others' posts, but can include activities such as editing and organizing messages. Lurkers use different strategies and the strategies chosen help the lurkers to decide whether to read or not, which threads to follow, deal with the

messages, keep the information manageable, and finally to maximize return on effort.

Lurkers may have never posted a message, but "they can cruise from site to site in peaceful anonymity, picking up perspective, information and insight,"[36] and this will have effects outside the boundaries of the online communities. Takahshi et al.[37,38] and Willet[39] develop the notions of active lurkers and passive lurkers, where active lurkers are those who make direct contact with posters in an interactive environment or propagate information or knowledge gained from it, while passive lurkers read for their own use only. Lurkers' behaviors may have effects outside the online communities, and their activities should not be neglected.[40] They not only enlarge the size of the group as an audience, but they also increase its influence, as the information gained may be used in other online groups or offline settings, lead to connections with other networks, as well as bring new contacts and members. Lurkers may use information or knowledge for their own activities, but they act as the weak/strong ties of a community[41] and connect "otherwise isolated social spaces"[5] by passing information, knowledge, and content to other online and offline environments. Lurkers' behaviors can also be used as a metric of online social influence: the "return on contribution" (ROC) is based on the number of people who read, view, or consume a resource divided by the number of people who produced the resource.[31,32] Lurkers may be the hidden asset in online communities.[42,43]

Further Considerations

While there is an increasing expectation that everybody should be using online tools, people will always have different ways of engaging online, deciding how and with whom to engage, and when to switch off and be unavailable, unhearing, and unheard.[35] Online research has focused on those who have spoken up and contribute visibly, but there has been little research into other forms of participation. Katz[38] makes the plea that although lurkers are not heard or seen, they need more attention, as they are, after all, the largest group of the users. On the premise "that everyone is likely to lurk at least some of the time and frequently most of the time,"[3] research needs to pay greater attention to the role of lurkers and lurking, recognize that lurkers are active, reading, listening, being receptive, connecting, forwarding. In spite of the lingering negative definitions, recognizing and understanding lurking as normal behavior or form of communication is important for online research, as it has wide-reaching consequences, not all of them known yet.

Lurking as an aspect of participation

Online technology has focused on users "having a voice," and research has focused on the extent that the technologies are used so that individuals can express themselves freely in cyberspace.[37] This focus has been criticized, as online participation is often seen as a dichotomy between those who participate and those who don't (and those who don't are assumed to free-ride), and this is view is too simplistic.[18] Lurking plays a role in many aspects of online life. In e-business, every lurker is a potential customer. In e-government, knowing more about lurkers may lead to tools, initiatives, and policies that are able to support citizens in different contexts, and more generally to the development of improved tools and design for different users with different needs.[44–46] Lurkers are the largest group in the online environment, and as such, they neither represent the unconnected nor those who "are out of the loop, socially and otherwise."[47] Lurking is not just one aspect of online participation, it is multidimensional online behavior, and research needs to acknowledge the complexity of different forms of online participation. Soroka and Rafaela[48] suggest understanding online participation in terms of their Social Communication Network (SCN), a model that includes all participants (both active and passive) and all the connections and relationships participation needs to reveal the complexity of online behaviors.

Should the aim always be to increase online participation?

Understanding lurking is central to understanding the social behavior in online social behavior, especially as lurkers do have opinions, ideas, and information that can be of value to the online and offline community.[49] Ignoring, dismissing, misunderstanding them will distort how we understand online life, as well as leading to mistakes in the way sites and strategies for increasing online and offline participation are organized and designed.

Virtual communities may need a sizable number of members for sustained participation,[50] but lurking and differences in levels and types of participation are always to be expected and has its functions. Nielsen[11] states that participation inequality cannot be overcome, and that "the first step to dealing with participation inequality is to recognize that it will always be with us. It's existed in every online community and multi-user service that has ever been studied." It is difficult to evaluate the value of participation by counting the number of posts or other activities and trying to convert these into economic quantities. The work by Takahashi et al.[39,40] shows that a clearer understanding of participation and lurking within an online community will allow lurkers to occupy a more important position as a resource. Encouraging a lurker to be a visible participant may not necessarily always be an advantage. Researching the role of the lurkers must not necessarily lead to higher levels of visible participation but reveal how the activities they like to engage in may have benefits for the group, the community, and, in much wider terms, democracy and society.

Conclusion

Defining lurking in positive terms can help provide new perspectives in online research. One serious consequence of misunderstanding lurkers is misunderstanding online environments.

An overview of definitions reveals that lurkers are not only defined in many ways, but that definitions themselves are often contradictory. Even when redefined in positive terms, lurking is often referred to as introverted, passive, or inactive rather than active behavior. Morris and Ogan[51] describe lurkers as readers and at the same time as passive TV viewers. Stegbauer and Rausch[5] believe that lurkers connect isolated social spaces and passing contents between mailing lists, yet describe this behavior as being passive. Passive behavior implies that participants obtain fewer benefits (e.g. informational) than active participants, and participants can only be either passive or active.[52]

Some definitions see lurking as acceptable behavior, yet use terms that reflect a more negative approach ranging from harmless and reserved[13] to "eavesdrop,"[53] but also lack of confidence and lack of productivity.[49] Lurkers have been given less derogatory labels such as "peripheral participants."[54] Yet the term "lurker," even if redefined in more positive terms, seems to have stuck. The definitions still focus on what lurkers are not: not public, not at the center. Such definitions neither adequately describe lurking nor explain why it is important to online participation.[18]

Sanders,[55] on the other hand, suggests defining lurkers as "lovecats," that is, people who share knowledge freely and with good intent, serving others, facilitating relationship building, and aiding group learning. The online environment relies on different types of users in the online environment. So lurking needs to be seen as a normal behavior to be researched from a number of perspectives, reflecting and identifying the diversity of lurkers, their behaviors, strategies, and needs.

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Noella Edelmann

13 What is Lurking? A Literature Review of Research on Lurking

Abstract: There has been a massive growth in user-driven online applications such as blogs, podcasts, wikis, and social networking, as well as online users having different ways of using online and social media. Although it is known that online participation is not evenly distributed among users, research often focuses on the small core of participants that generates most of the visible online content and activity. This chapter aims to provide an understanding of the phenomenon of online lurking by providing a review of the definitions of lurking, and shows that lurkers are both active and valuable online participants.

13.1 Introduction

The internet offers ways to interact with others, access information, as well as enables and facilitates contact among individuals (Anderson, 2006; Sypher and Collins, 2001; McKenna and Bargh, 2000). Online, individuals can chat, argue, engage in intellectual discourse, exchange knowledge, share emotions and provide emotional support, plan, brainstorm, gossip, feud, fall in love, find friends or lose them, and play games. Online technologies and media make finding others who are similar or share similar interests easy, they help those who are less confident to speak out and participate, and seem to provide almost infinite choices (Anderson, 2009, 2006; Katz, 1997).

Social networking encourages activities such as forming personal networks, connecting and linking to others, participating in discussions, and creating communities. But what is particular about the "new", "social", or "web 2.0" media is that it has given online participation additional dimensions: the new "architecture of participation" not only encourages contribution by users but also helps them gain control over information, the process of production and diffusion, as well as the software itself (Governor, Hinchcliffe and Nickull, 2009, p.22). The distinction between interaction and content production has blurred as users increasingly use online sites such as YouTube, Facebook, and Digg to produce and share knowledge and information, writing blogs, creating Wikis, producing and combining services ("mash-ups"), as well as organising and engaging in discussion (Archmann, 2010; Slot and Frissen, 2007). Successful outcomes of online participation and collaboration are possible even though online participants have never met face-to-face, and benefits may include better performance and quality, more efficiency, higher productivity, and improved attendance (Brandon and Hillingshead, 2007; Abreu, 2000; Cascio,

2000). It has been suggested that the internet may be the 'glue' that helps people stay together and that it supports the collective help necessary for solving a range of social and societal problems (Cruickshank, Edelmann and Smith, 2010; Huysman and Wulf, 2005).

But research on different online environments shows that online participation is not evenly distributed among users: individuals share information and connect with others at varying levels of involvement, and often a small core of participants generates most of the conversation and content (Martin and Robinson, 2007; Joyce and Kraut, 2006; Rafaeli and Raban, 2005; Skitka and Sargis, 2005; Preece, 2000). Nielsen (2009, 2006) states that low levels of participation and online information sharing are a characteristic of the online environment, describing online participation with the 90-9-1 rule: 90% of the users read or observe (but don't contribute), 9% of the users contribute from time to time, and 1% of the users participate a lot and account for most contributions. This proportion seems to be found in several online environments, for example in open-source communities 4% of the participants provide 50% of the answers on a user-to-user help site (Lakhani and Hippel, 2003) and in Wikipedia, 2.5% of the users contribute 80% of all the content (Tapscott and Williams, 2006). Typical online social networks – that are about interactivity more than anything else – are similar: the top 10% of users account for 30% of all production, e.g. on Twitter, the top 10% of prolific Twitter users account for over 90% of tweets (Heil and Piskorski 2009). A recent study on social media by Williams, Crittenden, Keo and McCarty (2012), revealed that 80% of their research sample (college students) see themselves as spectators rather than active users on social media.

Many researchers describe this dominant group of users in mass media, web 1.0, and web 2.0 as "lurkers". Online participation is not balanced, and the most common or popular online behaviour users engage in is lurking, and users who engage in lurking are known as "lurkers". Whilst participation in online and offline environments can be quite similar, lurking is possible because of the online technology: it provides access without being visible nor having to publicly participate (Joinson, 2001). Understanding online participation requires an understanding of lurking, in particular the implications of lurking for online research, but a review of the definitions of lurkers shows a broad range of definitions, as well as definitions thatare changing. Although reaserchers tend to use more neutral terms for the largest group of users, the more negative definition of lurking and assumptions about them seem to have remained. Understanding lurkers, their activies and value in the online environment are important when studying online environments, in particular in terms of how online research is conducted and results interpreted.

13.2 Defining Lurkers

A review of the research literature shows that there is a wide range of definitions, from lurkers as "free-riders" (Smith and Kollock 1999), to being the online "scourge" (in Antin and Cheshire, 2010, p. 128) or even "lovecats" (Sanders, 2010). But defining lurkers must begin with a clear distinction: lurkers are not non-users. Lurkers do use technology, they do visit sites and they do login. Non-users on the other hand, are those who do not use any information and communication technologies for a number of reasons, such as a lack of financial resources (Martin and Robinson 2007), poor education or lack of skills (Livingstone 2004), emotional reasons (such as technophobia, van Dijk 2005), because they resent using it (Hargittai, 2007; Selwyn, 2006), or simply because they do not want to. Furthermore, lurkers do not represent the unconnected, those who "are out of the loop, socially and otherwise" (Sypher and Collins 2001, p. 101).

13.2.1 Lurking: from "Never Posting" to "Luring the Gullible"

English language dictionaries define lurking as "to lie in wait (as in an ambush), to move furtively, to sneak, to go unnoticed or to exist unobserved or unsuspected. Synonyms include hiding, sneaking, hide, sneak, crouch, prowl, snoop, lie in wait, slink, skulk, concealment, moving stealthily or furtively" (Collins English Thesaurus, 2012, no page ref.). In the context of the online environment, dictionaires define lurking as to read but not contribute to the discussion in a newsgroup, electronic network, or community (Free Online Dictionary, 2012; Oxford Dictionaries Online, 2012).

In research on online communication, lurkers are understood as those who are known to read an online group's postings regularly but rarely participate. Sometimes they are described in terms how many posts they (don't) contribute, and this varies from those who "never" post (Nonnecke, Andrews and Preece, 2006; Preece, Nonnecke and Andrews, 2004), to those who have not posted in recent months (Nonnecke and Preece, 2000), who post infrequently (Ridings, Gefen and Arinze, 2006), who have not made a contribution in the first 12 months after subscribing to a list (Stegbauer and Rausch, 2002), or who contribute less than the average number of postings (Taylor, 2002).

It is known that lurkers access and login into sites, regularly read the postings and blogs, and anonymously use the content, but remain "silent". As lurkers tend to be the majority in the online environment - over 90% of the online group – their silence leads them to be called the "silent majority" or the "non-public audience" in an electronic forum (Strout, 2011; The Jargon File, 2010; Preece and Shneiderman, 2009; Nielsen, 2006; Stegbauer and Rausch, 2002; Takahashi, Fujimoto and Yamasaki, 2002; Nonnecke and Preece, 2000).

By being silent, anonymous, and not contributing visibly, lurkers are deemed to be the inactive, passive, peripheral or non-productive participants of online communities (Leshed, 2005; Rafaeli and Raban, 2005). Researchers describe them as TV viewers (Morris and Ogan, 1996), "TV zappers" or "aimless www surfers" (Stegbauer and Rausch, 2002, p. 263), those who do not interact with other members of the online communities, are passive, hard to involve, or non-public participants (Nonnecke et al. 2006; Rafaeli and Raban, 2005; Andrews et al., 2003). They are also defined as participants who do not actively and visibly contribute (Nielsen, 2006; Nonnecke and Preece, 2001), as well as peripheral or non-productive participants of online communities (Nonnecke et al. 2006; Leshed, 2005; Nonnecke and Preece, 2003, 2001).

Other definitions see lurkers as bystanders, someone who hangs around, wants something for nothing, shows a lack of commitment to the community, or is a threat to online groups (Cher Ping and Seng Chee 2001; Nonnecke and Preece, 1999). Ostrom (1990) suggests that lurkers get the benefits of belonging to the group without giving anything back or committing themselves to the online community, and Ling et al. (2005) describe them as "social loafers", i.e., users who contribute less or exert less effort to an online collective task. Researchers also view lurkers as selfish free-riders who aim to take advantage without contributing or reciprocating (Smith & Kollock 1999), where the lurkers' behaviours "results in unbalanced contribution: some enthusiasts contribute while others enjoy those contributions without reciprocating" and "eventually enthusiasm will erode leading to the slowdown or even demise of the group or community" (Rafaeli and Raban, 2005, p. 71). Rafaeli and Raban argue that free-riding allows participants to hide and easily assume false identities, making the lurking "problem" worse. Lurking is thus seen as an inappropriate behaviour or the detrimental use of technology (Butler, Sproull, Kiesler and Kraut 2002), an obstruction, exhausting bandwidth,"the scourge that prevents successful collective efforts" (Antin & Cheshire, 2010, p. 128), or cyber-tricksters "lurking the Web and luring the gullible" (OECD, 2003, p. 145).

13.2.2 Lurking as "Normal" Online Behaviour

Lurking seems to be the most popular online behaviour: some people spend many hours lurking, and know the topics of the conversation and key players of the online community well, becoming so immersed in the community's discussions that they feel they know the participants, belong to the community, and emphasise strongly with the issues in the online community (Soroka and Rafaela, 2006; Rafaeli, Ravid and Soroka, 2004; Nonnecke and Preece, 2000, 2003; Nonnecke et al., 1999). Lukers work at knowing the group, understanding the group and they are often committed to the group. They also do have opinions, ideas and information that can be of value to the community, but may be waiting for the right moment to contribute, are trying

to see whether there contributions are appropriate to the online community, or evaluating the community atmosphere. It is seen as a positive and helpful behaviour, it enables new members to learn community norms, see whether their concerns are relevant to the community, and sometimes they can receive help and support without having to disclose themselves. Lurking is useful and desirable, particularly for very busy groups; if all members participate visibly, it could cause repetition of queries and result in an overload of posting. Lurkers avoid contributing to the chaos and information overload often found in communities, and, by side-posting or contacting individuals directly instead, they are engaging in pro-social and thoughtful altruistic behaviour (Haythornthwaite, 2009). Some online groups encourage lurking because it helps potential new users get a feeling for the group, the kind of people who participate in it, and how it operates (van Uden-Kraan, Drossaert, Taal, Seydel and van de Laar, 2008).

Nonnecke and Preece (2000) believe that lurking is one style of online behaviour, and describe it as situated action that is taken for many reasons including personal and group-, work-, and tool-related factors. Different users have different needs, different motivations and will have and require different skills and tools. Although participation includes activities such as creating relevant content, participation also involves activities such as consuming content e.g. reading the material that others provide or post. The majority of lurkers (53.9%) choose not to post because "just reading/browsing is enough" (Nonnecke et al., 2006, p. 13), and they may even be learning vicariously by reading the experiences other participants report (Arnold & Paulus, 2010). This means that lurkers are not ignoring the material (Edelmann and Cruickshank 2011), they may be engaged in other activities such as reading, listening and learning. Characterising readers as free-riders is inappropriate, as reading represents a legitimate form of participation and contribution; as readers they participate rather than try to take advantage of others' efforts and "if everyone chose to free-ride, Wikipedia would not exist (Antin and Cheshire, 2010, p. 127). Muller (2012, no page ref.) describes lurkers as "social readers", participants engaged in "social reading", where reading is not as a solitary, unconnected, unproductive action, but understood as an activity everybody does, a social activity that occurs in a social context, involves other people, and contributes to the social worlds of readers, authors and organisations. Muller suggests that everybody is a lurker, as we all read before engaging in another activity such as creating or posting content.

Lurkers are listeners, a important role, especially for others, as "if everyone is talking, is anybody listening?" (Goggin & Hjorth, 2009, p. 2). Listening (by reading the posts) and acting as an audience may represent a legitimate form of participation, and can be seen as a form of contributing to the community. According to Crawford (2009), "listening" is a useful metaphor for engagement and paying attention online, and, as readers and listeners, lurkers contribute a mode of receptiveness that encourages others to make public contributions. In many contexts lurkers serve as

listeners, as conventional mass media audience, making them the justification and target for certain online activities (e.g. advertising, Soroka & Rafaela, 2006).

13.2.3 Active Lurking

Blanchard and Bowles (2001 p.60) helped popularize the notion "none of us is as smart as all of us". Attributed to originally being a Japanese proverb, it means that more can be accomplished by working together than on one's own –thus highlighting the importance of participation and contribution. In line with this, Shirky (2010) emphasises that any activity and any form of participation should be encouraged, as any "banal use" of the online environment (he mentions posting YouTube videos of kittens or writing bloviating blog posts) is "still more creative and generous than watching TV. We don't really care how individuals create and share; it's enough that they exercise this kind of freedom." (quoted in Garber, 2010, no page ref.). However, are posters more active than lurkers? Is active posting really the only legitimate online activity?

The lurker is not passive reader, a failure, or a free rider, but is a positive and active participant who can have an active role without posting a message. Willett (1998) considered lurking in terms of "active lurkers" and "passive lurkers". For Willet, "active lurkers" are those who make direct contact with posters in an interactive environment, propagate information or knowledge gained, whilst "passive lurkers" read for their own use only. Lurkers should not be approached as participants who do not actively contribute to an online environment, but as the indirect contributors of the online community's influence on its outside environment, by forwarding the topics in an online community to others who are not members of it and other online communites, or use information or knowledge gained from an online community for their personal or organizational activities. Research by Nonnecke and Preece (2003) found that active posting is not the only way to be part of a community, that lurking is more than not-posting or just reading others' posts and can include activities such as editing and organising messages. They suggest that lurking is a strategic and personal activity that involves a "complex set of actions, rationales and contexts" (Nonnecke & Preece 2003, p. 116). They see lurking as an activity, driven by the individual's needs, goals, reasons, and personal background. Lurkers use different strategies that help them identify community messages from other messages, decide whether to read or not, which threads to follow, deal with the messages, keep the information manageable, and finally, to maximise return on effort. The lurking activity is carried out methodoligically and strategically, may change according to the context, and individuals are capable of explaining the choice of method and strategy they follow. Nonnecke and Preece conclude that lurkers may have never posted a message, but they are not passive, rather, they are active and goal-driven.

Based on the assumption that lurkers may have a strong and wide influence outside the online community, Takahashi et al (2003) proposes a classification of online participants that includes lurkers and the the types of actions lurkers take outside the online community, and if the online community affects their thoughts. The classification of the participants and lurkers is based on the users and their 1. expectations of purpose of an online community; 2. stance on participation; 3. personal speciality and interests; 4. attitude towards information handling; 5. awareness of the existence of others. Within this classification, the lurker becomes a useful participant, and the lurker's point of view is a means of supporting or managing online communities and innovation. Even if lurkers do not propagate or use information or knowledge gained from an online community, their thoughts can be changed by it and reveal the influence of an online community.

13.3 Some Implications for Research

Lurkers should not be disenfranchised but given more attention, and, as lurking seems to be the most popular online behaviour, not be seen as dysfunctional behaviour but as an activity that many people enjoy doing. Understanding lurking is an initial, and certainly easier, step requiring less effort than trying to reach the non-users or those who are not at all interested in participation, the "ignorers" (Edelmann and Cruickshank, 2011).

Businesses and public institutions alike want users to actively participate online as the internet seems to be able to overcome a number of difficulties found in offline situations, as well as encourages innovation and the generation of new ideas (Tapscott and Williams 2006). Yet the research by Takahashi et al. (2007) shows that not only is it is difficult to evaluate the value of participation by counting the number of posts and other activities, and trying to convert these into economic quantities, but that a clearer understanding of online participation and lurking within an online community will allow the lurkers to occupy a more important position as a resource. Understanding lurking is central to understanding online social behaviour and cognition among the less salient participants, especially as lurkers do have opinions, ideas, and information that can be of value. Research on the online environment needs to consider that the majority of participants are not "seen" and that any results obtained may represent a small number of users only. In addition, the researchers approach to the users is reflected by the choice of definitions, and will impact how research is conducted and the meaning given to the results obtained. Research needs to consider, even avoid the dichotomy between "active" and "passive", and consider the multi-dimensionality of participation, including the role and value of lurking.

13.3.1 Which Definition?

Research on lurking shows that lurking involves a complex set of behaviours, rationales, and activities in an online environment that is rich with possibilities and options (Anderson, 2009; Nonnecke et al., 1999). To empirically analyse lurking requires a clear definition, yet this literature review shows that "it is not even clear what lurking means" (Stegbauer and Rausch, 2002, p. 264). The term is often associated with users who do not participate, are sinister or annoying, want something for nothing, are unnecessary for communication, an obstruction, and, on top of that, are significantly less valuable than other online participants. Lurking tends to have pejorative connotations, although what is deemed acceptable in terms of online behaviour may depend on the purpose of the group or community, the activities and attitudes of people who belong to it, and its policies: whilst education communities may be less tolerant of heated remarks than political communities, medical communities may be even more sensitive, given the vulnerability of the participants.

Opinions about lurking and lurkers vary considerably (van Uden-Kraan et al., 2008), and the choice of definition will impact how research is conducted, its aims (including the development of strategies to reduce lurking or make active participation more interesting for participants and lurkers), and the way results are interpreted. These definitions often imply that online groups with a large proportion of lurkers may have difficulty providing the necessary services or being successful. As the goal of most online communities is discussion and interaction, may there be some justification for the negative definitions?

Active, successful online participation and engagement has been defined mainly by visible participation, and negative approaches to lurking may hamper the way online spaces are understood. Even though internet user studies now focus more on particular online behaviors rather than considering all online actions to be uniform (Howard and Jones, 2004), categorizations of online activities are still relatively broad, making it difficult to understand who does what online and why. There are several reasons for abandoning the negative attitudes and definitions. Lurkers may not be contributing visible posts, but they are not depriving other contributors of resources or depleting the community. People lurk because that is what they enjoy doing, because they have nothing to say or because they are learning, reading, listening, forwarding or engaging in some other way. Nonnecke and Preece (2003, p.110) found that lurking is a strategic activity that is more than reading posts and encourage a "re-think" of lurking, as ignoring, dismissing, or misunderstanding them will distort how we understand online life as well as leading to mistakes in the way sites and policies for online participation are organised and designed. Some authors still tend to see lurking as free-riding in negative terms, but more recently lurking is being viewed and defined in more positive terms.

13.3.2 Avoiding the Dichotomy "Active" vs. "Passive" Participation

Stegbauer and Rausch (2002, p.267) suggest that among the majority of users, lurking is a "fixed behaviour pattern" thus placing online behaviour into either/or categories. Online behaviour has often been understood in terms of a dichotomy (participating vs. lurking), and a lot of research has focused on the overt online behaviours and visible activities only. This has encouraged the notion that lurkers are not participating, and are not as valuable as the contributing or "active" members (Antin & Cheshire, 2010; Crawford, 2009). Public posting is one way the community may benefit, but it is not the only way of communicating and contributing - participation can have many meanings and is complex. Online participation needs to be understood in terms of all the users, the connections and relationships and behaviours, and including lurkers' activities may allow a more complete depiction of online participation. The many forms of online participation and contribution, such as reading, listening, and being the audience, all represent legitimate and important online behaviours (Goggin and Hjorth, 2009). Muller (2012), who describes online reading as a social activity, suggests that everybody is a lurker, as everybody needs to read before engaging in the next activity.

Crawford (2009) believes that too much emphasis has been placed on "having a voice" and ensuring that individuals use online technologies to express themselves freely, making visible posting the most important form of online participation. Lurking is an important aspect of the online environment, so research on online behaviours, online communities and online media need to acknoweldge the complexity of participation (Leshed, 2005) and go beyond lurker/poster, active/passive as they cross between online/offline, public/private, and formal/informal divisions. Crawford suggests that everyone moves between different forms of participation, such as listening and disclosing online, and that all are necessary for online engagement. Individuals have different roles in different online contexts, as the online environment is a "holistic, polycontextual communication environment comprising diverse engagement spaces – differentiated online and offline communication contexts, within a larger community ecosystem" (Cranefield et al., 2011, p. 489).

13.3.3 The Value of Lurking

Although lurkers do not contribute public posts, they do not depreive regular contributors of resources nor do they detract from the community (Lee et al 2006 in Greif, Hjorth, Lasén and Lobet-Maris, 2011). As a behaviour common to the majority of online users in information or collaborative environments, it is necessary to understand lurking in terms of how it can be beneficial, valuable, positive, and helpful, and indeed may even need to be encouraged rather than eliminated (Crawford, 2009; Muller, Freyne, Dugan, Millen, & Thom-Santelli, 2009; Takahashi,

Fujimoto, & Yamasaki, 2003, 2007). Lurking can be an activity not only valuable to the lurkers themselves, but to others too.

Some assume that lurkers not only contribute less, but that they also receive fewer benefits from passive participation than active participants (Amichai-Hamburger, 2005; Taylor, 2002). However,other researchers have shown that lurkers do derive value and receive benefits from their activities, are satisfied with their experiences of the online community and the benefits they gain, and would not engage in lurking if they did not want to (Merry and Anoush, 2012). Lurkers gain perspective, information and insight (Katz, 1998) and they use this information for their own personal or organizational activities (Takahashi et al., 2007, 2003, 2002). Other benefits from lurking include enjoyment or learning (Arnold and Paulus, 2010; Soroka and Rafaela, 2006). Work by Metzger, Wilson, Pure, and Zhao (2012) shows that lurking is an important aspect in the use of social networks, and that lurkers gain personal and social benefits by visiting other members' profiles and reading others' personal information. Lurkers scan for information that is important, inspiring, useful; they follow up on ideas they find, draw attention to broken links, seek advice and opinions, and they communicate with others using alternative channels such as email, skype, etc. (Cranefield, Yoong and Huff, 2011). Value and benefits are derived in many ways, by acting as community advocates, sharing content and influencing others, using a number of online and offline channels and networks, by choosing a single channel of (online) activity or communication digest rather than multi-channel communication technology, having access to critical information that can help save time and take better decisions, as well as learning and saving information for their job or personal life (Ogneva, 2011).

The activities of lurkers can be valuable to the online environment, they may even be a necessity for enabling communication, e.g. by helping to avoid information overload, by paying attention as listeners or as an audience, or being the justification and target for online activities (Crawford, 2009; Soroka and Rafaela, 2006). In this way lurkers may maintain the community's infrastructure and help promote it. Even Stegbauer and Rausch (2002, p.271), who describe lurkers as passive, note that lurkers have a function "connecting otherwise isolated social spaces. They possibly contribute to the passing on of contents between mailing lists and from mailing lists into Usernet". Takahashi, Fujimoto and Yamasaki (2007, 2003, 2002) also suggest that lurkers are the indirect contributors to the online community's influence beyond its boundaries. Lurkers' activities make content available beyond the members of a mailing list or social network, and are essential for the transfer of knowledge between online groups and social spaces that would otherwise be separated from each other. Lurkers extend the online group through using the information in other online groups or offline settings, thus leading to connections with other networks bringing new contacts and members, providing key activities, resources and information, as well as serving as a mass media audience and representing potential future users (Gossieaux 2010; Preece & Shneiderman 2009; Ridings et al. 2006; Soroka and Rafaeli 2006). As

lurkers cross the boundaries, they transfer knowledge from one context to another, making them "boundary spanners" or "knowledge brokers", where lurkers engage in identifing context-specific knowledge needs and opportunities, promoting new ideas, facilitating knowledge and content uptake, translating, recombining and adapting knowledge, making sure it fits the new context (Cranefield et al., 2011, p. 491). Wallace (2011) suggests that there are many online member types, and even without contributing online individuals can provide value by encouraging their peers to join, understanding and discussing the issues, and by pushing community administrators to deliver content that may increase engagement and participation.

By considering the value of lurking, definitions and descriptions of lurkers have changed. Lurkers' behaviours can be understood used as a metric of online social influence, e.g. their value is understood as part of the "return on contribution" (ROC) of a resource, which is based on the number of people who read, view or consume the resource, divided by the number of people who produced this resource (Muller et al., 2009). Harquail (2010) notes that whilst comments made on blogs show that readers are engaging with the ideas presented there, there is nothing wrong with reading and not commenting: lurkers are neither "self-centered idea scavengers" nor "online introverts lacking in gumption" (no page ref.), but participants who take the information gathered in one context and use it in another. Lurking has become an "asset rather than a hindrance" (Antin and Cheshire, 2010, p. 128), either by providing information that helps complete a task or by reading or being the indicator of the value and reliability of a text. Lurkers act as an audience and motivate others to participate in more active ways. Gossieaux (2010) also subscribes to the idea that lurkers are the "hidden asset" in online communities, they are active participants who forward content and information from one community to others using a variety of different channels (e.g. telephone, in conversation, by email). Lurkers are participants able to support and innovate online communities, or, in former Yahoo! Executive Sanders' (2010, 2003) terms, they are "lovecats", people who share knowledge freely and with good intent, serving others, facilitating relationship building, and adding to group learning.

13.4 Conclusion

The web 2.0 and social networks allows individuals even more control over what they want to publish and how they want to engage online. At the same time, there is also an increasing expectation that everybody should be using online tools and be online all the time – yet people will always have different ways of engaging online, deciding how and with whom to engage and when to be available. High levels of connectivity, frequent usage, as well as the availability of and access to information, does not mean that online users will necessarily be online more, more social or more knowledgeable, or understand what they are expected to, produce through posting more content.

Understanding lurkers has been the aim of a number of researchers for a number of years, and Katz (1998, no page ref.) notes that lurkers "cruise from site to site in peaceful anonymity, picking up perspective, information and insight". He was even informed by a lurker that there is of an online list[1] where lurkers meet to discuss the sites they've lurked, and the information they gathered. So Katz argued for a more positive approach to lurkers, for example with websites which aim to "offer special welcome areas for Lurkers, newcomers and newbies, not to mention immigrants, the elderly, the technically challenged or the shy." And although attitudes towards lurkers are changing and broadening, the label remains - can a new, more suitable definition be found for the largest group of users? Recent surveys show that 85% of American adults go online (Zickuhr, 2013) and 73% of online adults use least one social network (Duggan & Smith, 2014) – it may be by redefining online users that research can better understand online behaviours, online roles, and the values associated with them.

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E-Governance and Civic Engagement:

Factors and Determinants of E-Democracy

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Chapter 17
Introducing Psychological Factors into E-Participation Research

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ABSTRACT

This chapter looks at e-petitioning as a successful application of e-participation from a psychological perspective. It notes that e-participation should not be viewed uncritically, as digital technologies cannot remedy all (political) problems: indeed, they can strengthen old ones and create new ones. Following a brief reviews of socio-economic and application-acceptance models of e-participation, a small selection of psychological approaches factors are presented that could be applied to this context. It is argued that it is useful and important to understand the psychological factors that influence the decisions made by individuals about whether to participate in the political system by initiating, or simply signing, a petition, or choose to remain mere passive observers, no matter how well informed. These insights can both help practitioners designing an e-participation system, and designing new research projects.

INTRODUCTION

Since its beginning, the Internet has been a tool for democratic communication – simply by being able to establish communication between any two people on this earth (Schuler, 2010). Society has used the Internet for positive social change (Surman & Reilly, 2003), and Internet use has long been associated with increased civic involvement (Kraut et al., 2002) and greater engagement in social-capital-building activities (Kavanaugh & Patterson, 2001). It has been used since the 1980s to promote political participation and activism, and is now a favorite tool to promote political knowl-

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edge, interest, discussion and voting (Mossberger, 2007). In 2006, Time Magazine[1] nominated "You" as the person of the year, where "you" meant all the users of the Internet who were driving the Internet development by producing "user-generated content", including a variety of online participatory activities such as chatting, file sharing, emailing, blogging, socializing, creating Wikis; this implies that a different framework is necessary for understanding citizens and their interactions with government and public administration.

Digital technologies alone will not remedy all political or democratic problems: indeed, they can amplify old ones, and they can create new ones. Carman (2010) and Ostling (2010) point out that in the context of e-participation, the new digital tools may not only lead to inflated expectations, but to disillusionment and at the end of the day, not solve the problems imminent in democracy. Public administrations and governments will need to adopt a different attitude in their understanding and attitude towards the citizens and learn to deal with their complexity, rather than expect citizens to work with the official spaces provided for them (Ferro & Molinari, 2010). Democratic communication requires not only suitable participation or deliberation venues Schuler (2010) but individuals will also need to have the skills, the needs or desire to contribute and participate.

There is no doubt that the Internet has had a big impact on the way people communicate, and behave – the Internet is a social place, and many people fulfill their most important social needs such as affiliation, support, or affirmation over the Internet. Whilst tools and technology lead, support and sustain users' interactions, it is the users' social behavior, needs and personality that 'makes' interaction and participation happen. This chapter outlines the potential of using psychological perspectives in understanding the factors behind civic engagement: that is, why individuals would chose to participate in a political process, rather than on the many available online alternatives. It focuses on the field of online petitions or e-petitions in particular, as they are one area of e-participation with a relatively long history as part of established political processes, rather than pilot projects. By examining a number of psychological factors the aim is to encourage a deeper understanding of citizens' behaviors and intentions whether to engage or not with an e-participation system. Psychological dimensions such as personality, needs and self-efficacy can offer both practitioners and academics an understanding of patterns of uptake, the use of e-petitioning systems, as well as the factors that influence the citizens' decision-making process as to simply access information or act as a participating signatory.

THE CONTEXT

E-Participation

In the context of the broader use of the Internet, it may seem confusing that 'e-participation' is not used to refer to participation in online communities in general. Rather, e-participation refers to one aspect in particular: the use of ICT (Information and Communication Technology) by governments, elected officials, media, political parties and interest groups, civil society organizations, international governmental organizations, citizens and voters within any of the political processes at local, regional, national and global communities (Clift, 2003). In this narrower sense, e-participation is "the use of information and communication technologies to broaden and deepen political participation by enabling citizens to connect with one another and with their elected representatives" (Macintosh, 2004) or as aiming to include citizens in policy and decision-making, thus broadening and deepening their political participation (Creighton, 2005; O'Donnell et al., 2007). For Coleman and Blumler (2009), the Internet is the space for democratic citizenship, a space for interaction between citizens and elected representatives which has a meaningful impact on

political outcomes. These definitions place ICT tools at the centre for facilitating two-way communication between governments and citizens in all democratic decision-making processes (both bottom-up and top-down) such as electronic public administration, service delivery, policy-making and decision-making, security and archive maintenance.

Another motivation for the development of e-participation is that for some years now, people's interest and knowledge in politics and social issues has been felt to be in decline across the Western world[2] (Turnsek, 2007); public sharing of information, the creation of community and commitment to debate are also falling (Putnam, 2000). The media is blamed for providing entertainment rather than information,: infotainment that does not lead to participation; acting as a strong source for identity construction, the media leads individuals to be consumers rather than citizens (Hardt, 2004). Traditional authorities and institutions (family, schools, religious institutions, neighborhoods, civic organizations) as well as the state misunderstand their citizens and their changing needs (Codrington & Grant-Marshall, 2005; Coleman & Blumler, 2009) and are therefore losing power over the development of identity, particularly in terms of citizenship. As individuals' identities become more fragmented and less connected to a single group or community, participation is shifting to a more personalized or issue-based form of politics or societal interest. (Putnam, 2000)

At the level of the European Union, there has been strong political support for e-participation initiatives from the European Parliament and Council of Ministers following ongoing concerns about the democratic deficit, issues of public trust and active citizenship. In 2005, the European Parliament asked the European Commission to launch an e-participation Preparatory Action which underlines the importance of this field. The i2010 eGovernment Action Plan (European Commission, 2006) which aims to make public services more efficient and more modern, at the same time aims "to target the needs of the general population more precisely"[3]. The European Commission thus encourages the Member States to experiment with innovative e-participation schemes which increase participation in democratic processes in terms of tools and addressing citizens' demands. The e-participation initiatives aim to support deliberation (the process of communication where people discuss their concerns with the intent of arriving at a decision) and engagement (Charalabidis, Koussouris, & Kipenis, 2009); these initiatives are justified with arguments such as raising the public's interest for politics and strengthening European citizenship (Panopoulou, Tambouris, & Tarabanis, 2009).

E-participation is perceived as leading to shared decisions or activities and possibly to increased societal solidarity – it is a social activity, therefore meaningful only when it is linked to multiple levels of society and able to lead to social change (Schuler, 2010). However, e-participation processes are complex, and this complexity results from the large number of different participation areas, the range and variety of stakeholders, levels of engagement, and stages in policy making (Fraser et al., 2006). Although the move to modernize transactional public services (e-government) has indeed been successful in many administrations, there are still problems with communication between politicians, government authorities and citizens so that participation in the majority of civic platforms and networks has not yet been as successful as anticipated (Schuler, 2009).

Top-down and bottom-up e-participation certainly challenges the traditional understanding of political participation, but as Ostling (2010) notes, ICT cannot change the existing political practices, rather, it reflects and amplifies existing political trends – in the short term at least, the new digital technologies may have not led to any change in representative democracy, and e-participation may neither have led to success nor to any impacts on decision-making processes (Davies 2009). The initiatives are often expensive, and politicians

may not be interested in relinquishing control and power. A number of issues have still not been addressed, for example, accountability, in particular when the minority has an impact on policy, or when outcomes lead to outputs that are not advantageous to the public interest but the participants themselves are not formally responsible for the policy outcome (Ekelin, 2007).

E-Petitions

Despite the above, one e-participation tool that has had success at least in some countries (such as the UK and Germany) is e-petitioning. In the area of political participation, petitioning is a simple yet effective tool which provides a first step for citizens who want to interact with and influence democratically-elected assemblies, from their Local Council to the European Parliament. Internet-based e-petition systems have already been introduced in some EU member states both at national and, increasingly, local levels in order to make it easier to gather signatures from a wider audience.

The traditional representative approaches in local democracy are now increasingly supplemented with (if not substituted by) forms of direct democracy, participation and/or deliberation, such as e-petitions. As a device to transform established representative democracies into more participatory democracies (Ferro & Molinari, 2010), e-petitioning has been the source for great advances in the effort to confront the perceived decline in the public's trust of political institutions and the associated symptoms of disengagement (Lindner & Riehm, 2008).

In response, political scientists have conceptualized petitioning as a mechanism for making democratic inputs, sitting somewhere between pure representative democracy and direct democracy (which bypasses representatives altogether), in a distinct category of advocacy democracy (Carman, 2010), where the participation activities are directed towards influencing the decisions of elected representatives, thereby mitigating the risks of weakening existing democratic institutions. On the other hand, since the policy impact is indirect as it is mediated by representatives, perceived fairness and openness in the process can be as important as the actual outcome.

It is necessary to remember that the participants in the petitioning process and e-democracy have been shown to be generally male, educated and older than the general population (Lindner & Riehm, 2008; Carman, 2010). This is despite the potential of these systems to widen the pool of participants in the decision making process; conversely, it is unrealistic to assume that universal participation could be achieved or indeed is desirable – there appears to be a realistic ceiling of around 30% active participation (Maier-Rabler & Reimer, 2009; Ferro & Molinari, 2010). Even more realistically, achieving the participation of 1% of citizens in any one e-petition would generally be considered a stunning success.

Cruickshank and Smith (2009) provide a brief overview of the state of play with e-petitions. The main actors in the petitioning process can be placed into two groups:

- **Internal actors:** (a) Officers of the assembly who are responsible for the operation of the system (forum moderators are generally considered to belonging to a subcategory of officer). (b) Elected Representatives (and their support staff), who respond to petitions individually and collectively.
- **External actors:** (a) Petitioners; that is, the person (or group) who initiates a petition after identifying an issue and follows its progress through submission to final feedback and outcome. (b) Citizens: that is, those persons who are entitled to sign the petition. Eligibility rules may vary here, and this raises important questions of identity and authentication which are beyond the scope of this article. However, Citizens can be broadly divided between those who

are participating in a petition by signing it (referred to here as the Signatory), and the non-participating majority.

Psychology of Online Participation

Digital technologies and social media have changed the way people communicate, participate and behave – understanding the characteristics of online behavior and communication therefore means understanding the individuals who choose to use the possibilities offered by the Internet.

In terms of identity and expression, Internet use can be positive and offer opportunities for participation and citizen involvement. From the early days of the mass use of the world wide web, it has been felt that the online context can be used as a learning or testing environment, and that the Internet may actually encourage participation in real life (Putnam, 2000; Horrigan, 2001). It has also been argued that participation in online activities can confer social and psychological benefits (Shaw & Gant, 2002) – social companionship is an important motive for Internet use (Whitty, 2008). Online activities provide support, information and opportunities for connection to the marginalized and socially isolated groups (Hillier & Harrison, 2007), people with social anxiety or medical problems. It is important to note that the use of Internet is not to be seen or used as an alternative to social activities, but as an additional social tool (e.g. Facebook) or channel for voicing opinions, conducting research and sharing information. Indeed, the potential for negative psychological and social consequences (e.g. 'Internet addiction') are reduced as society becomes more accustomed to using the Internet (Kraut et al., 2002), and almost a decade later, these negative consequences should have been minimized or at least reduced.

Attracting and getting people to return to a website or participation initiative is a major challenge – users may not find the sites, and the majority of visitors do not return, unless they become intensely involved (Blanchard & Markus, 2004). People will slowly start making more contributions as their confidence grows and they feel empowered and appreciated. Factors which have an impact here are for example visibility of contributions, recognition, reputation and celebrating status (Preece & Shneiderman, 2009).

"Lurking" is a common activity on the Internet – it is a way of describing those who participants that do not actively and visibly contribute, yet can make up over 90% of the online group (Nonnecke & Preece, 2000; Nielsen, 2006). It is often assumed that they are free-riders (Smith and Kollock, 1999), but recognizing and understanding the factors for lurking has important implications for public deliberation and democracy – public forums suffer from social-psychological influences such as majority opinion (Noelle-Neumann, 1984; Sunstein, 2006). The term "lurker" describes someone who does not actively participate, observes what is going on, but remains silent. Lurking is possible because of the technology used: it provides access without being visible or having to publicly participate. Lurking is a strategic and idiosyncratic activity driven by the individual's needs and background, which means that different people have different reasons for lurking as well as different lurking strategies (Nonnecke & Preece, 2003). Considering the variety of reasons such as personality, motivations, psychological needs and the users' experiences may lead to finding ways of improving the online community experiences for citizens whether they are users or lurkers as well as lead to increased interest and participation.

If encouraging participation is one of the biggest challenges for any online community, then it is necessary to understand why and how citizens choose to participate or not (Bishop, 2007). For e-participation initiatives, which aim to reach, engage and mobilize citizens, it may be helpful to move the focus onto the invisible participants, the so-called 'lurkers' who may not seem to be actively contributing, but nonetheless are valuable for e-participation. For these reasons, it is useful and important to understand the psychological

factors influencing the behaviors and decisions made by citizens about whether to participate in the political system, which can range from signing a petition to creating an online initiative, but can also mean remaining a passive, yet well informed observer.

MAIN FOCUS OF THE CHAPTER

There are a number of established approaches to understanding take up of e-participation systems and evaluating e-participation initiatives, with those based on socio-economic and technical factors tending to predominate (Wimmer & Holler, 2003; Aichholzer & Westholm, 2009). This section starts with a brief overview these before turning to examine the value that person-oriented psychological insights can add.

Non-Psychological Approaches in E-Participation

TAM: Technology Acceptance Model and Related Approaches

Starting very much at the technical end of the socio-technical spectrum, the Technology Acceptance Model (TAM) and its derivatives are widely used models of software acceptance which goes beyond a basic measurement of usability and accessibility. They derive from behavioral psychology and identify a number of factors that are claimed to predict decisions to use software or hardware, in particular:

- **Perceived usefulness:** the degree to which a person believes that using a particular system would enhance his or her task performance.
- **Perceived ease-of-use:** the degree to which a person believes that using a particular system would be free from effort.

Successor models, such as the Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh, Morris, & Davis, 2003) introduce a range of other factors, incorporating concepts from other approaches such as Social influence and Facilitating conditions including gender, age, experience and voluntariness of use on the basis that other studies have shown that they too influence the other factors.

Although these approaches are informed by psychology, acceptance modeling is based on predicting or understanding the success of the application: the focus is not on the individual, or the socio-political context for that matter. And even when the evaluators look for a bigger picture, the focus has tended to be on acceptance by organizations rather than citizens, as has been noted by Rose and Sandford (2007) as well as Lindner and Riehm (2008).

Socio-Economic Factors

Income or socio-economic status is one of the most commonly used factors for explaining use of the Internet (Martin & Robinson, 2007). The dimensions usually preferred for understanding the use of IT and participation are often income (Fuchs, 2009), gender, with men having more access and women using ICT less, although the difference is declining (Selwyn, 2006), age, where increased age is associated with lower levels of access and less use, education, with lower levels of education corresponding to divides related to access and range of use (Roe & Broos, 2005), family structure, where school-age children seem to increase contact with ICTs (Kennedy, Wellman, & Klement, 2003), race (Kvasny, 2005) and geographical location (Warren, 2007).

Other similar frameworks have been drawn up. For instance, in order to be more inclusive, to involve and engage citizens in government and business, Schuler (2009) proposes six core values for the development of online community networks, platforms or spaces: conviviality and

culture; education, strong (or participatory) democracy, health and human services, economic equity, opportunity, sustainability, information and communication. Similarly, (Ferro & Molinari, 2010) suggest that 5 main enabling conditions must be fulfilled in order to increase citizen participation: access, awareness, skills, motivation and representation (of the citizen).

Another view of participation comes from economic views of impact, mainly related to the business models of traditional companies, where the new forms of content provision are decentralized, allowing more participants and experimentation with new business models based on the Internet. User content, previously seen as competition by publishers and broadcasters is now actively encouraged. The economic impact can be understood in different ways (Li, 2007):

1. Providing social computing devices is increasingly profitable, they can contribute to growth and employment;
2. Social computing applications are a threat to telecommunication and content industries;
3. Social computing applications are being used as a tool for productivity in both the private and the public sector;
4. Social computing applications are able to make customers smarter due to the horizontal exchange of information with other users.

Social impacts are those which describe the ways users produce, distribute, access and re-use information, knowledge and entertainment, thus (potentially) leading to increased user autonomy, participation and diversity. Further effects are seen in terms of informed user and consumer decisions, strengthening existing social ties, making new social contacts (Boyd & Ellison, 2007); this understanding could equally be applied to online interactions with government.

Psychological Approaches to Online Participation

Overall, although a socio-economic or demographic approach provides a starting point to understanding the uptake of e-participation, understanding why people choose to participate and contribute using online tools needs a focus on the individual differences and the role of personal influences on the Internet (Sunstein, 2006). This means recognizing that people use online tools and information to discover alternatives, for help with taking decisions, to participate with others and in society, engaging in behaviors that can and do lead to the development and cultivation of their identity (Turkle, 2007) in the context of society and citizenship.

It is insufficient to analyze an individual's decision to participate in terms of socio-economic factors since it loses the individual exception. The role of the Internet in influencing levels and styles of political participation has often been investigated, however, it is not yet clear why the Internet is perceived as a medium that can increase participation. Putting the emphasis on the Internet and technology rather than citizens indicates a tendency for technological determinism. TAM and derived approaches are too simplistic, as they still focus on the application rather than the variety of citizens using it. Different types of participants are motivated to do particular tasks and will therefore have different needs and require different skills and tools.

Approaches based on psychology offer ways of looking at citizens at a more individual, personal level, including aspects of their personality, their motivations, emotions and needs, and can provide valuable insights into the reasons why individuals choose to participate in an online political process. This will lead to an alternative approach to seeing why citizens choose to participate (or not), as well as learn about the advantages and disadvantages of e-participation methods, help improve existing participation processes or reveal alternative and

valuable ways of participating. Three such approaches are reviewed in the rest of this section.

Self-Efficacy

The perspectives offered by a social-cognitive approach provide a stimulus to address personal and societal aspects, placing the user (and citizen) at the centre of the process. Social Cognitive Theory (SCT) broadens the analysis offered by traditional acceptance models with their history in behaviorist psychology and focus on perceived outcomes by giving prominence to the concept of self-efficacy – defined as beliefs about one's ability to perform a specific behavior. Unlike efficacy, which is the power to produce an effect (in essence, competence), self-efficacy is the belief (whether or not accurate) that one has the power to produce that effect.

People who regard themselves as highly efficacious act, think, and feel differently from those who perceive themselves as inefficacious. They produce their own future, rather than simply foretell it. (Bandura, 1986)

Expectations of positive outcomes of behavior are meaningless if we doubt our capacity to successfully execute the behavior at all; conversely, previous bad experiences can create a self-reinforcing cycle of expectations of negative outcomes. This could potentially provide a model for understanding why citizens would choose to sign a petition, or just remain as an observer. There are two aspects to this.

The concept of Computer Self-Efficacy (CSE) is used to make individuals' judgment of their capability to perform a computer-based task central to the analysis (Compeau & Higgins, 1995). CSE has been used to help understand the decision of an individual to use an application, generally in an institutional or business context rather than within a democratic system. However, is seems clear that CSE is an appropriate conceptual tool which can help illuminate the decision-making process around the use of e-participation systems. Further, while CSE is typically applied to 'professional' users, which in the e-participation context might equate to the 'internal actors' (council/assembly officers, elected representatives and their staff), it seems plausible and useful to apply it to the decisions of the external actors (petitioners and citizens) to submit and to sign or discuss a petition online respectively.

There are clear parallels to be drawn between Computer Self Efficacy and Political Self Efficacy (PSE) (Caprara, Vecchione, Capanna, & Mebane, 2009). Where CSE is concerned with self-perception of the ability to produce an intended result with computer-based systems, PSE is concerned with citizens' perceptions of their own ability to bring about intended results in dealing with politics and public authorities. PSE addresses the estimations that citizens make about their own capacities to effect a result through their actions (internal PSE), and also about their attitudes to the political system as a whole (external PSE). Therefore, while CSE effectively models the role of the confidence of citizens in engaging with an e-petitioning system, PSE models the role of both their confidence in their own ability to deal with public authorities, and their views on the extent to which public authorities can be influenced, affected or changed by individual or group actions.

PSE is important because critical thinking, communication and persuasion skills are important for successful political behavior and performance (Silvester & Dykes, 2007) and political deliberation, i.e. the ability to discuss, understand and make decisions also have powerful political effects on (internal) political efficacy (Morrell, 2005). *S*elf-efficacy beliefs mediate the influence of personality traits and they channel the dispositions into the service of political activities: "whichever their habits, dispositions and preferences, it is unlikely that people get involved in politics unless they feel capable to do what political participation commonly requires" (p. 49). Improvements

in the online environment which improve social support and the increased use of social media can help in healthcare, energy management, economic development, education (Ben Shneiderman & Plaisant, 2009) and political participation.

The benefits of the SCT approach are twofold. Firstly, it allows judgment to be made of the role of efficacy-related factors in the decision to use an e-participation system to participate in a democratic process. Secondly, it highlights citizens' perceptions of the system. Fundamentally, it is also of interest to assess the interaction between CSE and PSE, and whether a citizen's confidence in their ability to utilize interactive systems is paralleled by a belief in their ability to successfully interact with the political system as a whole.

In other words, this framework centers on the person, not the application, and allows exploration of environmental (social / cultural / institutional / educational) and personal factors (experience) behind the decision to either engage or not. The analysis therefore focuses on the participant's (or potential participant's) subjective perspective as well as upon the objective context.

Needs

Needs are evolved desires and can be found within every person. Psychological needs are particular qualities of experience that all people require to thrive (Sheldon, Elliot, Kim, & Kasser, 2001). Needs are universal, that is, they are inborn, but they do not specify the behaviors needed to satisfy them, allowing for a range of behaviors in order to achieve the satisfaction of needs. When a person behaves successfully within a particular life domain, there will be a reward which is satisfying and which a person will try to achieve again and again. This also means that they will be motivated to further develop those skills so as to achieve the sense of satisfaction (e.g. within a social environment, within a certain vocational area).

Maslow's (1954) theory of personality looks at 5 fundamental needs: physical health, security, self-esteem, love/belongingness and self-actualization. Maslow suggests that people need to feel that the biological requirements of their physical organism are satisfied, have a sense of order and predictability within their lives as well as a sense of personal worthiness and importance, a sense of love and affection with important others and that they are moving toward an ideal world or version of themselves. Similar alternatives are Derber's (1979) "American Dream" theory, i.e. that happiness results when individuals acquire popularity, influence, money and luxuries or Epstein's (1990) cognitive-experiential self-theory that specifies the four needs that all individuals must satisfy: self-esteem, relatedness, pleasure (vs. pain) and self-concept consistency (sense of stability to the individual).

Some researchers (Kim 2000; Krasnova et al. 2008) use Maslow's (1943) hierarchical needs theory to understand online behavior. They suggest that users do not participate because their basic (physiological or security) needs are not being met. Although Maslow's (1954) and similar theories are popular, they have received little research support. The models are controversial and have been criticized on the grounds that even individuals who are not fulfilling their needs still want to participate and be sociable with others and exhibited altruistic behaviors. Bishop (2007) believes that it is not necessary for users to feel safe or physiologically satisfied in order to interact with a system and suggests that users must have an initial desire (to post or act) that is consistent with their goals and plans and have the skills to do so, whilst Nielsen (2006) and Norman (2003) suggest that users are goal-driven rather than needs-driven.

Prosocial Behavior

Participation requires members, relationships between them, individuals who will devote time and effort to the community and can include generating messages, reading them and responding

to them, organizing discussion, offering other online activities. But why do individuals choose to commit time and effort to supporting an online community of people they do not know, how do they determine whether it is worthwhile when they can't see other potential helpers and find it difficult to judge whether their help would be useful? Tools and technology are in part able to sustain online interaction, but it is the social and prosocial behaviors that lead to interaction and make participation happen.

Prosocial behavior is voluntary, intentional behavior that results in benefits for another person or cause (Eisenberg & Miller, 1987), and can include donating money, computer power, software and documentation, time and attention, information and emotional support. Help in the electronic context may be due to empathy, community interest, generalized reciprocity, a personal return of learning and/or reputation enhancement. In the electronic context, prosocial behavior is observable by many, it is socially reinforced and has visible peer recognition.

There are a number of reasons why individuals choose to participate online, for example because the individuals believe that their participation is important for the group's performance or because they like the group. Whilst individuals will participate for altruistic or conformist reasons, they will also do so to boost their feelings of self-esteem (McLureWasko & Faraj, 2000), self-enhancement (Allport, 1937) and self-efficacy. The benefits which result from being involved in an online group can also be more personal, such as visibility and self-promotion or gaining status as an expert (Hiltz and Turoff 1993). The degree to which participants value the benefits obtained from their group will also predict the amount of community building work (Butler, Sproull, Kiesler, & Kraut, 2002).

Ridings et al. (2006) analyze lurkers on the basis of social exchange theory (Thibaut & Kelley 1959; Blau 1964), where users view interpersonal interactions from a subjective cost-benefit perspective. They compare the intangible costs, such as the cost of helping others, with the expected future intangible benefits of these, such as receiving respect. This is sometimes seen in those communities which rely on knowledge such as Wikipedia and the open source community (Tapscott & Williams 2006). Social exchange theory is not to be confused with economic exchange (Blau, 1964) which is governed by rules and regulations – in social exchange, there are no explicit rules or agreements, and individuals' actions are motivated by social behavior that is expected from others Ridings et al. (2006).

User Personality

In the online environment, individuals have learned to connect more with others, using different means (tools) and at varying levels of involvement. The popularity of the Internet as a social tool is popular due to four characteristics in particular:

1. **Controllability:** people have more time to think about what they would like to say than in face-to-face communication, so they can control if, when, how, how much and what to say (McKenna & Bargh, 2000);
2. **Status:** the Internet conveys fewer social status cues (Sara Kiesler, Siegel, & McGuire, 1984);
3. **Reciprocity:** people feel that they and their communication partners are more responsive on the Internet;
4. **Anonymity:** the Internet allows people to overcome their shyness.

The Internet is thus an environment that can encourage people to express themselves more freely than they would in a regular interaction (Amichai-Hamburger, 2005). It facilitates self-expression, particularly because of the anonymity of the interactions, and the individual is free of the typical constraints found with communication. Given the inherently social nature of all online

activities, personality traits will determine user behavior and choice on the Internet. Differences in personality are able to explain the choice and motivation of some individuals to participate by signing a petition or participating in an Internet community. Personality dispositions have been found to be responsible for political choice (Block & Block, 2006), and may account for variations in political behavior. Individuality and personality are important to political predispositions in two important ways: firstly, personality is an important variable when studying political behavior, including partisanship, ideology, presidential approval, internal efficacy, trust, participation in local politics, political discussion, development and expression of opinion and political knowledge; secondly, no individual facet of personality influences all aspects of political behavior.

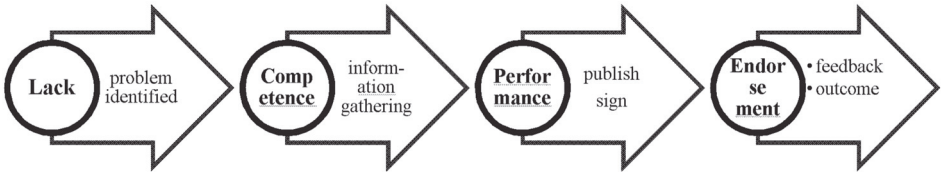
So far, thousands of personality attributes have been identified, but there has been some consolidation with the development of personality frameworks, for example of the Big Five Model of personality (Costa & McCrae, 1992). The Big Five framework is able to assess personality and behavior in both the "real world" as well as the "virtual world" contexts by providing a broad, replicable framework based on the traits extroversion, agreeableness, conscientiousness, emotional stability, and openness to experience:

- **Neuroticism:** a person's tendency to experience psychological distress, where high levels are associated with a sensitivity to threat;
- **Extraversion:** a person's tendency to be sociable and able to experience positive emotions;
- **Openness to experience:** the person's willingness to consider alternative approaches, be intellectually curious, and enjoy artistic experiences;
- **Agreeableness:** an aspect of interpersonal behavior, it reflects the tendency to be trusting, sympathetic and cooperative;
- **Conscientiousness:** this tendency reflects the degree to which an individual is organized, scrupulous and diligent.

Butt and Phillips (2008) suggest that the trait "openness to experience" is the personality factor most likely to be associated with trying out new methods of communication, such as those found in the online environment. Critical thinking, which is related to openness (Clifford, Boufal, & Kurtz, 2004) seems to encourage political participation by enhancing personal efficacy and personal control (Guyton, 1988). Other aspects such as assertiveness, persuasiveness and dominance are also part of the extraversion trait and crucial to successful political life and participation (Vecchione & Caprara, 2009). The Big Five model is useful as an initial exploration for the relevance of personality in many areas of behavior, including online and political behavior and provides a context for those analyses where links between political behavior and personality attributes have already been found (Ozer & Reise, 1994).

The Internet seems to be able to support an individual's need for expression of individuality but at the same time also able to satisfy the need to belong and relate to others or a group. On the Internet, individuals can easily find groups and social roles that suit them, achieve self-expression and self-actualization (Amichai-Hamburger, 2005). The positive online experience can also be used for the offline world: the Internet is thus a communication channel which can help people express themselves, but at the same time, is a testing ground for skills which users then apply to the offline world – for example, gaining a sense of effective self-efficacy from an online interaction that is then used in the offline environment. The Internet can therefore be an environment to be used for acquiring and learning social skills and confidence before they are then used in an offline environment, an issue which would be particularly important for a citizen who perhaps is not used to taking part in political processes.

Figure 1. Overview of stages in a petition, following Santucci (2007)



The Psychology of Using E-petitions

Using e-petitions as an example of e-participation, this section examines the transition from lurker to active participant through the simple step of signing a petition and in the context of the approaches that we have discussed. We will consider e-participation in general and e-petitions specifically in terms of creating and then signing a petition.

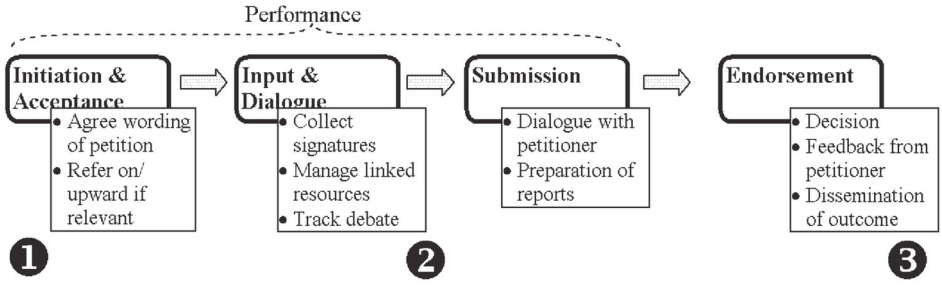
Creating a Petition

We start with an overview of the petitioning process. Santucci (2007) provides a useful generalization of the stages which a petitioner goes through, illustrated in Figure 1. The petitioner starts in a stage referred to as a 'Lack' - an awareness on the part of the petitioner that there is an issue that needs to be addressed, and then moves onto the stage referred to as 'Competence' (where an understanding of the issue and how to address it is gained). Both of these stages largely happen away from any formal petitioning system, whether electronic or paper. It is only at the final 'Performance' and 'Endorsement' stages that the petitioning system becomes relevant to the wider petitioning process.

These last two stages – where wider citizen participation is expected – are shown in further detail in Figure 2, where the performance stage is shown further broken down into three substages of *initiation &* acceptance, *input & dialogue*, and *submission*.

Even in this brief outline, the challenges faced by potential petitioners are clear: moving between the Lack and Competence stages to actually submitting a petition and following it through, requires a real commitment, and an understanding of the best approaches to support them would seem essential in broadening the range of people who raise petitions in the first place.

Figure 2. Details of the performance and endorsement stages of the petition cycle



This chapter restricts itself to discussion of the simple action of signing a petition – one of the simplest forms of e-participation possible. It is at ❷ – quite far in to the petitioning cycle – that potential signatories become aware of a petition. It is here that they have the opportunity to sign it, and may decide to do so, or having become aware of the petition, they may still choose to remain as a 'lurker' in the political process, as we now discuss.

THE CHALLENGE OF THE LURKER: DECIDING TO SIGN

"Lurking" may be central to help understanding participation in online environments. Few users intend to lurk from the onset – instead, the majority of lurkers may become lurkers as a result from previous (presumably negative) interactions with the community (Preece et al., 2004): there are obvious parallels to be drawn with the ideas behind self-efficacy being influenced by past experiences.

In the context of e-participation at least, lurking should not be seen as a "negative" form of behavior: it still implies a positive choice to pay attention to what is happening in a community (Preece, 2000). Indeed, one challenge that e-participation set itself is to move even beyond those who are lurkers – and to focus on the "ignorers", competing against rival streams in the attention economy (e.g. sport or entertainment), and bringing citizens back to focus and take an interest in the democratic decision making process. From this perspective, for a citizen to become a lurker is the first, and possibly hardest, step in engagement.

Findings from research into online communities in general may be of use here. Preece and Shneiderman (2009) provide one model that differentiates between levels of participation, and suggest the "Reader-to-leader Framework" as a way of understanding and motivating participation. Starting from "all users", these move to become readers (i.e. lurkers), then contributors, collaborators and finally leaders. Participation in each of the phases is characterized by certain behaviors and motivations which need to change, be encouraged and supported. Each transition includes a number of steps and behaviors; the aim is to increase the user's confidence and activity, knowing that at the same time many will also terminate their participation for a variety of reasons. Reading is a typical first step toward more active participation (Preece et al., 2004) – for some people, overcoming their resistance to novelty may require strong encouragement, while others tend to embrace new experiences – the insights offered by models of user personality have clear applications here.

The most understandable motivation for people to read content (or follow a political debate) is that they can personally benefit from doing so. The next step, getting return visitors is more difficult, as is making a contribution and collaborating. Those factors that motivate readers are also important to those who then decide to contribute and gain the confidence to do so: for example, a sense of belonging, a welcoming environment, safety, support for newcomers, and contacts to ask questions. Other issues such as the ease for making small contributions, visibility of contributions made, recognition of quality and quantity of contributions, rewards, etc. can also be important (Preece & Shneiderman, 2009).

The transition of users between the different participation stages is little understood, and even less understood or discussed are the reasons why participants terminate or why they give up collaborating and return to individual contributions or merely reading. As has been shown earlier, factors affecting self-efficacy, variables such as the community size, personality of participants, topic, social interactions, such as conflicts and other, external factors such as worldwide news events (Preece, 2009) can undermine (or support) participation. A "successful" petitioning action could be experienced in terms of satisfying psychological

needs, so the role of delay and other elements in affecting satisfaction, even if engagement remains limited to the act of signing a petition. Political, social, and economic changes may also be tied to effective participation in social media. Changing user (consumer and citizen) values with respect to societal and political issues as well as changing attitudes, for example, concerning privacy, also have an impact on participation. This area may be best understood by looking at individuals' decision processes and the psychological factors impacting them in the context of the well known models discussed earlier.

DISCUSSION AND RECOMMENDATIONS

To recap: the Internet can be and is used for political activism and democratic decision-making processes, such as online campaigns or mobilizing offline political action. Online participation and activism can, like any form of online participation, be conducted at any time, from any place; it allows for ideas and tactics different from traditional media, such as explaining the motives of their actions and coming away from a traditional or stereotypical portrayal. The goals of e-participation are highly idealized though, and these goals lead to material consequences such as the introduction of technology into public organizations, restructuring resources and responsibilities as well as new forms of behavior (increased / online interaction). This chapter has used e-petitioning an example, as it is arguably the most mature area of e-participation, in that it is well-established and has a history of making useful inputs to political processes in some countries.

Merely providing an environment that can support collaboration will not automatically lead to participation and collaboration (Kreijns, Kirschner, & Jochems, 2003). It is important to remember that the Internet is about communication, and not content or functionality as such. For all the enthusiasm for the online environment, "the reality is that many websites fail to retain participants, tagging initiatives go quiet, and online communities become ghost towns. Many government agencies are reluctant to even try social participation…" (p.15, Preece & Shneiderman, 2009). A reason for this is that the online participant is often seen as an information gatherer rather than as a social being, so tools are often designed at increasing the provision of information, usability of websites and the links between information. Social networking sites, however, show clearly that users will want to communicate in the right circumstances. Supporting communication and participation ("de-lurking" – moving from the information gatherer role) means considering user personality, motivation, and emotions.

Political behavior requires the capabilities to organize and integrate information, convince and persuade people, capabilities related to the personality traits openness and extraversion, and feelings of self-efficacy – in using the technology, but also in relation to the political process. People will participate regardless of their political orientation – but they must believe that they can exert some influence over the political world and to avoid increasing further cynicism and disengagement, and that belief has to be backed up by positive experience.

It is therefore important to move away from the technologically deterministic perspective that still often underlies e-participation projects and to look at the reasons how and why people communicate on the Internet – their perception of the Internet, personality, motivations and emotions may moderate the use of participation in the online environment. Tools and technology are in part able to sustain online interaction, but is social behavior that "makes" interaction and participation. It is the participants who choose the tools to be used, recruit people, ensure communication and promote the behavior desirable in the community. Psychological approaches have already been used to understand mass political

participation and political behavior e.g. Vecchione and Caprara (2009), they can therefore supplement the approaches taken so far to understand e-participation behavior. Online activities provide support, information and opportunities for connection to the marginalized and socially isolated groups (Hillier & Harrison, 2007) and adopting a psychological perspective can help to attract and getting people to return to a website or participation initiative. Attracting and getting people to return to a website or participation initiative is a major challenge – users may not find the sites, and the majority of visitors do not return, unless they become intensely involved.

In terms of Preece and Shneiderman's (2009) Reader-to-Leader Framework, this would mean understanding the users so as to achieve the next stages, beginning with making a contribution (an individual act such as signing a petition) that adds to a larger communal effort, even when there is no intention of collaborating, communicating or forming a relationship. People will slowly start making more contributions as their confidence grows and they feel empowered and appreciated. Factors which have an impact here are for example visibility of contributions, recognition, reputation and celebrating status.

Individual participants do benefit from prosocial behavior such as contributions and collaboration, and are often grateful for it – the users will also contribute more if they believe that their contributions are important to the group's performance, their contributions are identifiable and if they like the group they are working with (Ling et al., 2005). In their recent book The Internet and Democratic Citzenship, Coleman and Blumler (2009) assess the democratic potential of the Internet and reassess their manifesto Realising Democracy Online (Blumler & Coleman, 2001) by looking at the relationship between governments and the governed and suggest that strategies need to be developed which "shrink and transcend political distance" (p. 166). They believe that for people to be involved requires three things:

- Democratic institutions and processes need to be sensitized to the way people "tell their stories" and "express their fears and desires";
- Democracy needs to "remain in touch" with those governed (i.e. communication needs to go beyond voting);
- Public interaction must lead to change or results, an "authentic relationship" needs speaking and being heard;

Coleman and Blumler therefore suggest the development of a "civic commons" that is inclusive, expansive and meaningful for e-participation to achieve the results and aims that have been set. We argue that the development of a civic commons or new e-participation policies would be helped by psychological approaches as they can provide a profound understanding of the citizen and his or her role in society at the personal, individual level, away from the stereotypes inherent in sociological categories.

Taken together, this means that further studies are required to look at personality, individual needs and motivational factors that are relevant in the specific context of online civic participation and also to understand how individuals decide to move between being ignorer, lurker and participant, even at the simple level of signing an online petition.

CONCLUSION

This chapter started by noting that e-petitions are one of the most mature and proven e-participation tools, in that it is well-established and has a history of making useful inputs to political processes, at least in some countries. This article has focused on approaches to understanding the motivators and de-motivators to e-participation, as these are perceived by individual 'external' actors, the citizens and petition signatories.

Although e-participation may help increase the satisfaction citizens have with governments

and politics, e-participation should not be viewed uncritically. Digital technologies cannot remedy all (political) problems: indeed, they can amplify old ones and create new ones, and in the context of e-participation, the new digital tools used may not only lead to inflated expectations, but to disillusionment and at the end of the day, not solve the problems imminent in democracy.

It has been argued that it is insufficient to analyze an individual's decision to participate in terms of socio-economic and technical factors since it loses the individual exception. TAM and derived approaches are too simplistic, since they still centre on the application. Rather, we feel that different types of participants are motivated to do particular tasks and will therefore have different needs and thus require different skills and tools. Insights provided by psychology and socio-cognitive theory into users' personality and motivations can provide valuable insights into the different reasons why individuals choose to participate in an online political process, in this case using e-petitions.

Practitioners implementing e-participation and e-petition systems can use these insights to create an awareness of need for supporting for instance self-efficacy and prosocial behavior, and taking into account the different personality types of individual citizens. This could involve offline activity to support and encourage engagement by new users, or multiple routes to carry out the same action. Practitioner need to remember that it is generally the minority of their users are visible participants – and the 'lurking' majority should be supported, and taken into account when decisions about the site are made, and routes to provide an easy transition to active participation provided.

More broadly it is clear that further studies are required to support a move away from sociological stereotypes (no matter how well justified) to look instead at which personality, online behavior and motivational factors relevant to the specific context of online civic participation, and help understand how individuals decide to move between ignorer, 'lurker' and participant, even at the simple level of signing an online petition.

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ADDITIONAL READING

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KEY TERMS AND DEFINITIONS

E-Participation: The use of information and communication technologies to broaden and deepen political participation by enabling citizens to connect with one another and with their elected representatives. It can also be seen as aiming to include citizens in policy and decision-making, thus broadening and deepening their political participation.

E-Petition: Online equivalent of a petition; in the context of this article3, it refers to petitions which are have at least a semi-official role in the political process.

Lurking: A way of describing those who participants that do not actively and visibly contribute Lurking is a strategic and idiosyncratic activity driven by the individual's needs and background, which means that different people have different reasons for lurking as well as different lurking strategies. A term that should not be used negatively.

Needs: Particular qualities of experience that all people require to thrive. Needs are universal and inborn, but they do not specify the behaviors needed to satisfy them.

Personality: Differences in personality are able to explain the choice and motivation of some individuals to participate by signing a petition or participating in an Internet community. Popularly measured using the Big Five framework which provides a framework based on the traits of extroversion, agreeableness, conscientiousness, emotional stability, and openness to experience.

Prosocial Behavior: Intentional behavior that results in benefits for another person or cause. In the electronic context, prosocial behavior is observable by many, it is socially reinforced and has visible peer recognition.

Self-Efficacy: The belief whether or not accurate that one has the power to produce an effect; this contrasts with efficacy, which is the

objective power to produce an effect (in essence, competence).

ENDNOTES

1 http://www.time.com/time/magazine/article/0,9171,1569514,00.html, retrieved 22 November 2010

2 I.e. USA, Canada, Japan and the EEA countries

3 http://europa.eu/legislation_summaries/information_society/l24226j_en.htm, retrieved 22 November 2010

Article IV

Edelmann, N., P. Parycek and J. Schossböck. 2011. “The Unibrennt Movement: A Successful Case of Mobilising Lurkers in a Public Sphere.” *International Journal of Electronic Governance* 4(1-2), 43-68. (1.1).

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The unibrennt movement: a successful case of mobilising lurkers in a public sphere

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Abstract: With the student protest movement 'unibrennt' in 2009, Austria saw a new quality of online mobilisation. Beginning with the sit-in of the auditorium, the initiative provoked an extensive media echo in Austria and other European cities. In this paper we examine the preconditions of unibrennt, such as the political culture and individual motivation. We analyse factors of successful mobilisation and empowerment in the case study of unibrennt with reference to communication studies, political theory and psychology. In particular, we draw on recent research on the lurker as a user type and relate it to the bottom-up movement and its characteristics.

Keywords: e-participation; e-democracy; lurker; online mobilisation; public sphere; civic engagement; digital natives; student protests; unibrennt; online movement; case study.

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1 Introduction

Successful e-participation initiatives depend on the successful mobilisation of citizens. Consequently, in e-participation research, we find a strong emphasis on the mobilising power of the internet. Early studies claimed that the web would provide an ideal space for discussion, participation and deliberation (Toffler and Toffler, 1995; Negroponte, 1995; Rheingold, 1993). Recent studies show a more nuanced picture of political communication online and include different ways of political mobilisation and engagement that can also – not only – be communicated through digital media (Bakardjieva, 2011; Papacharissi, 2010; Dahlgren, 2009). Regarding the current political situation and the ongoing protests in North Africa, theories of collective action and resource mobilisation perspectives are again at the centre of the public's attention.

This paper investigates a concrete protest movement, its preconditions and success factors by drawing on psychology, political theory and communication studies. It, furthermore, analyses the extent to which new tools and online spaces can be utilised by a movement and in which way they can reduce political apathy, activate citizens and enhance the democratic (re)empowerment of people.

Norris (2001) suggests understanding political participation on the internet in terms of two hypotheses: mobilisation, i.e., that the internet will mobilise new groups of citizens who previously were not involved, and reinforcement, where the internet is more likely to reinforce existing patterns of political participation, so primarily well-educated individuals will benefit politically from the internet. To examine these hypotheses, communicative, organisational and psychological factors of online mobilisation need to be considered. Whilst the effects and benefits of e-participation have been extensively discussed, projects often struggle with a lack or only low numbers of participants (Millard, 2009). Linhart and Papp propose that to overcome the low participation levels, e-participation should be redefined as active citizenship. Bottom-up initiatives and grassroots movements conducted by citizens and organisations must be interwoven with top-down approaches (Linhart and Papp, 2010).

The Austrian grass roots movement known as unibrennt (uniburns) or unsereuni (ouruni) began in 2009 and represents a prominent example of successful mobilisation,

which still exists as an organisational infrastructure and background of today's student actions. The unibrennt movement started on 22 October 2009: At 3 p.m., a Facebook group was created after the protest action 'Malen nach Zahlen'/'colour by numbers' in the Austrian Academy of Fine Arts, leading to an official demonstration on the same day (organised by about 400 students; Neumayer and Schossböck, 2011) and the occupation of the largest lecture hall Audimax. The event was immediately disseminated via Twitter and Facebook. From this moment onwards, not only a digital, but also real movement with a massive inflow of people on the digital platforms and the Audimax at the University of Vienna as a centre began to develop (see Section 6). Like with many movements utilising new media for their aims, the movement was discussed around the notion of a (social) media revolution. After almost 3 months of occupation, the Audimax was cleared by authorities two days before Christmas.

The analysis of this case aims to add a new perspective to the issue of mobilisation in e-participation by considering two factors: engagement via technological improvements can reach a wider audience owing to the snowball effect and the integration of technology in people's everyday lives worlds and the adoption of new technologies, capabilities and behaviours by a new generation widely referred to as the digital natives or net generation (Palfrey and Gasser, 2008; Prensky, 2001).[1] The case presented here will investigate e-participation in terms of criteria for citizen engagement in e-participation projects (European Commission, Information Society and Media, 2009, p.19), factors and preconditions of successful mobilisation, and empowerment with a case study. A psychological theory of online user types and their motivation to participate (especially in terms of lurking) will be used to understand unibrennt and its success and limitations.

This student protest was chosen not only because this kind of mobilisation had never been seen before in Austria, but also because of its cross-national scope and setting in the public sphere. The discussions held on- and offline, the big role of online social networks and the widespread media, the action echo especially in the German-speaking countries, but also on an international level, mark this protest movement as a case, which may be deemed as relevant for examining the characteristics of successful online mobilisation. At the same time, questions nowadays frequently discussed in the context of e-participation and online deliberation theory are: Did the online forms of communication and the interaction in online social networks lead to success, and what were the characteristics and problems with these new forms of discourse (organisation)? What are the structural differences to former movements, and what is the role of collaborative and social platforms like Wikis and Twitter? Do these new forms of engagement strengthen participating individuals? For this particular analysis, the Austrian student protests are considered as the case representing the changing nature of discourse and protest (Herwig et al., 2010) that has highlighted the mobilising power of the internet.

This paper is about the characteristics of a particular movement, the nature of mobilisation and how to activate passive participants. Whilst it is dealing with a protest movement, it is not about activism as such and does not discuss the meaning of activism or their moral implications. The authors are looking at participation in e-participation, taking an interest in political and societal matters without taking a stance on its moral or ethical position.

E-participation is complex, and involves a number of different stakeholders (citizens, administrations), stages (Edelmann and Parycek, 2009), technologies, behaviours and motivations. The aim of this paper is to understand some of the factors that may have

contributed to this example of bottom-up e-participation being successful, i.e., citizens taking an interest in political and societal issues and acting upon them. The analysis of this protest movement (or other successful protests supported by social media and technology) is to provide an overview of human behaviours in social movements and online environments rather than a discussion of the ethical aspects of such behaviours and decisions.

2 Definitions

2.1 E-participation

Computerised political participation and activism can be traced back to the middle of the 1980s, with 'PeaceNet', which allowed activists to communicate across national borders (Downing, 2006; Wray, 1998). A particular type of participation is e-participation, which uses "information and communication technologies to broaden and deepen political participation by enabling citizens to connect with one another and with their elected representatives" (Macintosh, 2006). E-participation as a research field examines how the internet is being used by civil society groups for political involvement and campaigning. According to Macintosh's definition, e-participation is the use of Information and Communication Technology (ICT) to enhance citizen political participation. Therefore, e-participation can be understood as a means to foster citizen engagement in the democratic process and to strengthen the voice of citizens in politics.

Macintosh refers to three levels of citizen engagement in e-participation: information (one-way communication), consultation (two-way relationship based on feedback) and active participation (two-way relationship based on partnership) (Macintosh, 2004). Edelmann and Parycek (2009) expand this to a four-level stage model, including information, consultation cooperation and co-determination. Williams (2008) addresses the role of citizen engagement in the digital age in terms of idea, education, recommendation and decision. Whilst mobilisation can include efforts at any level of these models, empowerment and active participation mean moving beyond the one-way communication stage.

E-participation can be either a top-down or a bottom-up (grass roots) initiative. Top-down e-participation often provides technology and discussion spaces for citizens with the aim to increase government transparency, accountability of governmental action, and increasing or fostering confidence and trust in political institutions. The European Commission, Information Society and Media (2009) defines the 'top-down' approach as focusing on improving transparency to renew the trust of citizens in political institutions and their elected representatives, and to encourage people to voice their opinions and get involved. They are usually financed by government institutions on a local, national or EU level. Top-down e-participation initiatives include e-consultations, e-panels, participatory budgeting and e-legislation, and are promoted and supported by government institutions, so are more likely to impact policy or legislation directly. Examples of top-down e-participation in the last years are www.mitmachen.at and www.jugend2help.gv.at in Austria, Barak Obama's presidential campaign in the USA or the UK government initiatives 'Programme for Government', 'Your Freedom', and 'Spending Challenge'.

From a bottom-up perspective, e-participation mobilises support or delivers a political message. E-participation projects include e-activism, e-campaigning, e-petitions and

e-questionnaires and trying to coordinate, organise, finance and engage the public. They aim to mobilise and gain support or deliver a political message as a part of political campaigns. A bottom-up approach focuses on enabling proactive citizen involvement in decision-making. The citizen-driven approach employs technology so that citizens' voices can be heard and really listened to. Citizens choose the topics to be discussed and make the proposals, and it is assumed that the more the citizens will participate, the more satisfactory the outcomes. Bottom-up participation is usually informal, initiated or carried out and funded by individuals, temporary citizens' action groups or organisations such as NGOs, trade unions, or religious communities. Grass roots activities can be carried out via Facebook groups or blogs and need input from citizens – in relation to government institutions this is based on the principle of participatory democracy. According to Husar (ePractice, 2011), some of the best examples of successful bottom-up initiatives in this domain include 'fedspending.org', 'fixedmystreet.com', 'theyworkforyou.com' and 'whatdotheyknow.com', which are mainly initiated by NGOs.

The underlying core of both bottom-up and top-down e-participation is mobilisation to legitimate a project or citizen view in the case of bottom-up e-participation[2] and to legitimate decision-making by administrations and governments in top-down e-participation.

2.2 Sustainable e-participation

Citizen participation is unanimously seen as an essential precondition for deliberative-collaborative e-democracy (Petrik, 2010), and a key element for the sustainability of e-participation (Fuchs and Obrist, 2010). A lack of participation is considered a major threat to online communities (Cher Ping and Seng Chee, 2001) and e-democracy (Lutz, 2006). So far, the number of active participants has been treated as one of the criteria for measuring the impact and sustainability of e-participation trials (Maier-Rabler and Huber, 2010).

Sustainability has been defined as "the ability of a participatory decision-making process to maintain juridical compliance, legitimacy, social value, efficiency and productivity over time" (Molinari, 2010, in Luehrs and Molinari (2010, p.v)). It is also seen as

> "The detection of operational and policy barriers in order to ensure the continuity of a case without creating any disharmony and imbalance in a system. Consequently, a case may be defined as sustainable if there are substantial possibilities for future development, enhancement or expansion and ways to overcome potential budgetary implications and funding issues." (Panopoulou et al., 2008, p.13)

Whilst the engagement of large numbers of citizens is seen as having the power to impact politics and policy, it also needs to move beyond ad hoc cases and initiatives and become institutionalised (Rohen and Thanassis, 2010). Sustainable e-participation must be an experience citizen who wishes to engage in repeatedly or integrate into their lives, and this can only be achieved by making them feel that their investment makes a difference (Hinsberg, 2010). According to Hinsberg (2010), for e-participation to be sustainable, citizens must have the capacity to participate in public life and want to do so, and, the 'right' technology needs to be employed. At the same time, governments must encourage e-participation users and communities. Whilst the first two points have been realised in the unibrennt movement, the government did not actively react to participant's claims

in this case. Likewise, as Banfield-Mum points out in an empirical analysis based on interview material, the institutionalised mass media only reported about the event after it reached a huge popularity within the social web and social media acted as a bypass for media regulated censorship (Banfield-Mumb, 2010). Whilst some politicians solidarised with the movement by participating in working groups or discussions, there was no integration of the movement's ideas in education politics and no new decision-making opportunities were created.

Sustainability of e-participation initiatives is an important issue, but there are a number of fundamental problems associated both with the concept of sustainability and its application to e-participation. According to Luehrs and Molinari (2010), there are several problems associated with using sustainability in the context of e-participation: first, it is not clear what 'sustainability of e-participation' is (i.e., there are only few definitions) and, second, it is hard to apply this concept as long as there is no deeper understanding as to what e-participation can and cannot achieve (Aichholzer et al., 2008). Furthermore, approaches focusing on the sustainability of e-participation often put high demands on citizens' social media skills. Most e-democracy platforms require citizens who are able to understand and master the technology and the systems of suggesting policy issues, forming lobbying groups and developing concise policies on wiki servers (Petrik, 2010). With regard to the digital divide (understood as different capabilities, Mansell, 2001), the internet cannot resolve many of the problems imminent in democracy: the requirements of the internet itself extend the list of capabilities citizens are supposed to have to participate actively in democratic processes (Maier-Rabler and Huber, 2010, p.135). However, the participants of the unibrennt movement deployed or developed these capabilities in some ways very effectively, as we will show in Section 5.

2.3 The public sphere

In Austria, unlike in some other countries, the university is a public institution, although in the 1990s a modernisation of the university system reflecting the Anglo-Saxon model took place with the amendment of the university law ('UG 2002'; Heissenberger et al., 2010, p.76). Through its research and teaching functions, the university acts as a site for the production of knowledge and the education of democratic citizens. The erosion of this function of the public sphere was part of the movement's criticism. Taking on a discursive point of view, the public sphere is an area where people congregate to discuss matters of mutual interest, identify problems and influence political action (Hauser, 1998, p.86). In broader terms, the public sphere can be defined as a space that facilitates freedom of speech, publication and assembly. Universities are a prime example of these spaces as they, like the concept of the public sphere itself, mediate between the private sphere and the sphere of public authorities. With the amendment of the university law, students claim that they have had to re-claim this public sphere, as democratic voices within the university management were removed.

With the rise of new tools promoting self-organisation, citizens are more likely to capture and re-create their public spheres if they are not given the opportunity to enact in official public debates online. New public spheres like the blogosphere and digital communities emerge. The Austrian student protests represent a successful example of a bottom-up initiative using social media tools to re-claim and re-define public space and debate.

How public unibrennt would eventually become could not be foreseen – at the beginning protests were limited to single departments. The ex-Minister for Scientific Affairs, Johnannes Hahn, described it as a 'local protest' at a press conference on the fourth day of the movement (Heissenberger et al., 2010, p.13). Others spoke of it as a symbol of resistance or one of rational discourse. It is remarkable that part of the media's attention was focused on the occupation of the 'Audimax', the main auditorium of the university, as a re-capturing of public space offline.

During the three months of the occupation of the university's auditorium, it was transformed into a DIY lecture, speaking, workshop and even sleeping hall, so that official lectures could not be held. The auditorium movement quickly became a symbol for a space outside of the university management's control. Previously unobserved with Austrian student protests, in this form, the internet as a public space was used to mobilise people for actions offline and for protest organisation.

2.4 The lurker

Lurkers are one of the 'silent majorities' in an electronic forum,[3] they post occasionally or not at all, but read the group's postings regularly (Nonnecke and Jenny Preece, 2000). The term describes someone who does not actively participate, observes what is going on, but remains silent. When defining lurkers, a clear distinction needs to be made: lurkers are not non-users. Non-users are those citizens who do not use any information and communication technologies, owing to a lack of financial resources (Martin and Robinson, 2007), poor education or lack of skills (Livingstone, 2004), emotional reasons (such as technophobia (van Dijk, 2005)) because they resent using it (Selwyn, 2006) or simply do not want to.

The term often has a pejorative connotation, as it denotes someone who hangs around, is sinister or annoying, a free-loader, someone who wants something for nothing (Preece, 2000). Communities try to organise themselves to prevent lurking, as it is seen as a lack of commitment to the community (Ostrom, 1990) or threatening the online group and its activities (Cher Ping and Seng Chee, 2001).

Whatever reasons lurkers have for not participating, it is important that they should not all be given the label 'selfish free-riders' (Kollock, 1999). There are two main reasons, which make understanding lurkers a necessity: first, they should be seen as possible future posters, and second, they are community users, even if they will never post (Ridings et al., 2006). Ignoring or misunderstanding lurkers distorts how we understand online life as well as leading to mistakes in the way sites (Nonnecke and Preece, 2003) and policies for increasing participation are organised. Given that lurkers make up a majority in the e-participation process, the crucial question is how we can motivate them to become active.

3 Methodology

3.1 Case study methodology

A case study is a method, which involves an in-depth study of a contemporary phenomenon using multiple sources of evidence in their real-life contexts. This form of research provides an extensive examination of a single instance of a phenomenon,

although the context of the case study is essential, as understanding the dynamics present within the setting of the case is of particular relevance (Eisenhardt, 1989). A case study is a form of exploratory research, characterised by Yin (1994) the following:

- the research aim is not only to explore certain phenomena, but also to understand the context in which the phenomenon takes place
- the research does not begin with an initial set of questions or notions within which the study will take place
- multiple methods may be used for collecting the data – these can be quantitative or qualitative.

Hussey and Hussey (1997) argue that such characteristics are open to debate, and it depends on the paradigm the researcher decides to use. A number of other investigative methods can be used in a case study, including documentary analysis, interviews or observation.

3.2 The case study of unibrennt

The aim of studying the unibrennt movement was to explore the facilitating and mitigating factors in a bottom-up e-participation initiative. The initiative, organised by Austrian students in 2009, represented a protest against a number of issues including the Bologna Process and the demand for increased democracy in university structures. The case study method was chosen as it provided the researchers with the opportunity to investigate a specific instance of a successful case of online participation in Austria, which eventually crossed national borders. This case study is to gain new insights into the implementation of e-participation instruments and to understand how mobilisation was achieved.

Adopting the case study approach meant that it was possible to concentrate on a specific instance of bottom-up e-participation and to, therefore, analyse the various interactive processes – processes that, according to Bell (1999, p.10) "may remain hidden in a large-scale survey but may be crucial to the success or failure of systems or organisations". The researchers were able to identify the particular features, strengths and weaknesses of the unibrennt initiative, as well as provide data useful for examining the possibilities of e-democracy and e-participation in the future. Obviously, there is the danger of distortion: the researchers selected the area to be investigated, the material to be presented and the form of presentation. With this particular case study, the researchers believe that the knowledge and details gained can be generalised to other similar initiatives in the future (Bassey, 1981).

Case study research has a number of weaknesses, such as setting boundaries onto the phenomenon or setting to be investigated. The phenomenon does not exist in its own vacuum, which means that it is important to be aware of the case's (societal) context and setting. Without knowledge of what went before and what may follow, it is often difficult to understand the events in a particular period of time (Hussey and Hussey, 1997).

For the data collection and the investigations, the researchers used online material, e.g., blog articles, messages in social media networks and commentaries. Additionally, frequent field investigations and interviews on site (in the university, the occupied auditorium, the working groups and demonstrations) were integrated.

4 Preconditions: political culture, demographic changes and individual motivations

4.1 Mobilising in the 21st century: political distrust vs. new forms of engagement

On the one hand, current technological developments have an effect on mobilisation, especially on very young target groups: we can assume to reach more young people via electronic forms of participation. On the other hand, decreasing readiness to participate is reflected in continuously falling election turnout rates during the last decade. Longitudinal comparative studies on the values of Austria as a nation (Friesl et al., 2009) show that a mistrust in politics, especially political parties is increasing. When comparing Western European democracies between 1945 and 1980, the turnout rate averaged 83%, with figures constantly decreasing in the following years (Filzmaier, 2007). Although Austria held the Europe-wide fourth place in 2006 with a turnout rate of 78%, it is not this figure that is problematic, but the continuously falling rate. The tendency of a decreasing participation rate is even significantly higher when looking at other forms of participation such as memberships in parties. Support for political protest action is low: whilst the majority of Austrians can imagine participating in petitions, 79% cannot imagine occupying a building in 2008 (Friesl et al., 2009, p.211). Transferring this to the electronic environment shows another indicator of the high proportion of lurkers in e-participation related to political culture. The exact reasons for this can only be evaluated empirically, but Austrians citizens have, consistent with the international trend, clearly been pulling back from the political system during the last 10 years (Gabriel and Völkl, 2008). The following long-term trends are visible: Low political interest, the questioning of democracy as a value and criticism of the political system (Medimorec et al., 2010). It is especially the latter that has provided a fertile ground for the overall criticism of the university system reflected in the Austrian student protests. The intensity of the protest can, therefore, be seen as a reaction to the political trends described. The protest was enhanced as the students did not feel supported by the university management, and they were not given enough opportunities to participate or collaboratively shape university policies. This suggests that this specific population group is disenchanted with the political system or its parties rather than political participation in general.

On the other hand, opposing this tendency towards general disenchantment with politics stand a tremendous amount of political internet initiatives implemented by civil society such as thematic blogs (e.g., meinparlament.at, ichmachpolitik.at, neuwal.at), informal political networking and new organisational forms of political activities. Moreover, the majority of citizens want more transparency and 42% of the 18–29 year olds state that they want to use published data sets from the state (SAS Deutschland, 2010). Mobilising in the 21st century needs to consider new forms of political activity and collaboration, especially those conducted online. Although many expectations promised by e-participation have not been fulfilled, a very high level of online interaction is now part of our everyday life. Online mobilisation and discourse is supported by developments such as mobile internet access and user participation as well as web-supported communication that allows for dynamic content.

Some of these new forms of mobilisation have already been observed during the last decade with seemingly unpolitical, short-time initiatives like flash mobs and smart mobs

(an action form that has also been part of unibrennt, although the term flash mob was initially unpolitical, as opposed to smart mobs, which want aim to convey a political message).[4] As terms used for a large group of people who suddenly assemble in a public place and perform an unusual act for a brief time before dispersing, flash mobs and smart mobs are gatherings organised using telecommunications, social media or viral e-mails, to reclaim public space(s). Such activities lead to the assumption that the internet improves the potential for groups to become more visible (Döring, 2003).

4.2 Mobilising young people online

Examining the readiness of a young target group to take political action, the results of a recent study on activity types and online behaviour of 14 year olds in Austria prove that young people find traditional forms of mobilisation and participation less appealing (Parycek et al., 2010). For the majority of young people, the internet is mandatory: they use it on a daily basis (64%), more than a half even declare that they cannot imagine a life without it. Although few are generally interested in politics (3.7% strongly interested, 20.8% interested), this figure needs to be put into context: as they grow older, they have more insight into political processes and thus have more political influence in their own lives. Young people's interest in politics normally increases (EUYOUPART, 2005). Furthermore, interest in politics correlates with the level of education (Shell Deutschland Holding, 2006). Those with a low social status have never taken part in a demonstration nor can they imagine other offline activities in a political context. At the same time, girls are less interested in politics than boys (14% of the girls are interested vs. 36% of the boys; Parycek et al., 2010, Figure (42)). In addition to these results, the lessons learned from the e-Participation project Mitmachen.at show that Austrian adolescents are interested in participating, if given the opportunity (Edelmann et al., 2008). The focus groups in the project Mitmachen.at show that they do want to participate, they believe in the value of communicating, and recognise e-participation initiatives as an opportunity to participate in politics and to have their say on issues, which are relevant and important to them. Young people are not interested in political parties, but in topics that matter to them, e.g., the rights of young people.

Another finding relevant for mobilising young people was that young people are, in accordance with the general culture of distrust in political parties in Austria, moving away from traditional party engagement or political societies. They are rather attracted by new forms of political participation characterised by punctual, unconventional engagement focusing on a clear topic (ICT&S Center der Universität Salzburg, 2007). Young people prefer networking structures without hierarchy, self-determined and spontaneously developed engagement with low binding character – criteria, that were all observable with the unibrennt movement that very strongly identifies with the idea of a bottom-up decision-making culture (Maier and Arnim-Ellissen, 2010). There is clear evidence of a strong tendency towards new, electronically supported forms of political engagement and the networker as the dominant user type (Parycek et al., 2010).

If we take a closer look at the forms of engagement, it is only 52% of the 14-year olds in Austria who do not actively participate in blogs, wikis or forums. On the one hand, this is a low figure compared with figures in other countries – in the USA, only 17% of the internet users are classified as inactive, drawing on the categorisation that 'creators' are people running a blog or posting on different platforms[5] On the other hand, almost two-thirds of the interviewed pupils can imagine creating or maintaining a blog or have

already done so (60%, 36% have already done). As the development of the blogosphere can be considered as a very young one in Europe, we can expect a growing usage of web 2.0 services during the next years amongst youngsters.

To conclude, the study results suggest that young users can indeed be mobilised by non-traditional, electronic forms of activities. Almost 100% are using the internet and social networks as part of their everyday activity, and it is remarkable that the majority are ready for more active participation, e.g., in blogs, wikis or forums. This marks a big potential for electronically supported, future protest movements initiated by the digital natives.

4.3 Not everybody mobilised by the internet? The lurkers

Despite these tendencies, being on the internet and getting active in political actions are still an individual choice. Since the beginning of online communities, it is just a small core of participants who generates most of the content (Preece, 2000). In the online context, lurkers are those participants who do not actively and visibly contribute, and can make up over 90% of the online group (Nonnecke and Preece, 2000; Nielsen, 2006).

According to Nielsen (2006), user participation follows a '90-9-1 rule': 90% of the users are lurkers (i.e., read or observe, but do not actively contribute); 9% of users contribute from time to time, but other priorities dominate their time and 1% of users participate a lot and account for most contributions: they are the ones who seem to be logged in all the time, as they will post just minutes after a new item, post or event occurs.

This proportion can be found in several online communities: in the open-source communities, 4% of the participants provide 50% of the answers on a user-to-user help site (Lakhani and Hippel, 2003), in Wikipedia 2.5% of the users contribute 80% of all content (Tapscott and Williams, 2006). On twitter, there is a similar ration: the top 10% of prolific Twitter users account for over 90% of tweets. On a typical online social network, the top 10% of users account for 30% of all production.[6] A more active proportion could be found in unibrennt: 30% of Twitter accounts were responsible for 80% of the content (see case study).

In e-participation, figures are even lower: an e-participation project is considered successful if it is able to reach a few thousands of users (Osimo, 2010). Explanations for low figures have included (Verdegem and Verleye, 2009; Ferro and Molinari, 2010) that online government processes are not innovative, a digital and cultural divide within the communities or governments not having paid attention to generating value for the citizens.

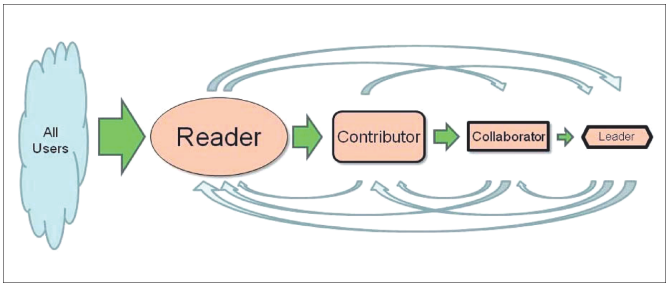
4.4 Encouraging participation: the active lurker

Shirky (2010) emphasises that any activity and any form of participation should be encouraged, as any 'banal use' of the online environment (he mentions blog posts) is "still more creative and generous than watching TV. We do not really care how individuals create and share; it is enough that they exercise this kind of freedom" (Garber, 2010). Thus, knowing more about lurkers is important for understanding successful e-participation and mobilisation. Understanding their needs, motivations as well as invisible actions will also to lead to the development of improved tools and design (Norman, 2002) for different contexts (Wimmer and Holler, 2003; van Velsen et

al., 2009) as well more successful political participation. Recognising and understanding the factors for lurking has important implications for public deliberation, as public forums suffer from social–psychological influences such as the spiral of silence (Noelle-Neumann, 1984) or majority opinion (Sunstein, 2006).

Different users will have different needs, different motivations, and will require different skills and tools. This means that not all users are the same, and Kim (2000) suggests a classification of the users in online participation: Lurkers (those who do not post), novices (former lurkers and now members), regulars (who were once novices, but are now comfortable participating), leaders (keeping the community running) and elders (who regularly reply to posts). Preece and Shneiderman (2009) differentiate between different levels of participation, and suggest the 'Reader-to-leader Framework' as a way of understanding and motivating participation. As Figure 1 shows, starting from 'all users', these users can move to become reacers, then contributors, collaborators and finally leaders. Participation in each of the phases is characterised by certain behaviours which can be accordingly changed, encouraged and supported.

Figure 1 The reader-to-leader framework[7] (see online version for colours)



Starting from 'all users', these users can move to become readers, then contributors, collaborators and finally leaders. Participation in each of the phases is characterised by certain behaviours, which can be accordingly changed, encouraged and supported.

An alternative approach may encourage the more passive participants to engage more actively. Understanding passive participants may be an initial, certainly easier step requiring less effort than trying to reach the non-users or those who are not at all interested in participation. But lurkers may well have an 'active' role. This means that online community management as well as political initiatives should focus not only the posters but also the lurkers, as they are indirect contributors of the community's influence on its outside environment (Takahashi et al., 2003). For example, lurkers sometimes propagate the topics in an online community to others who are not members of it, or use information or knowledge gained from an online community (Nonnecke and Preece, 2003).

Takahashi et al. (2003), who base their approach on previous work by Willett (1998), went beyond a simple differentiation between posters and lurkers, and included the notions of 'active lurkers' and 'passive lurkers'. For Willet (1989), 'active lurkers' are those who make direct contact with posters or propagate information or knowledge gained from it as, whilst 'passive lurkers' read for their own use only. Lurkers not only use information or knowledge in their own or organisational activities, but they are also

a resource that propagates information or knowledge gained from one community to others outside it, and even if lurkers do not propagate or use information or knowledge gained from an online community, their thoughts can reveal the influence of the online community. On the basis of the assumption that lurkers may have a strong and wide influence outside the online community, Takahashi et al. (2003) classify lurkers as follows:

- the '*active lurker as propagator*', who propagates information or knowledge gained from an online community to others outside it
- the '*active lurker as practitioner*' who uses such information or knowledge in their own or organisational activities
- the '*active lurker candidate*' where the online community affects the lurker's thought
- the '*persistent lurker*' where the online community does not affect the lurker's thought.

The research by Takahashi et al. shows that active lurkers, particularly the 'propagators', 'practitioners' and 'candidates', can affect the success of an e-participation initiative. Lurkers may take something from the community and pass it along to others using different channels, so the active lurkers are to be seen as the hidden asset in online communities (Gossieaux, 2010). Although lurkers may become 'active', this does not necessarily mean that they become activists or that their activities represent activism.

5 Case study: mobilising via the internet: the example of unibrennt

5.1 Formation and characteristics

The unibrennt movement started in October 2009 with the occupation of the main auditorium of the university for about three months, provoking an extensive media echo not only in Austria, but also in Germany and other European cities too. The initiative has managed to be present in the Austrian media well past the time of the occupation as projects and further actions like demonstrations are still announced on the website.[8] On 29 October 2010, a documentary film was released[9] and further actions on the occasion of the occupation's anniversary are planned. The grass roots movement has also been rewarded with the 'Award of Distinction' of the Ars Electronica festival in the category 'digital communities' in 2010.[10] Amongst the broad claims made by the participants of the movement were the (re-)democratisation of universities, anti-discrimination policies in all educational institutions, less economisation of education and gender-mainstreaming measurements. A significant trigger was the threat to education (e.g., knock-out exams, inflexible curricula or less freedom of choice due to the Bologna process) that leads to a feeling of helplessness among the students (Herwig et al., 2010).

At the beginning, a rhetoric of enthusiasm was observed. Some even proclaimed a modern revolution, which would be able to transform the world.[11] However, after the difficult 'Bildungsdialog' on the 25.11.2009 (a dialogue with Austria's political representatives to which the students delegated members) and the promise of aid in the form of 34 million euro to be fast-tracked[12] the auditorium was cleared by the authorities 2 days before Christmas after 60 days of occupation.[13] Whilst many participants were

surprised by this sudden evacuation, some also expected it as the lecture halls already served not only as a place for public debate, but also as a retreat for homeless people. Additionally, it was in the interest of the university management to use the premises for lectures after the Christmas vacation.

6 Basic success factors

6.1 Enabling technology: the role of the social web

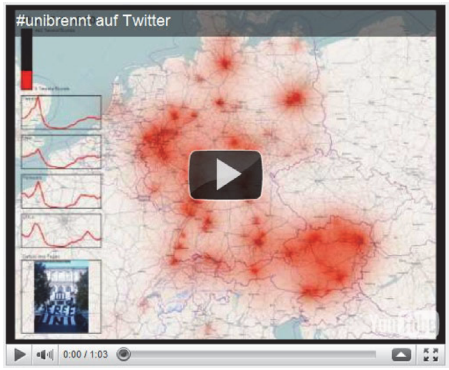
The internet provided both the background infrastructure and the basis for further success factors of the movement, and the rapid expansion of the movement across the German-speaking countries was largely a result of web 2.0 technology and networks. The news media referred to the student protest as 'student protests 2.0' (APA/nachrichten.at, 2009), 'the revolution is Twittered' (APA/stol.it, 2009) and similar slogans. However, it has to be pointed out that online actions have been used to organise offline protest actions (like working groups, occupation of lecture halls, the organisation of food or demonstrations) as well. There was a strong interrelationship between offline and online activities. During the occupations, online social media were not used solely for online communication and mobilisation, but also for combining these activities with offline actions.

We usually face multi-channel participation as the reality of participation and off- and online action need to be seen as interwoven activities. However, social networks like Twitter played a crucial role with mobilisation and ad hoc organisation. The official Twitter hashtags (i.e., bookmarks in this social network) used enabled collective organisation around topics and requests without the requirement of personal contact between people participating. An investigation into the official Twitter hashtags #unibrennt and #unsereuni (although the first one, despite many attempts, was never displaced by the second) shows the role played by online mobilisation.

Between the 23.10.2009 (in the afternoon) and the 31.12.2009 (midnight), 95,743 tweet messages with a maximum of 140 letters were sent from 8898 different Twitter accounts referring to at least one of the terms 'unibrennt' or 'unsereuni' (most of the time as hashtags (Herwig et al., 2010)). 'Unibrennt' became clearly accepted before 'unsereuni' with 74,144 entries against 47,911. 30% of Twitter accounts provided 80% of the network's content. The movement of the initiative to other countries is visually documented by web enthusiasts in Figure 2.

Twitter streams and all real-time communication (e.g., a blog parade listing all blog articles[14]) was integrated into the main website unsereuni.at – 'Our Uni' – which is still active as infrastructure for organising protests and discussion. The interactive website, sometimes visited by 10,000 users during a day,[15] with fast communication via online social networks that helped the initiative to be present and to bundle competences. Wikis[16] and livestreams[17] enabled the mobilisation of people outside the community. People could even solidarise out of their own private home, e.g., by participating in an online demonstration[18] After only one day, 30 working groups, each of which dealt with a different topic, as a central element of decision making and discussion have been formed. Minutes, documents, information sheets and press articles were distributed and collaboratively edited via the wiki.[19] The unibrennt managed to build up a highly participative infrastructure that could be recognised all over the web.

Figure 2 Unibrennt auf Twitter (Screenshot) (see online version for colours)



Source: Kossax (2009)

In combination with *Facebook* updates, personal networks were used to spread information, create solidarity among the students, identify with and actively engage in protest. The *Facebook* group *Audimax*, launched in the afternoon of the occupation of the audimax, reached a considerable number of members, 33,000 with a total number of 48,000 interactions such as wall posts up to 13 December 2009. The peak of interactions was on day 8 of the protest and then gradually decreased again (Banfield-Mumb, 2010). The group was moderated by the *AG Presse* and *AG IT* (working group press and IT).

Up until now, nearly 30,000 fans support the initiative on Facebook (09.10.2010: 28,048 members). All social networks undisputedly played an important role during the occupation of the audimax, with food, working material and demonstrations organised using digital technology (Maier and Arnim-Ellissen, 2010, p.214): Participants joining the bottom-up initiative were not web 2.0 users or experts, but most were even encouraged to try the new infrastructure:

> "[…] the majority of the people participating in the digital community did not come into contact with this before […] they have just found web 2.0 and digital media this way."[20]

Besides Twitter and Facebook, other social media channels like YouTube or ustream.tv were used and integrated into the interactive main website. The live stream was particularly important to invalidate articles by traditional mass media, which claimed that making party would be a dominant motive of participants.

By integrating different media in the main website, the joint impact of these media in mobilising students and other solidarising people was centrally collected. On the other hand, it makes it difficult to analyse the different tools in relation to one another as multimedia channels were deployed simultaneously. Traditional mass media becoming aware of the movement might even have encouraged the influence of social media channels by addressing the important role of social media for the movement. However, traditional media like television broadcasting and newspapers were less important and less suitable as an information source for participants, owing to the "lack of relevant information published and because certain activities were carried out ad-hoc, whereas mainstream media coverage usually lagged behind" (Banfield-Mumb, 2010, p.7).

Anti-hierarchic organisational structure and transparent processes

It is remarkable that for the first time a protest was not organised by student unions ('Österreichische Hochschülerschaft') but by the students themselves. The communication, based on flat hierarchy and openness of organisation, was multiplied by the nodes in the network and enabled influential action-taking without having to ask for permission from above. The decentral element of the digital community enabled anyone to participate in and work together with the movement from home.

Message interactions amongst participants expressed group norms (McKenna and Green, 2002; Postmes et al., 2000) and, according to the grass roots nature, goals were defined collectively (e.g., the rules for delegating students in the so-called 'Bildungsdialogue' or 'educational dialogues' could be edited by everybody in a wiki.[21]) The organisation team changed almost daily, so there were no leaders as such. Responsibility was thus not explicitly assigned, which also lead to criticism amongst participants, as it was thought that it would eventually be necessary when negotiating with politicians.

The flexible organisation and interconnectedness was pointed out by students in interviews:

> "It is remarkable that […] without organisation and project management in the usual sense an incredible infrastructure and level of connectedness and communication structure developed immediately."[22]

6.2 Common goals vs. heterogeneous target group

The unibrennt initiative represents and addresses a homogeneous target group (Zlousic, 2009), enabling a lot of people to identify with the movement. A broad range of goals was formulated independently from political orientation. In comparison with the rest of the population, participants are well educated (and therefore more likely to be interested in politics) and have the necessary internet skills and capabilities. Students' political views within the movement were very heterogeneous, sometimes following contradictory subgoals.[23] However, this heterogeneity was perceived as a strength (Heissenberger et al., 2010, p.17),[24] although there were also a lot of opponents to the movement (e.g., the big counter group "Study, don't block!" ("Studieren statt Blockieren!") on Facebook). The subsequent solidarity by outside organisations (e.g., kindergarten teachers), public media (e.g., http://derstandard.at/) and politicians resulted in a high numbers of participants in demonstrations. The reasons for the high levels of mobilisation and dissemination of the common goals in the background were the factors responsible for de-lurking. With the many technical options available to take something from the community and pass it along to other channels, the movement managed to transform passive participants into active lurkers, especially as propagators of the brand unibrennt. This transformation was also expressed by the students when they stated that many of them had not used web 2.0 options to pass on information before.

7 Crucial success factor: de-lurking

Virtual communities need a number of members for sustained participation (Blanchard and Markus, 2004), and, as already pointed out, research on lurkers has provided some

suggestions as to how to change lurkers' behaviour (Preece et al., 2004; Bishop, 2007). To provide a psychological explanation for the successful mobilisation, we address the role of the lurkers in the unibrennt case, in particular on their possible reasons for getting active.

The definition of a typical lurker in a social network, e.g., in the Twitter context, is debateable: As Twitter is an open network, lurkers can be seen as those who do not own an account and just read other's messages. They might, however, tell other people about their findings offline or in other networks. Likewise, they could also own an account for a while without immediately sending their own tweets. The threshold to participate (e.g., by 'retweeting' a message) is then very low, and the structure of microblogging systems promotes this low effort. In the context of unibrennt, as already pointed out, the majority of users were encouraged to actively use these new networks for political protest for the first time, therefore becoming readers, contributors or collaborators.

Providing helpful information and emotional support is a key issue for every initiative (Blanchard and Markus, 2004; Barnes, 2008). Unibrennt is based on a radically transparent flow of information and low entry barriers for new members, which enabled the transformation of user roles: Whilst new members participated passively at first, they gradually became more active as they learned the norms of the group openly expressed themselves within the community, on the website and in wikis. This meant that new, potential members were able to gain an overview of the community (Preece et al., 2004) and gradually begin contributing.

Joyce and Kraut (2006) found that the more often users contribute to an online community, the more likely that they will continue to participate. Therefore, the reaction/interaction newcomers are given is central in mobilisation for determining the commitment to the group. There are different possibilities of how group interactions might increase newcomers' motivation:

1 users are more likely to continue if they receive a response

2 reciprocal exchange within the community can set up an unspoken obligation to the group

3 personal bonds with group members, which stem from the interactions will foster further commitment and participation to that group.

Primarily, the nature of social networks and the possibility of commenting on topics ensured users were given a response. Other technical tools such as live streams and online demonstrations promoted reciprocal exchange and created bonds with those who could not participate on site. Direct feedback could be given via other channels and feedback systems like Twitter walls, where participants actively integrated questions asked via social networks into the public debate. These vast communication opportunities added to a big commitment and a broader and more sustainable dialogue.

Alexy (1990) developed rules for the ideal speech discourse based on Habermas' work that fit in this context, as the third rule states:

3.1. Every subject capable of speech and action may take part in discourses

3.2(a) Everyone may challenge any assertion

3.2(b) Everyone may introduce any assertion into the discourse

> 3.2(c) Everyone may express his or her attitudes, wishes and needs
>
> 3.3. No speaker may be prevented, by internal or external coercion, from exercising his or her rights under 3.1 and 3.2 (Habermas, 1983, p.99).[25]

Interactivity, generalised reciprocity and interaction are important for motivating participation (Wasko and Faraj, 2000). Within unibrennt, mobilisation was promoted as users believed that their contributions were important to the group's performance. Users will contribute more if they like the group they are working with. The exchange of social support (e.g., realised by the support of individual needs in the different subgroups) was another important motivator. As users brought up their own ideas and suggestions, they gained more responsibility and assumed an unspoken obligation towards the group.

According to the Social Identity Theory (Tajfel and Turner, 1986; Turner et al., 1987), people identify with groups to enhance their self-esteem. Social identification processes were instrumental in unibrennt's collective definition of what is considered to be helpful. The novelty was that these group norms were not only collectively shaped, but could also, due to a transparent information policy, be influenced by outsiders. Consequently, rules and regulations for upcoming press events and demonstrations were not only put online, but also open to the public and anybody's feedback. The collectively shaped norms of unibrennt led to a bigger identification with the movement's core. If a participant could not identify with one of the working groups, he or she could set up a new one. Identification with the initiative was further strengthened by slogans such as 'One of many' ('Einer von vielen'[26]), the establishment of a 'unibrennt brand' through consistent usage of the wording and merchandise articles. Herwig et al. (2010) closely examine this collective identity as part of a four-stage identification model:

> "The decision to join a protest follows a variety of inter- and intrapersonal influences. According to Stürmer and Simon, there are four steps in becoming an active member of a protest: first, sympathy towards the cause of the protest must exist; second, calls to mobilise must reach the person in question; third, the person's motivation to participate must be developed and fourth, any difficulties that might prevent participation must be removed. In the protests of 2009 and 2010, the internet probably enhanced this process, particularly the second and third stages."

The online forms of participation offered by unibrennt reduced the costs of taking part in a movement by rapidly creating a collective identity and a feeling of belonging (Herwig et al., 2010).

7.1 Output and results: an outlook

Unibrennt managed to provoke an extensive media echo and to establish a brand and organisational infrastructure that has not been observed in this context before. Compared with the '68 student protest movement, the movement formation was faster and more ad-hoc via digital tools with the strong utilisation of social weak ties inherent. For many participants, it was proved that young people could successfully and rapidly organise themselves to make their political opinion visible. What initially started as a harmless protest turned into a democratic movement dominating Austria's politics, leaving the impression that citizens can actually influence public debate. Whilst the first hurdle of

e-participation was overcome, the implementation of the highly ambitious political goals failed almost completely. The vice-chancellor estimated the costs of the movement and its 60 days of the occupation of the Audimax at 1.3 million Euros.[27] As opposed to Germany, where a demonstration led to changes in the Bologna-reform, unibrennt in Austria has, as yet, not had any direct political consequences. However, smaller results were achieved at university level, like the installation of a lecture series organised by participants or the extension of library opening hours have been.

Whilst new forms of mobilisation, self-organisation and collective decision making definitely worked, the initiative itself could not agree on a common political position, maybe because of the very broadly defined goals. Subsequent criticisms resemble those of the Obama movement (Sifry, 2010). Citizens' serious doubts about the state and the democratic system were a major mobilisation factor at the beginning, but the participation model of the campaign itself cannot be compared with the reality of political work (Swire, 2009).

Although the role of the social web in the unibrennt movement was significant in communicating a cause rapidly throughout the whole German speaking university landscape, it should be considered as a 'SmartMob' (Rheingold, 2002) or important symbolic activism rather than a social movement that lead to political change. Online activism without any offline effects is, at this stage, not likely to lead to social revolution. Such forms of activism can be described as slacktivism, leading to nothing more than a good feeling derived from having done something good for society without actively engaging in politics (Morozov, 2009).

The important role the social web played specifically for information, coordination, mobilisation and communication is not in doubt. However, as Banfield-Mumb (2010) points out in his empirical analysis of the student protests, it is hard to see any positive influence on the education system in general. Additionally, decisions were made on-site, in the occupied Audimax lecture hall, which limited the role of online participants in commenting and showing solidarity (Neumayer and Schossböck, 2011). To sum up, the movement failed in communicating the results of working groups and the protest in general to decision-makers and in influencing a change in the university structure. Nevertheless, unibrennt proofed that young people could put a topic onto the political agenda, which could shape their notion as well as other ideas of politics significantly.

Excellent mobilisation does not lead to a (re)democratisation and sustainable participation in general. The question, therefore, remains how bottom-up participation processes have to change to achieve political influence, moving towards the levels of e-participation that allow more citizen engagement.

Whether political goals will be met by further initiatives will depend on future political culture and communication. As statements of the students show, there is a big potential for many-to-many-communication in governance that has yet to be taken on by the state:

> "The big question remains: When will the state be ready to communicate?"[28]

The future will prove whether and when state and politics will take on this challenge, opening up the new role of actively promoting civic involvement in governance processes.

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Notes

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[3]http://catb.org/esr/jargon/html/L/lurker.html

[4]http://en.wikipedia.org/wiki/Flash_mob

[5]http://ow.ly/17K7a

[6]http://blogs.hbr.org/cs/2009/06/new_twitter_research_men_follo.html

[7]picture from: http://aisel.aisnet.org/cgi/viewcontent.cgi?article=1004&context=thci

[8]http://unibrennt.at/

[9]http://derstandard.at/1285200310333/UniBrennt-Beatrix-Karl-ist-unsere-groesste-Mobilisierungs offensive

[10]http://studi.kurier.at/?story=699

[11]http://web2politik.wordpress.com/2009/10/31/unsereuni-moderne-revolution-verandert-die-welt/

[12]However, this aid was already passed before the beginning of the protests.

[13]Media echo on the evacuation: http://www.scribd.com/doc/24524973/Rektorat-Uni-Wien-Medienecho-Raumung-Audimax-22-12-2009

[14]http://unsereuni.at/wiki/index.php/BlogParade

[15]10,000 unique users in 15 hours according to documentation video; http://www.ichmachpolitik.at/questions/557

[16]http://unsereuni.at/wiki/index.php/Main_Page

[17]http://www.ustream.tv/channel/unsereuni

[18]http://unsereuni.at/?page_id=4878

[19]http://unibrennt.at/wiki/index.php/Main_Page

[20]http://studi.kurier.at/?story=699 Statements from the video are translated into English.

[21]http://unsereuni.at/wiki/index.php/Projekt_Hochschuldialog

[22]http://studi.kurier.at/?story=699

[23]E.g. participant's opinion on the integration of gender equality measurements in the list of claims.

[24]http://studi.kurier.at/?story=699

[25]quoted from openpolitics.com

[26]http://studi.kurier.at/?story=699

[27]Traxler, Tanja and Lisa Nimmervoll: Universität Wien sperrt ihre Pforten. DerStandard, 22.12.2009. Available online at: http://www.scribd.com/doc/24524973/Rektorat-Uni-Wien-Medienecho-Raumung-Audimax-22-12-2009

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Article V

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LURKING AND DE-LURKING IN E-PARTICIPATION

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ABSTRACT

This paper presents a literature review of a PhD that looks at the role and impact of lurkers in e-participation. The review defines and re-defines lurking, looks at reasons why online participants prefer to lurk and how they can be encouraged to participate. In the context of e-participation though, lurking and strategies to reduce it may need to look at other issues and factors. This review concludes by raising the question whether de-lurking is always the best strategy and considers how to understand lurkers' roles in e-participation.

KEYWORDS

Lurkers, de-lurking, roles, e-participation.

1. INTRODUCTION

The internet has been given an important role in shaping the new and different opportunities for political engagement, enabling government agencies to restructure their interactions with citizens and to include citizens' perspectives in the development of policies and public services; this is known as e-participation, and is to benefit both governments and citizens (Fountain 2001; Archmann 2010). Online platforms, blogging, Facebook and Twitter are examples of online technologies that allow citizens to be active contributors in the development of policies and public services rather than just being the final user or receiver (Osimo 2008; Punie, et al. 2009).

Whilst there has been a massive growth in user-driven applications such as blogs, podcasts, wikis and social networking (van den Broek et al. 2010a), figures of active citizen e-participation are low (Charalabidis et al. 2010) and e-participation initiatives seem to engage a small core of active participants only rather than the majority of the population. A large proportion of the participants seem to prefer to remain passive, that is, to lurk rather than visibly participate.

This paper provides a definition of lurking, and explains why it is important to investigate and understand online lurking, in particular in the context of e-participation. It also raises the issue as to whether strategies that reduce lurking always are the best option for e-participation and provides some recommendations on how to consider lurking.

2. STUDYING LURKERS

Online participation has never been evenly distributed among users (Joyce & Kraut 2006), and not everyone needs to contribute for an online initiative to be successful, but online initiatives with a large proportion of non-contributors or non-participants may have difficulty providing the necessary services and be unable to support its participants (Wimmer & Holler, 2003; van Velsen et al. 2009). Lurkers are seen as those participants who do not actively and visibly contribute, and they can make up over 90% of an online initiative or community (Nonnecke & Preece 2000). Lurking is a very common online behaviour, needs to be recognised and understood: misunderstanding lurkers directly leads to a misunderstanding of the online initiative as lurkers are rarely heard (Nielsen 2006, 2009).

2.1 A Typical Definition of Lurkers

The term lurkers usually describes those who do not visibly participate in the online environment, a behaviour made possible by the technology that allows access without having to publicly participate or be visible (Joinson 2001; Nonnecke & Preece 2003).

Lurking has always been a very popular activity among virtual community participants as it leaves no traces (Whittaker et al. 1998), yet the term often has a pejorative connotation: it is usually associated with someone who hangs around, is sinister or annoying, an eavesdropper (Webopedia n.d.), a cyber-trickster "lurking the Web and luring the gullible" (OECD 2003, p. 145), or a free-loader (Smith & Kollock 1999), that is, someone who wants something for nothing (Nonnecke & Preece 2000). As the success of an online initiative or community depends on active participation and contributions, there may be some justification for this view of lurkers.

2.2 Re-defining Lurking

Lurking requires a different definition. Lurking is a nomal social behaviour, it is a form of communication with wide-reaching consequences (Nonnecke & Preece 2003; Takahashi et al. 2003; McKenna et al. 2005; van Uden-Kraan et al. 2008). The lurker is not an ignorer (Edelmann & Cruickshank 2011) or just a passive reader, but a positive and active participant, albeit in different ways: they extend the group, use or act upon information within other online groups or offline settings, connect with other networks, bring new contacts and members, provide key activities, resources and information, serve as a mass media audience or represent potential future users (Ridings et al. 2006; Soroka & Rafaela 2006; Takahashi et al. 2007; Preece & Shneiderman 2009; Gossieaux 2010). Viewing lurking as a positive behavior will help the development online and e-participation initiatives and appropriate de-lurking strategies.

2.3 Why do they lurk?

There are many different social and psychological reasons that impact online users in their decision to participate or to lurk, how to use the available online resources, how to interact with others and what goals are to be achieved e.g. to communicate, to gain information and support, present oneself or achieve a certain status in the community (Ellemers & Barreto 2000; Douglas & McGarty 2001; McKenna 2008). Lurking is influenced by a variety of factors found in both the offline and online context, such as social loafing, information overload, bystander effects, the diffusion of responsibility or personal decisional styles (Jones et al. 2001; Spears et al. 2002; Butler et al. 2002; Yechiam & Barron 2003).

Nonnecke and Preece (2003) suggest that participants lurk to satisfy personal and informational needs, to maintain privacy and safety, as a response to group dynamics, and to act within constraints. Lurking may also occur if participants do not have the tools, skills or the time necessary, do not understand what they are expected to do, or are not aware of their responsibilities (van der Laar 2010). Reasons may also be altruistic, that is, lurkers try to be helpful by not posting and not adding to the confusion on an online site or discussion (Haythornthwaite 2009).

High levels of connectivity, frequent usage, the availability of and access to information does not mean that online users will necessarily be more social or more knowledgeable (Hargittai 2008). The availability of too much information and social information has measurable impacts on both individual behavior, where individuals are unable to deal with the large amounts of data encountered. Information overload may lead to "attention economy" (Davenport & Beck 2002, p.2), where the value of attention given to the other participants or interaction with them is given a price sticker, rationed and not provided as a matter of course.

2.4 DE-LURKING

Encouraging participation is one of the biggest challenges that many online communities and initiatives face, and a number suggestions have been made to change lurkers' behavior. As described above, there is a variety of reasons why participants choose to lurk, and these need to be understood so that de-lurking strategies can developed that increase online participation and improve the online experience for the participants.

Research on lurkers has provided some suggestions on how to change lurkers' behaviour, for example, by rewarding those who contribute, although this assumes that people free-ride (Smith & Kollock 1999), by focusing on the tools, their usability and interoperability (Wimmer & Holler 2003; Scherer et al. 2011), making participation easy and fun (Nielsen 2006; Scherer et al. 2009), managing the online interaction (Amichai-Hamburger & McKenna 2006), considering the role of leaders and moderators (Blanchard & Markus 2004), motivating commitment (Joyce & Kraut 2006) and dealing with controversies (Preece & Shneiderman 2009).

3. LURKING IN THE CONTEXT OF E-PARTICIPATION

E-participation is to encourage citizens to be active citizens, to have and use the opportunity to impact public policy goals, and see the incorporation of their needs and values in decision-making processes (Arnstein 1969; Creighton 2005; Smith & Dalakiouridou 2009).

Some scholars suggest that citizens want greater government transparency and interaction, opportunities and channels in order to participate in public matters that affect them (Flew 2007; OECD 2007; Rosanvallon & Goldhammer 2008; Panopoulou et al. 2009). Online tools such as forums, blogs, e-government portals, social networks, collaborative platforms, and applications for mobile phones are to help reconnect citizens with politics and policy-making, encourage interaction, collaboration and new productive relationships between citizens and governments (European Commission 2009; Pratchett et al. 2009; Hennen et al. 2011; Lindner & Riehm 2011). Successful e-participation initiatives and events from around the world, for example Jugend2help (2008) and student protests (2009) in Austria [1], e-participatory budgeting in Brasil (Peixoto 2009), the BürgerForum in Germany (2011) [2], Barack Obama's online twitter town hall in the USA (2011) [3] show that citizens are using the online tools and networks to participate, contributing and engaging in strategic political behavior (Mullany 2011).

Nevertheless, e-participation initiatives still need to encourage citizens to participate. Whilst some argue that online technologies will alter democratic processes and government efficacy in a revolutionary way (Levy 1997; Castells 2003), others believe that the new digital tools lead to inflated expectations and disillusionment rather than solve the problems pervasive in democracy that are due to low levels of trust towards public administrations and government (Ostling 2010). Millard (2009) found that citizens only interact about 3 times per year with their government, although Williamson (2010) suggests that some citizens may well want interaction that is limited to casting a vote every few years. Gladwell (2010) believes that the internet and social media will seldom lead to committed participation and political activism.

The majority of de-lurking strategies have been developed for general online participation and communities, and it is therefore necessary to consider whether any of these may be suitable for e-participation, as it specifically aims to raise the public's interest for politics, strengthen active citizenship and encourage political activity as well as empowering civil society, engaging citizens and providing services the public is interested in. Given the complexity of e-participation, understanding lurking and developing appropriate de-lurking strategies may have to consider a broader spectrum of issues. Maier and Reimer (2010) suggest that barriers could be the citizens' lack of motivations, lack of shared interests, lack of feedback to their contributions, unclear roles and no political support for the outcomes of an initiative. They also argue that other factors could be disenchantment amongst participants, a negative attitude to those in power, and low levels of use of the official e-participation sites. In e-participation, lurking may also be due to other factors such as preferring entertainment and other easy-to-find online distractions (Tsui 2008).

3.1 Should de-lurking always be the aim?

Shirky (2010) claims that any activity and any form of participation and use of the online environment should be encouraged (he mentions posting YouTube videos of kittens). E-participation strives to include as many citizens as possible, but is de-lurking always the right strategy? Should the aim of de-lurking in

[1] www.jugend2help.gv.at and http://unibrennt.at; #unibrennt
[2] http://bund.buergerforum2011.de/
[3] http://askobama.twitter.com/

e-participation be to achieve the perfect information arena, the ideal speech situation (Habermas 1984) or achieving a new "Athenian Age of democracy" (Gore 1994; Coleman & Blumler 2009)?

The number of active users is often seen as the main indicator of an online community's success (Krasnova et al. 2008). But if e-participation is part of the overall transformation of the public sector, then having a large number of online participants who actively communicate may be less important than seeing whether society and the governance processes are benefiting (Andersen et al. 2007; Arregui Mc Gullion 2011). It is difficult to evaluate the value of e-participation for society only by counting the number of posts and trying to convert these into economic quantities.

More active participation does not necessarily mean that political participation is improved. De-lurking in online social networks may lead to large echo chambers, spaces where people look for those with whom they agree with (Sunstein 2006). Echo chambers are encouraged by the idea that only online sites and initiatives with large number of active participants are important or valuable. Boyd (2008) suggests that participants may be more interested in "adding glitter to pages and SuperPoking their "friends"" (p.112) than engaging in any form of civic-minded collective action. She claims that the new web technologies hold the mirror to a status-obsessed and narcissistic society, that politicians and activists use the online tools more for advertising than increasing real political participation. Gladwell (2010) also challenges the importance given to social media for achieving active online political participation, wondering whether people on Facebook are really the ones who should be involved in political decision-making: Facebook was originally conceived a tool for being in touch with friends, and Twitter a tool for following (or being followed) by people one may have never met.

4. CONCLUSION AND CONSIDERATIONS FOR FURTHER RESEARCH

On the premise "that everyone is likely to lurk at least some of the time and frequently most of the time" (Nonnecke & Preece 2003, p. 112), knowing more about lurkers in terms of their diversity, their behaviors, strategies, needs, roles, values, and activities will lead to the development of de-lurking strategies that are able to increase levels of e-participation.

Future research on needs to consider lurkers and their role in e-participation in a number of ways. First, further research is needed to understand why people choose to lurk rather than visibly participate. Second, lurkers may actually be seen as being active by engaging in a number of ways that could be important for e-participation to achieve its aims, e.g. promoting the online initiative, helping maintain its infrastructure, distributing content, storing, sharing and retrieving (Ciciora 2010; Haythornthwaite & Kendall 2010; Edelmann & Cruickshank 2011). E-participation must recognise the value of a wide range of online behaviours and experiences, including lurking may. Work by Takahashi et al. (2007) shows that a clearer understanding of participation and lurking within an online community will allow lurkers to occupy a more important position as a resource. Third, it is also necessary to consider that lurking can be beneficial, it can be a positive, helpful and possibly necessary behavior. Artificially enforcing active contribution may result in information overload (Rafaeli & Ravid 2001), so lurking may be just as necessary as visible posting. Fourth, whilst the aims of de-lurking strategies are to achieve more communication, interaction, supportive social ties, civility and community, they may address and encourage participants who do not share the values or engage in behaviors idealized by policy-makers, strategists and leaders of an e-participation initiative. E-participation must therefore consider those who do not participate in the expected manner and respond to de-lurking strategies with hurtful messages, equivocation, deception, physical and psychological abuse (Adams 2001).

The next step of this PhD will be to develop a methodology to investigate these issues in a number of different e-participation contexts and initiatives.

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Article VI

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Collaboration for Open Innovation Processes in Public Administrations

2

Noella Edelmann, Johann Höchtl, and Michael Sachs

Abstract

In Government 2.0, public value no longer needs to be provided by government alone but can be provided by any combination of public agencies, the private sector, civil society organizations or citizens. The ubiquitous presence of ICT, citizens' digital literacy, and their potential willingness to participate online can efficiently enable collaborative production. Models for the inclusion of external stakeholders in public value production can increase the degree of public sector innovation and improve the outcomes of such processes. Governments can use the most valuable resource they have, the citizens, by establishing opportunities for civil society and businesses to engage in an open government.

2.1 Introduction

Public administration has not yet found its new role in the virtual environment, but it is clear that closed, hierarchical governed systems will increasingly be untenable and open and collaborative production systems in governments and public administrations need to encourage stakeholders and citizens to participate in order to achieve and produce better solutions and outcomes. On his first day in office, US President Obama signed the Open Government Memorandum: "We will work together to ensure the public trust and establish a system of transparency, public participation, and collaboration. Openness will strengthen our democracy and promote efficiency and effectiveness in Government" (Obama 2009). The European Union too seeks to involve citizens in decision-making processes, and

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the Ministers responsible for eGovernment declared in December 2009 that "there is a growing expectation from European citizens and businesses for their governments to be more open, flexible and collaborative in their delivery of public services across Europe" (Ministers 2009). Governments worldwide have understood the importance of including citizens in decision-making processes, to incorporate stakeholders' potential for achieving innovation, with the aim of achieving better governance and better regulation.

The Internet enables government agencies to restructure their interactions with citizens: "computer networks (...) harness the power of a larger population of networked users" (Whitehead, quoted in Fountain 2001). The government will need to have the ability to organize, coordinate and control complex policy domains as well as provide the databases on platforms for encouraging communication with and between citizens, institutions and business. This means recognizing the importance and necessity of sharing knowledge, experiences and resources in new ways: networks and collaborative environments need to have ties to agencies, supply chains, sources of knowledge and platforms which help citizens and agencies work together to achieve mutual productive gains. In Government 2.0, public value no longer needs to be provided by government alone but can be provided by collaborative production between different public agencies, with the private sector, community groups or citizens. In this context, policies at the institutional and public level will be able to fully utilize the power of mass collaboration within the legal framework. This informal, non-hierarchical nature of mass collaboration facilitated by electronic communication technology is not yet fully endorsed by public administrations, and governments face the challenge of establishing a framework that defines new institutions of governance and the roles so that the innovative capacity of the market can be used.

The aim of co-productive value production is not collaboration at all means but efficient and effective decisions that include all stakeholders. A new paradigm of collaboration and innovation in public administration requires that certain online behaviours be learned, understood and adopted. Furthermore, whilst the Internet is able to support and encourage prosocial behaviours for the good of a community or society, simply providing an online environment will not automatically lead to contribution, participation and collaboration (Kreijns et al. 2003). Members need to be engaged for participation and collaboration to occur, and such behaviour may not always be visible: this is "lurking" and tends to have a negative connotation. However, lurking can also be valuable in a democratic society where information provides the basis of effective decisions and innovation.

2.2 Online Prosocial Behaviour

Prosocial behaviour occurs offline and online and is a type of behaviour that often leads to activities with positive ends (Rheingold 2002) or results that benefit others. In the online context, prosocial behaviour can include donating money, computer

power, software and documentation, time and attention, information and emotional support, working together and collaborating.

According to Amichai-Hamburger (2005), online prosocial behaviour is characterized by visible requests for help, but not always the people making the request; helping behaviour that can be made visible (but does not have to be); potential help providers that are not visible until they actually offer help; physical invisibility that reduces the barrier for help providers whose age, gender, race or other visible attributes lead people to discount their contributions in the offline world; online help that can be judged solely on the content of help; the ease of making a contribution—at any time of day, from any place, read and sent at one's own convenience; and finally, the controllability of further involvement and provision of help.

But why do people contribute or collaborate to achieve a common end or a result that benefits others? There are several reasons, including empathy, community interest and generalized reciprocity. Individuals benefit from prosocial behaviour and are often grateful for it; groups and communities also benefit (Lakhani and Hippel 2003). Collaborative behaviours do occur online, and they represent different participative behaviours that may lead to different innovative effects, results and solutions.

2.2.1 Hyperlinking

"Without linking, there would be no Web" (Weinberger 2008). Hyperlinking, that is, the activity of making online ties and links, is part of everyday life, "created and situated in a political-social context" (Turow and Tsui 2008), and affects the size and shape of the public sphere by facilitating the wide sharing of information. The hyperlink began as a citation mechanism but is now both a navigation tool and a social behaviour that has social implications (Halavais 2008). On the one hand, links can be useful for providing trust and providing support (evidence), transparency and credibility as they are able to specify "the relationship between what is known and how it is known" (Turow and Tsui 2008) simply by linking to the source. On the other hand, hyperlinks have a gatekeeping effect, guiding users (Hargittai 2008) and their attention (Webster 2008), thus controlling and managing the audience flow. Few people "would create hyperlinks purely for their own use" (Adamic 2008): hyperlinks are social and used to express social relationships in a public space for others to see, as gifts, and to reinforce existing relationships. Hyperlinks affect the dynamics of content production, distribution and access, so it is necessary to understand not only user consumption of the Internet but also their navigation, attention, generation and how the content sources interact with one another (Napoli 2008).

2.2.2 Participation

Participation is one of the most important keywords when discussing the Internet and its development: in 2006, Time Magazine nominated "You" as the person of the year, "You" being all the users producing "user-generated content" by chatting, file sharing, emailing, blogging, socializing on the Web and creating Wikis. Since then, some of the tools and forms of communication, such as blogging, Facebook and Twitter, have been taken up by the formal political system and political public administrations for decision-making processes. According to Ferro and Molinari (2010), in some cases, citizens may refuse to use the official government spaces provided and thus influence the way online tools are used and adopted, and other citizens are involved.

Online participation involves a number of activities, including generating messages, reading them and responding to them, organizing discussion and offering other online and offline activities that could be interesting. Some scholars believe that the characteristics of the Internet such as anonymity and reduced observable social cues can encourage discussions and generate interesting arguments, that is, they are "conducive for public deliberation by attenuating the effects of the undesirable social-psychological influences on opinion expression" (Ho and McLeod 2008). In addition, anonymity in the online environment reduces the observable status differences, so that citizens who are less confident in offline environments will speak out in the online environment, leading to greater idea generation and increased levels of participation.

2.2.3 Collaboration

The Web is easy to use and enables new forms of working together. Internet users do not just read the content but want to use it and have control over it. Some of the characteristics of online communication (such as multimedia, interactivity, synchronicity, hypertextuality) encourage participants to engage in new behaviours such as new reading conventions creating new meanings and collaborating with others (Wood and Smith 2004). Collaboration is based on individuals engaging in loose voluntary associations and using technologies to achieve shared outcomes and can impact workplaces, communities, national democracies and the economy, as well as have social benefits, such as making governments more transparent and accountable (Tapscott and Williams 2006).

Peer production will continue with increased access to tools, applications, databases and knowledge, and increased transparency and skills. Collaboration will improve as businesses, governments and public administrations change their internal processes (Tapscott et al. 2007) and users learn and adopt the new rules of behaviour. Providing a platform will not be enough: it is necessary to ensure that users having rich and engaging online experiences, relationships and interaction. Thus, collaboration will need some form of management to help guide and support users and to deal with the complexity of such activities.

2.2.4 Negative Online Behaviours

Even though some participant activities are very successful (e.g. Wikipedia), in both the electronic and the offline context, the majority of help is given by the minority (who incur substantial costs in terms of their own time). Preece and Shneiderman (2009) state that for all the enthusiasm for the online environment, "the reality is that many Web sites fail to retain participants, tagging initiatives go quiet, and online communities become ghost towns. Many government agencies are reluctant to even try social participation. . .". Although people will contribute time and effort, traditional offline problems such as the bystander effects or diffusion of responsibility and simply lack of participation do occur (Yechiam and Barron 2003).

According to Nielsen (2006), user participation follows a "90-9-1 rule": 90% of users are lurkers (i.e. read or observe but do not actively contribute), 9% of users contribute from time to time, but other priorities dominate their time, and 1% of users participate a lot and account for most contributions. Take-up of participatory and open government initiatives is not large, especially for the government-led initiatives: an eParticipation project is considered successful if it is able to reach a few thousands of users (Osimo 2010).

There are many reasons why people do not contribute, some are selfish, but there are other reasons too (Nonnecke and Preece 2001). The perception of the current opinion climate (Noelle-Neumann 1984) as well as the perceptions of the future (Scheufele 2001) can predict the willingness to express an opinion or to contribute. Explanations for low levels of collaboration with governments include online government working processes that are a mirror image of existing (offline) services; a lack of skills inside public administrations; governments that do not try to generate value for the citizens; the technological assumption that if you "build, they will come"; online service infrastructures guided by technology rather than user needs and expectations; and governments that distrust citizens and do not really listen to what citizens say (Coleman and Blumler 2009; Ferro and Molinari 2010; Verdegem and Verleye 2009).

Virtual communities experience serious problems if there is a lack of participation and contribution, and where the majority of participants are so-called lurkers. Lurkers are those participants who do not visibly contribute online. Lurking is possible because of the technology used: it provides access without being visible or having to publicly participate. Opinions about lurking and lurkers vary considerably (van Uden-Kraan et al. 2008). Whilst it is on the one hand considered negative behaviour, lurking may well be acceptable and even beneficial: groups encourage lurking because in this way potential new users get a feeling for how the group operates and what kind of people participate in it. Lurking may be desirable for very busy groups; if all subscribers to a group were to participate actively, it could cause repetition of queries and result in an overload of contributions.

Whatever reasons lurkers have for not participating, it is important that they should not all be given the label "selfish free-riders" (Kollock 1999). Rather, it is important to understand lurkers, as ignoring and misunderstanding them will distort

how we understand online life as well as leading to mistakes in the way sites (Nonnecke and Preece 2001), participation initiatives and policies for increasing participation are organized and designed. Studies show that the lurker might be a valuable participant (Takahashi et al. 2003) and that lurking may have wide reaching consequences (such as leading to active participation in the real world), which are not yet known and require further research.

2.3 Creating Public Value

Closed hierarchy is the traditional organizational form of bureaucratic government, but nowadays, the word "bureaucracy" has a rather negative connotation and is mainly used to describe a hierarchical and inefficient organization. The notion and duties of government have changed over decades. Weber (1980) defines the state as a monopoly on the legitimate use of violence. Weber describes a patrimonial view of bureaucracy, where bureaucracy means (1) official jurisdictional areas ordered by rules, (2) official authority to enforce these rules and (3) a methodical provision for the regular and continuous fulfilment of authority.

Porter's (1990) approach towards the nature and duties of states and nations is grounded in economic theory: nations exist as there are goods which are necessary but for which there can be no market because the transaction costs surpass the profit. This failure of the market justifies government bodies, which act as collectives for the benefit of all. Public transport, energy infrastructure or streets in low-income areas are examples of public value that would not be reasonable in terms of pure economical valuations. Porter concludes his analysis (in a pre-Internet-dominated epoch) by stating that the "proximity of [...] personnel, along with cultural similarity" will foster a free and open information flow, a prerequisite for low transaction costs (Porter 1990, p. 86).

Friedman (2005) rebuts Porter's explanation, taking market failures as the reason why states fail to deliver public value efficiently. From the members' point of view, contributing to the group's political efforts is the production of a public good where the public is not the whole population but members of an interest group. Public goods theory tells us that it is harder to produce public goods for a very large public than for a very small public, and, according to Friedman, "there are a variety of social mechanisms by which it may be possible to provide, at some level, public goods even for quite large publics" (Friedman 2005).

Public administration should work to achieve legislative goals in the most effective and efficient manner, as stated in the constitution or as a legal obligation (Constitution of South Africa 1996; §18 AVG Austria). While political decisions may contradict this paradigm for good reasons (such as deficit spending), public actions need to be carried out efficiently: while the tax payer may lack the required information to question decisions (effect), he certainly wants to see his money spent efficiently.

Government production is favourable when the benefits outweigh the costs of production, so the bigger the difference between output value and costs of production, the more efficient the process will be (Moore 1995). This defines efficiency solely in terms of money, provides no alternative meaningful assessment of efficacy, assumes that public values can only be created by public agencies and does not account for the value created by and for citizens participating in public value production.

Extending Moore's model of public value creation, Bozeman (2007) defines public value independently from public production processes. This means that the notion of "public value" is more psychological and sociological than just the measurable production of goods and services. Thus, public production has a creative dimension that accounts for effectiveness and a legal dimension, measurable in terms of efficiency.

2.3.1 A New Paradigm of Collaboration

Open government concepts seek to include society in governmental processes to increase efficacy and efficiency as well as citizen satisfaction. The ubiquitous presence of ICTs (information and communication technologies), citizens' digital literacy and their willingness to participate online could efficiently enable collaborative production. The inclusion of third parties in the policymaking process increases the potential of innovative approaches to problems, as many minds can create new and better solutions to existing problems. Traditional stakeholders, such as unions, interest groups and associations of political parties, have been included in the process of policymaking ever since modern representative democracies have been established. Even if these traditional stakeholders represent large groups of society, not all members of society are equally represented. ICT allows for a new form of mass communication where many-to-many communication replaces the one-to-many concept. With the use of Web 2.0, individuals can contribute to large-scale projects, enabling the individual to participate in the shaping of his/her life world at a political level.

New policies are usually implemented on the basis of the policy cycle, itself an iterative concept that ensures that targets are met and implementations are evaluated. In open government, various stakeholders can participate at any stage of the policy cycle (Fig. 2.1):

- Stage 1, Agenda setting: At this stage, a problem is depicted and possible future solutions are outlined. When all stakeholders participate at this stage, the actual problem can be described in great detail, and possible solutions that will not fit stakeholders' needs can be rejected at this initial stage.
- Stage 2, Formulation: During the formulation stage, all stakeholders define the solution required to solve a specific problem. This is the planning stage of the policy cycle, where all ideas and interests must be merged into one concrete plan. Protests from stakeholders against the solution can be considered prior to implementation.

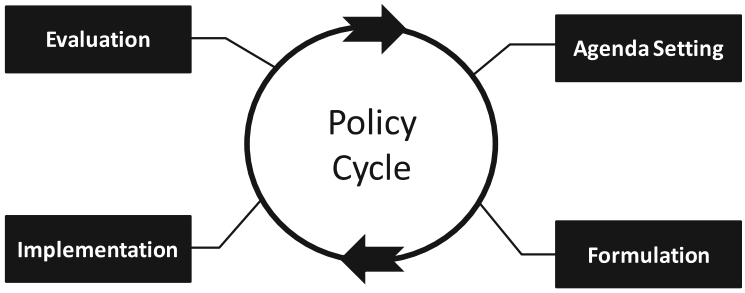

Fig. 2.1 Policy cycle according to Müller (2010)

- Stage 3, Implementation: The implementation focuses on carrying out the plan described in the formulation stage. Stakeholders can actively engage in the realization and disseminate the new implementation to a wider audience.
- Stage 4, Evaluation: The final stage of the policy cycle is the evaluation stage. Stakeholders that are directly involved in the new policy can give the best feedback, as they have to deal with the new solution. If the outcome is not as expected, the policy cycle continues with stage 1.

In public administration, the open policy cycle can be applied in policymaking as well as service delivery. An open policy cycle allows for innovation, as externals can participate and contribute to the discourse. Collaboration does not necessarily need mass participation, but the process needs to include experts and dedicated people who are generally willing to share their ideas and knowledge. The most successful collaboration systems, like Wikipedia or Linux, are based on the qualitative contributions of a minority of users. In collaborative value production, the public administration must provide the necessary input and information and encourage citizens to participate.

Co-production already has a tradition in economy. According to Pisano and Verganti (2008), different models of collaboration depend on governance structures (flat vs. hierarchical) and forms of participation (closed vs. open) to support innovation, where innovation is the key factor for the new products and concepts that are to generate increased efficiency and effectiveness. Depending on the needs of the institution that runs the collaborative platform, different concepts of such platforms are possible as seen in Fig. 2.2.

Pisano and Verganti established this model for businesses where improvements are measured mainly by revenue. Adapting this model to governments must take political and sociological factors into account as public value cannot be measured in financial terms only. All collaboration models require a certain degree of transparency, as information must be shared with all potential collaborators.

The innovation mall model uses open forms of participation but a hierarchical governance structure. This means that collaboration is open to all people interested in participation, but the outcome of all innovation processes will be evaluated by

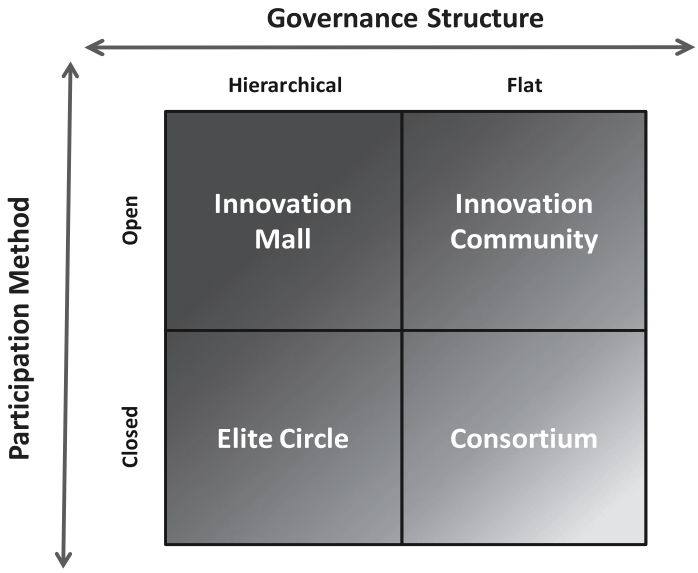

Fig. 2.2 Collaboration model according to Pisano and Verganti (2008)

governing body such as public administration. The peer-to-patent project[1] used the concept of the innovation mall to improve the quality and processing time of administrative procedures (Noveck 2009). A backlog of 600,000 applications at the US Patent and Trademark Office (USPTO) was reduced with the help of third parties. The project opened the analysis of applications to external experts, who, on the basis of their expertise and contributions, were able to help reduce the time required for issuing patents from 44 to 23 months. Members of the public were welcome to participate, but USPTO officials checked the proposed solutions on their correctness.

The Innovation Community is open in terms of participation and leaves governance to the community. This method of innovation was applied by the US administration during the Open Government Dialogue[2] in 2009. The federal government asked all citizens interested in improving government services and efficiency to present their ideas: 15,000 users discussed 4,262 ideas, writing 26,000 comments. The ideas were ranked by the users with 356,000 votes. The users' rankings showed that legalizing marijuana was a top priority, but this has not been realized by the federal government. The advantage of open collaboration is that the community brings new ideas; the next issue is then to see if any of the new ideas can actually be used for problem solving. If users' inputs are not taken seriously, the community might feel misused. At least concrete feedback must be given if popular ideas are not being considered.

[1] http://www.peertopatent.org. Accessed 26 May 2010.

[2] http://www.opengov.ideascale.com. Accessed 26 May 2010.

In a hierarchical governance structure, the public administration reserves the right to decide what ideas to keep and which ones to reject. Thus, the elite circle, using hierarchical governance and a closed participation model, meets traditional collaborative production run by public agencies. The initial stage of such a collaborative process is crucial, as the agenda must be set in detail. The elite circle consists of experts who are asked to provide solutions for a particular problem predefined by public administration. In Austria, the political parties' parliamentary clubs regularly invite stakeholders to present their solutions, but these externals cannot influence what the decision-makers actually take into account. The collaborative model for a consortium is based on flat governance and closed participation. The consortium is selected by the governance body and usually consists of experts that tackle a wide field where various improvements can be made. Within the selected field, members of the consortium can tackle any problems and propose any solutions. The consortium defines the agenda during the course of a collaborative process. In public administrations, the final decision regarding the implementation remains with the respective authority, but the consortium model can be sustainable only if the consortium's propositions are listened to and taken seriously. This method was applied in the Austrian constitutional convention (Verfassungskonvent[3]), the working group that discussed profound changes to be made to the Austrian constitution. From 2003 to 2005, the constitutional convention discussed and agreed on reforms of the Austrian state, but the government has not implemented substantial parts of the recommendations.

Using these collaboration models in government or public administration is different than in business. Public administrations are determined to spend money reasonably, as it is tax money that is being spent. Consequently, this limits risk taking and the culture of failure in public administrations and government projects must be successful from the beginning. Businesses, on the other hand, allow failure to a certain degree when launching innovation processes, as one successful project will refinance a handful of failed projects.

2.3.2 Collaboration Model for Public Value Production

Merging the above concepts of collaboration with the potentials of the open policy cycle offers public administrations the opportunity to define their needs internally and then choose a procedure that provides the best solutions. The degree of participation and governance as well as the open stages of the policy cycle can be chosen freely. The differences between Pisano's and Verganti's models of collaboration are gradual, as the degree of governance and participation can change even within different phases of one project. The following model describes the creation of public value by use of open collaboration (Fig. 2.3).

[3] http://www.konvent.gv.at. Accessed 16 June 2011.

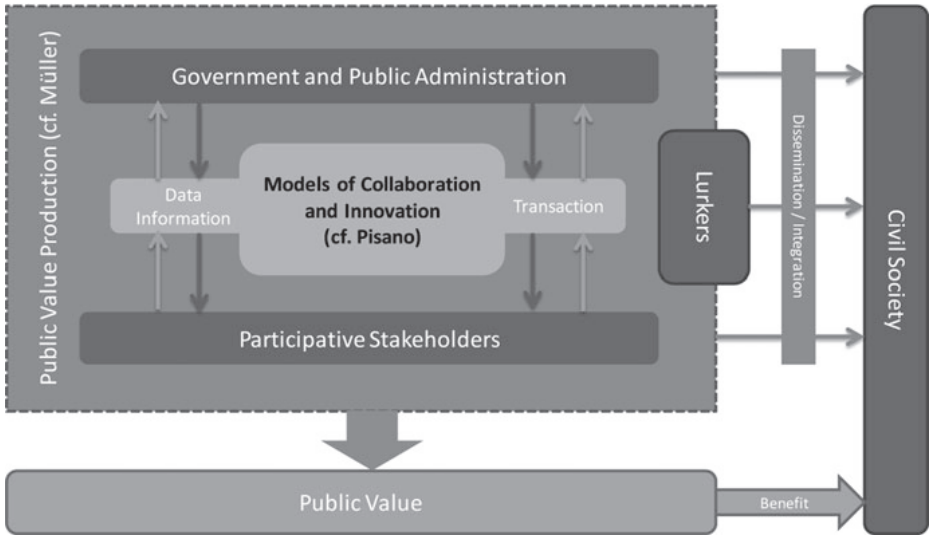

Fig. 2.3 Collaborative public value production

The framework of this model is set by the policy cycle as basis for the production of public value. Ideally, the processes within the policy cycle of governmental projects are transparent so that the interested public can follow developments. At different stages of the policy cycle, governmental agencies can interact with participative stakeholders by sharing data and information about the project. These can be top-down and/or bottom-up processes depending on the collaboration model. The actual transaction that can bring innovation to public sector projects can also be achieved with top-down and/or bottom-up processes. All stakeholders of the collaboration process as well as lurkers who follow the process will eventually inform the civil society about new projects and outcomes and consequently support its integration into society. The outcome of the collaboration and innovation process is new or improved public value. This leads to benefits for civil society though individuals might not notice to take for granted.

The theoretical framework of open government gives citizens the space to actively engage in shaping the state they live in (Parycek and Sachs 2010). Citizens are empowered as governments become more transparent, participatory and collaborative. Consequently, citizens gain further responsibilities as they interact with government and public administration more intensely than in traditional governmental structures. In order to provide public spaces for collaborative activities, public administrations need to assess what kind of collaboration model is needed to reach the required objectives. The aim of collaborative value production is not collaboration at all means but efficient and effective decisions that include all stakeholders. The most successful projects of citizen engagement focus on regional or municipal issues, as citizens are the experts of their local environment and issues.

Public administration must address citizens and business as equal stakeholders of the collaborative production cycle. Even if successful innovation cannot always

be granted, public administration will be able to gain knowledge for further improvements of collaboration processes. If governments create opportunities for civil society, business and public administration to engage in an open government, then they can use the most valuable resource they have, the citizens. All stakeholders of these processes need to adapt to changes in society and technology to achieve better collaborative procedures. Businesses already use the input from consumers to enhance their products, so government can do this too in order to increase citizen satisfaction.

2.4 Discussion

The impact of Web 2.0 on society results in a paradigm shift based on real-time, geographically independent communication and information access. Parts of the young generation of digital natives use social media and ICT to share content and work collaboratively in networks. These young adults will become the opinion leaders and decision-makers in the near future. It is only a matter of time until their ideas and attitudes have a serious impact on society, as present developments show.

O'Reilly frequently demanded "Government as a Platform" (Lathrop and Ruma 2010) by investigating the key success factors of Web 2.0 platforms and their respective models to incorporate people's innovation potential. O'Reilly enumerates the adoption of open standards, simple interfaces, a design for participation with low entry barriers as properties of successful platforms in economy, but leaves the possible implications caused by a target mismatch between economy and government unanswered. The goal conflict between maximizing shareholder value vs. public value will result in a different and more complex role description and good practice library than the role of the economy platform provider in peer production. Public administration seeks to utilize the collaborative production model of economy for citizen's satisfaction. However, utilizing this potential requires participation in an environment where the administration has not yet established the required procedures, organizational culture and captive mind set.

Noveck (2009) looks for answers in the design elements of collaborative democracy and describes granularity, groups and reputation as the key enabling properties for successful participation. Granularity enables peers to engage in the best manner and assures a high level of involvement, as a complex problem can be broken down in smaller and more manageable pieces. "Groupness" is well observed in real life as well as thriving online communities: the human's impulse for cohesion in groups has to be supported by virtual communities to enable high participation rates. In absence of monetary remuneration of citizens' value production, rating and reputation is one form of social compensation, a form of virtual currency widely accepted in online communities. These are the elements that have allowed Linux to be so successful. Yet to erect policies by and for the administration has to reflect these mechanics of civil engagement; policies, which turn ideas and visions into concrete measures to ensure equal possibilities among citizens, and to deliver the aims of the administration, with no individual left behind.

2.4.1 Fostering Innovation

In modern democracies, the law emanates from the people. Governments represent the people; therefore, governments have to include the people into the decision-making process at various levels. Collaborative value production triggered by public administration can engage citizens in shaping the regulated terms of coexistence. Electronic collaboration will still need leaders and persons who are responsible for monitoring and supporting such processes. The role of the civil servant in such a process must be redefined, as the present confining guidelines for civil servants are not flexible enough for innovation processes based on using the Web. Innovation always starts with criticizing existing mechanisms and thinking beyond given constraints. Civil servants are presently asked to follow guidelines that on the one hand secure neutral perspectives and ensure the correct treatment of all citizens but on the other hand limit civil servants, as they cannot take points of view that contradict existing regulations.

The Internet offers anonymity to users, and this anonymity can be an advantage in innovation culture. As some groups, for example, civil servants, cannot speak freely about all the agendas they are interested in, anonymity allows such user groups to participate more freely. When the goal of an innovation process is to get the best ideas, it does not matter where the ideas come from. Consequently, anonymity can encourage participation and innovation as the contributing user must not be afraid of resentment against his/her real personality.

However, anonymity has a downside. The amount of radical, undesired and simply useless contributions increases in an anonymous environment. People are more likely to denounce and verbally attack ("flame") others when they can hide behind a virtual identity. Using several virtual identities in an online discussion process can also be a way to manipulate the discussion. Moreover, government must decide if contributions to governmental projects can be made by citizens affected by the issue, all citizens, non-citizens or virtual identities.

The models given in this chapter allow governments to simply use collaboration. Civil servants will have to decide at what stage the policy cycle is to be opened and what collaboration model to choose. The flexibility of open collaboration models should be used by governments to design the processes exactly to the needs of a project.

2.4.2 Paradigm Change in Public Administration

The literature review above presents the reasons why government bodies exist and who is responsible for creating public value. Recent literature acknowledges the role of the civil society, "les citoyennes" in Habermasian parlance, yet assessing the value they create is difficult at its best. Instead of trying to erect such a model, which according to Bozeman (2007) would be almost impossible to evaluate anyway, the identification of motivating factors to stimulate engagement suffices. The question is whether public engagement will always have a positive societal

effect, and thus should be supported by the government. Answering this question imposes a dilemma for public administration. While the role of public administration is to carry out public policy, legitimated by law, democratic administrations influenced by Enlightenment have the tendency of becoming a diffuse body. These administrations do not solely carry out public policy for the benefit of all, but non-disclosure, overemphasis of data privacy and intransparency of actions develop a strong tendency to pursue actions which seem favourable from an administrative point of view. This concentration on self-sustainment raises the risk of bureaucracy and corruption. Thus, it is questionable whether the impetus of change can be induced by the public administration itself.

eParticipation as a mean for public value creation has a strong standing on the European agenda and that of the member states. Yet, according to Mayer-Schönberger (2009), no single state-driven participation project ever attained substantial and sustainable effects. The EU eParticipation report of 2009 concludes that eParticipation benefits are "information availability, better information, exchange and stakeholders accessibility to it, followed by greater accountability and transparency" (Millard et al. 2009, p. 17). However, information and transparency are enablers of participation and thus collaborative value production; thus, they are a mean instead of an effect. The effect of transparency and disclosure is participation, not the other way round.

Transparency can only be achieved by a combined approach: legal obligations to disclose data, organizational change to foster collaboration between government entities instead of thinking in silos and supporting a social behaviour of collaboration between government bodies as well as in their relationship to stakeholders. Behavioural change, for example, and "open attitude" cannot be demanded from people but supported by organizational change following an overall corporate culture of disclosure and openness. The so-called Civil Servant 2.0 is fluent in using the Internet as an information broker, understands network effects triggered by social media, acts as a knowledge worker in an environment which fosters competition between departments because of comparable services and is supported by charismatic leaders (Fig. 2.4).

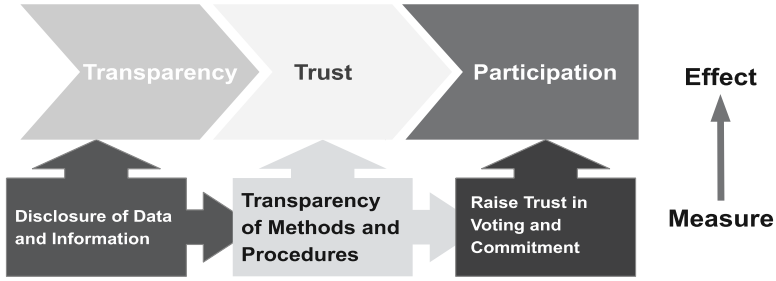

Fig. 2.4 Data and information transparency as a prerequisite for participation

While this impetus of change is unlikely to come out of public administration itself, exogenous factors as economic and society pressures make that change unavoidable. Economic pressure requires new and innovative ways to carry out public policies at reduced costs yet at a higher efficiency level. Society pressure arises from empowered parties and the civil society by their usage of collaborative platforms on which they generate data, information and statements which requires the administration to react. This direction of pressure can clearly be witnessed by observing recent developments of open government data portals. Enough pressure can force the administration to release data, even in the absence of legal obligation as found in the UK's Freedom of Information Act or the statutory rights governing the disclosure of information in the USA (Höchtl and Reichstädter 2011). Today, these forces set data free and are likely to change our conception about who is creating public value for whom and why.

Conclusions

Governments and public administrations are obliged to inform citizens, as the latter are the sovereigns in democracies. Further inclusion of the sovereign in decision-making does not mean to change the present structure of democracies, as inclusion does not automatically lead to more direct democracy. Inclusion of non-organized citizens can improve the decision-making process which leads to efficient and effective results. Transparency and access to information are the basis for proper decisions, and they create trust that motivates citizens to be involved in collaborative processes. Yet, public administrations and government need to rethink their operational structure as well as the interaction with citizens.

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Article VII

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How Online Lurking Contributes Value to E-Participation

A Conceptual Approach to Evaluating the Role of Lurkers in E-Participation

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Abstract— **This conceptual paper looks at the online behavior known as lurking, the value of lurking and how it contributes to e-participation and innovation in public administrations. Online lurking is often defined using negative terms, but it is argued in this paper that positive definitions may be more appropriate and using Takahashi's definition of "active lurkers" can show how online participation that is not visible may have an impact in online participation and e-participation by engaging in activities such as listening, acting as an audience, using, propagating and sharing knowledge. This works represents a contribution to a more differentiated understanding of online participation. It aims to show that lurking represents many online behaviors that may not always be visible, but are important in online contexts, as they represent participants who are active and may contribute valuable and innovative information. The role and value of lurkers is considered in general for online participation and specifically for e-participation and public administration.**

Keywords— lurking; e-participation; public administrations; innovation; public value

I. INTRODUCTION

Online sociability, participation and collaboration are important, fundamental human activities and reflect some of the ways people use the internet: "sociability is one of our core capabilities and it shows up in almost every aspect of our lives as both cause and effect" [1, p. 14]. The internet is a place to be "social" and "participative"[2, p. 3], [3], and is about "connecting people not computers" [4, p. 30]. Digital and collaborative, user-driven tools help increase the number of network connections, interaction between people, aggregation of information and development of innovative content - as seen with eBay, YouTube, Facebook [5] blogs, podcasts and wikis [4] to mention but a few. These tools encourage values such as contribution, inclusion, openness, informality and equality based on horizontal communication, sharing information, and equal rights in the creation and use of information, values that are also becoming increasingly important in the public sector. A report by the European Commission [6] makes clear that such values are important as they contribute to the creation of public value and innovation within the public sector. Governments are indeed under pressure to achieve many aims such as to increase the productivity of the public sector, develop more citizen-centric services, achieve better outcomes and enhance democratic participation. Some scholars argue that given the digital technologies presently available, governments are in a "golden era" for achieving valuable and innovative outcomes [5], [7], [8]. Next to "classic" e-voting [9], different online technologies can be used to mobilize and encourage individuals, groups and communities to participate in public decision-making [10], giving citizens not only the opportunity to participate and impact public policy goals but also to contribute to the innovation of public administrations. But evaluations of online public participation (e-participation) initiatives reveal low levels of participation because of e.g. a lack of adequate methods and tools for online participation, there is no systematic approach to the involvement of citizens in the co-creation of public value, and new solutions are not established or implemented [6], [11], [12]. Another reason may that e-participation is often evaluated solely in terms of the visible postings made by participants, thus limiting the evaluation of the impact of online participation and e-participation. By considering that a variety of online behaviors that are possible but not always visible, allows a broader evaluation e-participation, especially in the context of the numerous aims of e-participation. This conceptual paper, based on an extensive literature review, is an answer to the question as to whether online lurking can be considered as a valuable online behavior in the context of e-participation. This is a question that cannot be answered simply by collecting

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extensive empirical results or simply getting more factual information, so the authors consider the evidence in the literature to reflect upon that area of online participation that exists between non-participation and the minimum visible participation (clicking the "like" button), as well as how lurkers' non-visible behaviors can be valuable and contribute to innovation in public administration.

II. Online Citizen Participation (E-participation)

Opportunities for public participation may be initiated by governments and public authorities, and, by providing both the means necessary for including citizens and the necessary power(s), so incorporate citizens' concerns, needs and values into policy and decision-making processes [13], [14]. In the real (offline) world, citizen inputs to policy and political decision-making can be made in many ways such as participating in political manifestations, distributing leaflets, raising or donating money, engaging in discussions and relations with politicians, working for a political party, even just showing up, talking, listening, baking cookies, serving on committees, and organizing activities [15, p. 352]. Citizens may also demand opportunities for interaction and participation in the public matters and policies that affect them [16], [17]. With e-participation, governments and public administrations use the available digital technologies so as to:

- Reach a wider audience to enable broader participation;
- Support participation through a range of technologies to cater for the diverse technical and communicative skills of citizens;
- Provide relevant information in a format that is both more accessible and more understandable to the target audience to enable more informed contributions;
- Engage with a wider audience to enable deeper contributions and support deliberative debate [18].

Citizens and governments alike are to benefit from the e-participation activities [19], [20] such as more engaged citizen participation, greater efficiency, deeper transparency, and higher service quality. access citizen skills, knowledge and intelligence [21], [22]. By finding new ways of "tapping into people's experiences and needs, then feeding them into the making of laws and policy" [23, p. 11], e-participation is to improve the relationship between citizens and policy-makers [24]. The range of tools help governments and public administrations access citizens' knowledge and skills, have more detailed knowledge of the public's needs, generate citizen awareness, acceptance and commitment to policies, increase the government's decision-making quality and legitimacy, and encourage citizenship and societal solidarity. Tools for collaboration and cooperation such as file repositories, blogs, file sharing, and ICT-mediated interaction such as email, online discussions, Skype, chatting, voice-over-IP-communication, Facebook and Twitter have been taken up by the formal political system. There has been a massive growth in governments' implementation and employment of user-driven applications such as blogs, podcasts, wikis and social networking, feedback forums, online portals, collaborative platforms, and applications for mobile phones[4]. Social media is used as it helps discover and attract members with shared interests, exchange information, make group decisions, integrate individual contributions, supervise groups using less hierarchy, and manage group logistics. E-government portals, user-centred-platforms, mobile government, e-petitions and collaborative platforms partnerships, invited spaces, or deliberative spaces [25] are forms of public online participation that are to encourage participative online behaviors such as generating and responding to messages, organizing discussion or contributing knowledge and content. Involving the citizens through the horizontal exchange of information with other users [26], or in terms of "crowdsourcing" [27], citizens are to be active actors, contributors and co-creators in the participation processes and the development of innovative public services. Interactivity, communications and tools promise "coproduction on an unprecedented scale" [28, p. 446].

The desired outcomes of such public participation have many labels, such as collaborative government, wiki government, open government, DIY government, government as platform, collaborative governance, public-private partnerships [28], [29]. But e-participation is complex and has many aims. The internet is to help and enable government agencies not only to restructure their interactions with citizens, but also be an indicator of a governance challenge rather than a means to an end only [30], fostering voting behavior [28], deepening democracy and egalitarian citizenship [31], increased government efficacy and quality of the services [32], positive social change [33], social-capital-building activities [34], and achieve open, transparent and collaborative government. In addition to these aims, a further aim is to reduce costs [10].

III. Participating in E-participation

Businesses and public institutions want citizens and amateurs to participate and provide content [35], as the internet seems to overcome a number of difficulties found in offline situations. Surveys show that 85% of American adults go online [36] and 73% of online adults use least one social network [37]. Many online connections and behaviors represent users engaged in discussion, interaction and contributions [38], connecting, networking, generating and producing content [39]. E-participation relies on such online connections and engagement between actors. But online behaviors and connections do not necessarily have be visible, e.g. accessing information, interactions, sharing, aggregating and forwarding information or links [40], but are still important, necessary and valuable for public participation. In terms of public and political participation Vecchione and Caprara [41] suggest that people will participate if they believe that they can exert some influence over political events, even at the cost of personal risk. But research by Nam [42] finds that in the US, 12% are not at all and 20% are not very interested in political activities, 49% are somewhat and 19% very interest in political activities. In terms of their use of the internet for political activities, 18% see themselves as actively and 35% as moderately actively participating, whilst 47% report never participating. Of those who have been involved with online political information, 17% have visited political websites and

14% have shared online political information. Ferro and Molinari [43] identify four types of citizens in e-participation, and they conclude that only a small share of the population are "Activists" (less than the 15-20% as stated by Forrester Research [44]), users who spend most of their spare time creating and sharing their own agendas by means of personal blogs, wikis etc., and responding to political calls. The "Socialisers" represent 19% of the total internet users, and this figure includes the youngest generation who use online tools extensively, but, as they have a low interest in politics, it is not clear to what extent they interact with public institutions. A third group are the "Connected", who best represent society as a whole (e.g. families, businesses, professionals etc.), as they are those who may spend a time on the internet, but neither use online public services regularly nor respond to online political calls. A final group is the "Unplugged", those with low income, poor education, or a marginalized status or living in isolated locations (rural areas) and who have never used a computer in their lifetime. At the time of the study, this category still represents about 40% of the European population. Some scholars believe that whilst people are increasingly aware of the public policy issues, the tools and the opportunities that enable citizen participation, citizens are none the less disengaging from formal politics, reflected by low levels of voter turnout, declining numbers of membership in political parties, and a widespread loss of trust in government, politicians and institutions and processes is decreasing [45], [46]. It may also be that citizens want interaction that is limited to casting a vote every few years [47], but research reveals that low levels of interaction and participation may be due to governments who see citizens as passive consumers and do not encourage the development of (digital) citizenship [48], [49]. Others scholars argue that opportunities for online political participation are seen as primarily benefiting elites with the technological resources and motivations to take advantage of the resources [42]. Ferro and Molinari believe that over the years governments have turned into "closed bureaucratic institutions with only sporadic contacts with their constituencies" [43, p. 10].

Scholars and researches have thus come to the conclusion there are only low levels of online citizen participation [12], [50] and provided some answers as to why this may be so. But an alternative explanation may be that evaluations of e-participation often focus on the active users only, often exclusively understood as the visible participants and the visible online behaviors. This is because the number of users, user involvement, user participation are often seen as the main indicator of online value and success, sometimes considered to be even more important than profitability [51]. Because e-participation is often evaluated in terms of the number of visible comments only, many civic platforms and networks are deemed as not as successful as expected, with participation processes that do not lead to resolutions or conclusions, are abandoned, or end up being empty, with no interaction at all [21]. However high the visibility, popularity and enthusiasm for online projects, online participation has never been evenly distributed among users [52]. Low levels of participation characterize the online environment, even in the successful communities, and the process of digital inclusion has not yet reached its aims [43]. According to Nielsen [53] user participation follows a "90-9-1 rule", where 90% of users are lurkers (i.e., read or observe, but don't contribute), 9% of contribute from time to time, and 1% of users participates a lot and account for most contributions. The "1% rule" states that the number of people who create content on the internet represents approximately 1% (or less) of the people actually viewing that content [54], and Preece and Shneiderman's [55] "Reader-to-Leader Framework" shows different levels of participation in terms of reading, contributing, collaborating and leading, with decreasing numbers of people moving through the stages, beginning with a majority of "all users", then moving from "reader", to "contributor", "collaborator" to "leader" (p.16). In a similar vein, Kim [56] proposes that in online participation, the users are (in decreasing numbers): lurkers: those who don't post; novices: were once lurkers, and are now members who need to learn about the community; regulars: were once novices, but are now established in the community and are comfortable participating; leaders: the volunteers and members that keep the community running and eventually become elders; elders: those who regularly reply to posts in an online community. So who is the "majority", or rather, who are the "lurkers"? They are not online trolls, not spammers, and they do contribute.

IV. Know Your Lurkers

Lurking has a negative connotation: someone who hangs around, is sinister, wants something for nothing [57], and threatens the online group and its activities [58]. Definitions often focus on what lurkers are not: not public, not visible and not active, and these definitions neither adequately describe lurking nor explain why it is important and valuable to online participation. Lurkers may not be heard or seen, but they represent the largest group of online users, and ignoring, dismissing, misunderstanding lurkers distorts how we understand online participation. Whatever the reasons for not participating visibly, lurkers should not all be labelled as "selfish free-riders" [59], and they should neither be understood as non-users [60] nor do they represent the unconnected, those "out of the loop, socially and otherwise" [61, p. 101].

Lurking is a social behavior or perception towards others and oneself ("Oh, I'm just lurking." [62]), and a form of interaction, with many different consequences and not all of them known yet [63]. People lurk because that is what they enjoy doing, because they have nothing to say or because they are learning, reading, listening, forwarding information, hyperlinking [64], collaborating or engaging with the digital environment in some other way [65], [66]. Like other online behaviors it subsumes several online behaviors and involves a complex set of motives, rationales and activities [67], [68]. The work by Takahashi and his colleagues [69]–[71] has been pivotal in showing that online lurkers are active users, have different and valuable roles, and as such, are useful participants in a network by contributing to the community's social capital. Based on the assumption that lurkers can have a strong and wide influence outside the online community, Takahashi et al. propose a method of classifying lurkers based on their actions within and outside a community that may or may not be visible, as well as the extent to which the online community

affects their thoughts and tasks. For Takahashi et al., lurkers can have one of the following roles:

- The 'active lurker as propagator', who propagates information or knowledge gained from an online community to others outside it;
- The 'active lurker as practitioner' who uses such information or knowledge in their own or organizational activities.
- The 'active lurker candidate' where the online community affects the lurker's thought;
- The 'persistent lurker' where the online community does not affect the lurker's thought.

Lurkers not only use the information or knowledge gained from a network for their own personal or work-related activities, but can act as indirect contributors, propagating topics to others who are not members of the community, thus having a strong and wide influence that goes beyond the perimeters of an online community, community of practice, initiative, network or other online initiative.

V. Lurking as a Valuable Behaviour

Takahashi's research shows that lurkers can have an "active" role, and, as indirect contributors, have effects outside and beyond the reach of the online community or initiative in which they are a participant. The research by Takahashi shows that not the wide dissemination and use of information technologies, but rather, a clearer understanding of social capital will enable an online community to occupy a more important position as a resource. Lurkers are indirect contributors and make content available beyond the members of a mailing list, community or social network, and are essential for the transfer of knowledge between online groups and social spaces that would otherwise be separated from each other. As lurkers they cross boundaries, transfer knowledge from one context too another, engage in identifying context-specific knowledge needs and opportunities, promoting new ideas, facilitating knowledge and content uptake, translating, recombining and adapting knowledge, making sure it fits the new context [72], making them "boundary spanners" or "knowledge brokers".

Whilst public posting represents one way of communicating or one way an online community or platform may benefit, it is not the only way – online participation has many meanings and manifestations [73]. Participation needs activities such as creating and posting content, but also activities such as consuming and forwarding content e.g. reading the material that others provide or post. They act as connectors, and Stegbauer and Rausch [74, p. 271] note that lurkers have a function "...connecting otherwise isolated social spaces. They possibly contribute to the passing (…) of contents…". Others have also picked up on this understanding: Gossieaux [75, p. unknown] sees them as the "hidden asset" – active participants who forward content and information from one community to others using a variety of different channels (e.g. telephone, in conversation, by email) - or, in former Yahoo! Executive Sanders' [76] terms, they are "Love cats", people who share knowledge freely and with good intent, serving others, facilitating relationship building and adding to group learning. Lurkers extend the online group, use the information in other online groups or offline settings, lead to connections with other networks, bring new contacts and members, provide key activities, resources and information, serve as an audience or are potential future users, customers and consumers.

Online lurking is not only normal or positive, but an active, participative online behavior, one that many people enjoy engaging in. Lurkers not only derive value from their activities - lurkers would not engage in lurking if they did not gain some value from it - but they can also provide value for others. In many contexts (or in the future), lurkers provide key revenue sources, vital information [77], and, as a behavior common to many information or collaborative environments, it is necessary to understand how lurking can be beneficial and valuable to others. Their activities may even be a necessity for enabling communication, by paying attention as listeners or audience, or being the justification and target for online activities [78]. Lurkers are often listeners, an important role, made clear by the statement "if everyone is talking, is anybody listening?" [79, p. 2]. Listening (reading the posts) and acting as an audience represent a legitimate form of participation and contribute to the online world. According to Crawford [78] "listening" is a useful metaphor for engagement and paying attention online, and, as readers and listeners, lurkers contribute a mode of receptiveness that encourages others to make public contributions. In many contexts lurkers serve as listeners, as conventional mass media audience, making them the justification and target for certain online activities e.g. commerce and advertising [66].

Lurkers motivate others to participate in more active ways, either by providing information that helps complete a task, by reading or being the indicator of the value and reliability of a text – they are an "asset rather than a hindrance" [80, p. 128]. Wallace [81] states that even without contribution, lurkers provide value by encouraging their peers to join, understanding and discussing the issues, and pushing others to deliver content that may increase engagement and participation. Muller [82, p. not known] describes lurkers as "social readers", participants engaged in "social reading", where reading is not a solitary, unconnected, unproductive action, but understood an activity everybody does, a social activity that occurs in a social context, involves other people, and contributes to the social worlds of readers, authors and organizations. Muller suggests that everybody is a lurker, as we all read before engaging in another activity such as creating or posting content. Lurkers' behaviors can also be used as a metric of online social influence: the "Return on Contribution" (ROC) is based on the number of people who read, view or consume a resource, divided by the number of people who produced the resource [83]. Many online participants spend many hours lurking, know the topics of the conversation and key players well [66]. Work by Metzger et al [84] shows that lurking is an important aspect in the use of social networks, and that lurkers gain personal and social benefits by visiting other members' profiles and reading others' personal information. Lurking can be a positive and helpful, by side-posting or contacting individuals directly

instead, are still engaging in pro-social and thoughtful altruistic behavior [85]. Lurking may be desirable for very busy groups: if all members participate visibly, it could cause repetition of queries and result in an overload of posting. In busy communities, participants may not want to add to a cluttered and confusing interface – so their intention not to post visibly is altruistic [86] and helps avoid chaos and information overload.

VI. Online Lurkers' Contribution to E-Participation

Government and public administration need to achieve legislative goals in an effective and efficient manner, and there are several social mechanisms so that valuable public goods for the public can be provided. Bozeman [87] suggests that public value needs to be considered independently from production processes, as value and public value are more psychological and sociological concepts. In policy cycles that encourage participation and collaboration, governments and public administrations encourage citizens to participate. Participation in the online environment is based on values such as inclusion, openness, informality and equality based on horizontal communication, where all participants have equal rights in the creation and submission of content, the use and aggregation of information. Sandoval-Almazan and Gil-Garcia [29] thus suggest that governments use ICT and applications to that not only facilitate and foster information-intensive initiatives, knowledge society but also support values such as participation, collaboration and transparency. E-participation too is also seen as relying on values found in online environments, but also as a means to create public value. Open collaboration and participation helps governments be more transparent, to empower citizens and bring new ideas to the community and society [88]. These are values that help reach greater user diversity and network connections, access more knowledge and achieve political accountability, transparency, better performance, enhanced productivity and higher quality in public administration. They also contribute to the aims of e-participation and help achieve innovation in public administration, understood as (1) outcomes, in individual and societal terms in terms of increased health, learning, job creation, safety, sustainable environment, (2) meaningful, attractive and useful services for the users, (3) productivity, such as enhancing the internal efficiency of public organizations, and (4), strengthening democratic citizen engagement and participation so as to ensure accountability, transparency and equality in society [6].

Given the premise "that everyone is likely to lurk at least some of the time and frequently most of the time"[63, p. 112] it is clear that evaluating to what extent e-participation is achieving its aims and public value cannot be achieved only by counting the number of visible outcomes such as postings or "likes". A lot of online and technological research has focused on ensuring that users "have a voice" [78, p. 1], that is, the extent to which the technologies are used so that individuals can express themselves freely in cyberspace. Crawford [78] believes that too much emphasis has been placed on ensuring that individuals express themselves freely when they are online and that guaranteeing this freedom of expression relies on visible posting only, whilst listening (reading posts) is seen as less valuable. Online participation is thus seen as a dichotomy between those who participate and those who don't (and those who don't are assumed to free-ride), a view that is too simplistic [80]. There is an increasing expectation that everybody should be using online tools, but even high levels of connectivity, frequent usage, the availability of and access to information does not mean that participants will necessarily be online more, be more social or more knowledgeable, understand what they are expected to do, produce and post more content. Nonetheless, the focus on interaction and building relationships makes clear that public participation is a social activity that makes citizens contributors to democratic processes and public services [4], shared decision-making and increased civic intelligence [21], [22]. Several researchers show that understanding to what extent the aims of e-participation have been achieved requires an evaluation that focuses on all participants and stakeholders, all the media channels used, communication and relationship patterns, the information and resource flows and cross-boundary information sharing [29], [89], [90]. Sandoval-Almazan and Gil-Garcia [29] suggest that the evaluation of e-participation should not rely on visible postings, but also consider (1) the display of information that provides "valuable data and information to citizens" (p. 74), (2) the provision of online services and tools for interaction with citizens so that they can discuss and share ideas and solutions, (3) the provision of multiple channels for participation that expand the opportunities for citizens to exchange data and knowledge, add value and information quality to services, and of value for both citizens and organizations, and finally, (4) the provision of opportunities for collaboration based on a relationship that produces trust. The government is to be viewed as a network that allows collaboration, decision-making procedures, and is reflected by flows of information and the exchange of data. The new types of digital sharing tools encourage information production, contributions and interactions among all stakeholders, so the evaluation must look at the social actors and the way they interact, create content, and share knowledge [91]. An evaluation of public participation and innovation needs to consider the aims of e-participation, but also focus on how these are being achieved through the interaction and relationships, knowledge-sharing needs and informational benefits gained from access to other external sources and informal network contacts [92] that many lurking participants may be engaged in. Lurkers are often part of an online network and engaged in relationships within and beyond its boundaries, so act as connections between actors in other online and offline environments and so contribute information, social support, advice or intangibles such as money, goods, or services. Rafaeli, Ravid, and Soroka [89] study online communities on the assumption that reading and posting in a forum creates a social network where all participants, both the "active" and the "passive" (lurkers), acquire and contribute to social capital by getting and providing access to valuable information, learning the social norms of the relevant virtual community and getting to know the participants. By engaging in different ways (reading or posting or both) all participants help create a social network and all have access to valuable information, learn social norms of the relevant virtual community and get to know the participants. Including lurkers' activities rather than only looking at the active or direct connections between people

allows to depict online participation more fully. Their research shows that there are different levels of participation, and that these go beyond posting comments, and that the evaluation of online participation needs to capture those activities, connections and relationships. Lurkers as weak ties [93] or bridging ties [49] are important as they provide access to new and different knowledge, support interactions, the exchange of information and advice, and other social processes both between people and across boundaries, helping to build a network with outcomes greater than the sum of the pairwise connections and other exchanges [94]. Dichotomies and simplifications fail to capture the multiplexity of personal roles, relations and means of communication that form our social environment. Online and offline interaction are synergistic and by including the role of lurkers in the evaluation of online participation, it is possible to gain a broader view of how people communicate in organizations or other political, administrative structures, and to analyze and identify information flows within and between online environments. It can show the different and plural roles, communities or networks a person has, that some are more visible than others, and that each person is a unique intersection of "multimemberships" [95, p. 125]. Each additional membership, role and activity can have further and extensive effects on other participants, the network and the particular context. Both online interaction and lurking support knowledge building and the development of shared understanding among participants, as well as connect subgroups and help search and contribute new resources, information and opportunities and ideas, all important aspects for innovation in public administrations. Lurkers contribute added value, sometimes referred to as social capital, it represents the social resource embedded in and constituted by social network ties [96] but can also describe the extent to which the aims of e-participation have been achieved beyond the number of visible posts.

VII. Conclusion

"Web 2.0 is interoperable, user-centered, promotes social connectedness, media and information sharing, user-created content, collaboration among individuals and organizations" [97, p. 3], and online activities such as peering, sharing, socializing, collaborating, are beneficial to others and contribute to finding answers to problems. Internet participation and collaboration will continue to grow with increased access to computing power, transparency, and democratization of data, and so will lurking. Whilst technology for sharing is freely available (and abundant), information itself is social and the extent of sharing is socially constructed [98]. Internet users and their engagement varies at different levels and degrees of intensity and this may be due to a number of factors, including political interests, educational level and technological skills [43]. Differences in levels and types of participation are to be expected, and the impact of online lurking will continue to be misunderstood if defined as a form of inaction, non-visibility or undesirable behavior. Whilst governments must ensure stability and the respect of democratic and participative values, they also need to respond to developments and changes that lead to innovating (improving) and delivering public value, policies and services [28], [91]. But the focus of collaborative or participative value production should not be collaboration by all means but decisions that include all stakeholders, however they participate and contribute. Online technologies may encourage collaboration and contact, building and cultivating social networks, but lurkers also contribute, provide and disseminate the knowledge as well as be the bridges, links and connections necessary for the implementation and building of alliances and professional practices that are valuable for the public.

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APPENDIX (Articles VIII-X)

Article VIII

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Definitions and Meanings of Online Lurkers

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INTRODUCTION

An overview of the definitions of lurking and shows that there is a broad range of definitions and approaches, from authors that see lurkers as a problem or an online behaviour that needs to be suppressed or changed, to those that see lurkers as active online participants. Some definitions are unclear and mix positive and negative descriptions. It is important to be aware of the different definitions and meanings that are available, and how they are used to describe behaviours and users in the online environment.

BACKGROUND

The verb "to lurk" derives from slang for "method of fraud," and means to lie in wait (as in ambush), to move furtively or to sneak, to go unnoticed, to exist unobserved or unsuspected ("Lurk", 2012a). Some synonyms for lurking are hiding, sneaking, crouching, prowling, snooping, lying in wait, slinking, skulking, concealment, moving stealthily or furtively ("Lurk", 2012b).

Lurking has always been a very popular online activity that leaves no traces (Whittaker, Terveen, Hill, & Cherny, 1998). In the context of the online environment it is often understood as reading but not contributing to the discussion in a newsgroup, electronic network or community. Many agree that lurkers often represent the largest group in the online environment, but there is little agreement on the definition of lurking, even in numerical terms: lurkers are those who "never" post (Nonnecke, Andrews, & Preece, 2006; Preece, Nonnecke, & Andrews, 2004), post infrequently (Ridings, Gefen, & Arinze, 2006), have not posted in recent months (Nonnecke & Preece, 2000), or have not made a contribution in the first 12 months after subscribing to a list (Stegbauer & Rausch, 2002).

It is important to state at the beginning that lurkers are not non-users. Non-users are those people who do not use any information and communication technologies, due to a lack of financial resources (Martin & Robinson, 2007), poor education or lack of skills (Livingstone, 2004), emotional reasons (such technophobia, Van Dijk, 2005), resent using it (Selwyn, 2006) or because they don't want to use the technologies. Lurkers are neither non-users nor do they represent the unconnected, those who "are out of the loop, socially and otherwise" (Sypher & Collins, 2001, p. 101). Lurkers do use technology, they do log-in and do visit sites.

Lurkers can represent over 90% of the online group, it is known that they access and login into sites, regularly reading the postings and blogs, and so their silence has made them the "silent majority" (author n.n., 2010; Nielsen, 2006; Stegbauer & Rausch, 2002).

By being silent, anonymous and not contributing visibly, lurkers are deemed to be inactive, peripheral or non-productive (Nonnecke et al., 2006; Leshed, 2005; Nonnecke & Preece, 2003, 2001), non-public participants or hard-to-involve participants (Strout, 2011; Andrews, Nonnecke, & Preece, 2003).

Katz (1998) has suggested that lurker may be users that do not participate publicly as they do not understand the language, rituals or norms of the particular community, as harmless, e.g.

(the) lurker does not participate in normal forum discourse, but he's out there...watching, reading every message. He is usually quite harmless, and more often than not his silence reflects a natural reticence rather than sinister motives. If a fight breaks out he will quietly observe to avoid revealing his position. (Reed, n.d.).

But more often than not, the term is often used to describe participants who hang around, are sinister,

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annoying or selfish free-loaders who take advantage without contributing or reciprocating (Smith & Kollock, 1999), cyber-tricksters "lurking the Web and luring the gullible" (OECD, 2003 p.145).

MAIN FOCUS OF THE ARTICLE

Negative Definitions

Lurking is often defined in terms of social loafing or free-riding. These phenomena are common to many collective action problems, and describe the tendency to avoid contributing while benefiting from others' efforts (Olson, 1971). According to Ledyard (1995), in a wide range of settings people contribute less to the public good but consume more than their fair share of common resources.

In information-sharing environments, this means that some contribute less information than others. Ostrom (1990) believes that lurkers get the benefits of belonging to the group without giving anything back or committing themselves. Ling et al. (2005) suggest that people will exert less effort on an online collective task than on a comparable individual task. Lurkers are thus "*characterised by a reluctance, or lack of readiness, to contribute*" (Cranefield, Yoong, & Huff, 2011, p. 487), and their behaviours are deemed antisocial and unacceptable. The success of the online community is often seen as dependent on active participation and contributions, enticing current members back and new ones to join, so lurkers are seen as a threat to the success of an online group and its activities:

the existence of 'lurkers' may lead to (the) group fading, as some active participants may be disheartened to continue with the discussion when they fail to get any feedback, verbal or non-verbal, from others (Cher Ping & Seng Chee, 2001, p. 58)

Lurkers as free-riders are deemed to be a problem, as their behaviour "*results in unbalanced contribution: some enthusiasts contribute while others enjoy those contributions without reciprocating and eventually enthusiasm will erode leading to the slowdown or even demise of the group or community*" (Rafaeli & Raban, 2005, p. 71). Whilst it is recognised that not everyone needs to contribute for a group to be successful (Nonnecke & Preece, 2001), many communities try to prevent lurking, as it is seen as unnecessary for communication, an obstruction exhausting bandwidth, a "*scourge that prevents successful collective efforts*" (Antin & Cheshire, 2010, p. 128).

The goal of most online communities is discussion, interaction and collaboration, so there may be justification for negative definitions. But negative definitions represent only one approach to understanding online users, and they tend to dismiss lurkers as less valuable than other users (Strout, 2011).

Positive Definitions

Lurkers spend many hours online, thus may be well-informed and familiar with the issues being discussed, even if they never visibly post or reply directly. They may engage in behaviours which are not immediately visible yet still have an impact. According to Nonnecke and Preece (2000), lurkers can emphasise strongly with the issues in the online community and see themselves as part of the community without posting but by engaging in other behaviours such as reading, listening and learning. People spend many hours lurking, may know the topics of the conversation and key players of the online community well, feel that they belong to the community even though they have never visibly posted (Soroka & Rafaela, 2006; Rafaeli, Ravid, & Soroka, 2004).

Nonnecke et al. (2006) wonder whether visible participants (posters) really are always more engaged or engaging than lurkers? Contributive behaviour is often seen in terms of a dichotomy between those who participate and those who lurk (or "free-ride"), but such a dichotomy may be too simplistic (Antin & Cheshire, 2010). Many lurk because reading and browsing is enough (Andrews et al., 2003), and as readers they are engaging rather than trying to take advantage of others' efforts (Antin & Cheshire, 2010). Muller (2012) sees lurkers as "*social readers*," engaged in "*social reading*" (no page ref.), where reading is not a solitary, unconnected, unproductive action, but a social activity that occurs in a social context, involves other people, and contributes to the social worlds of readers, authors and organisations. Reading is understood as an activity everybody does, and Muller suggests that everybody is a lurker, as we all read before we engage in another activity. Lurkers' behaviours can also be used

as a metric of online social influence: the "return on contribution" (ROC) is based on the number of people who read, view or consume a resource, divided by the number of people who produced the resource (Muller, Freyne, Dugan, Millen, & Thom-Santelli, 2009).

Crawford (2009) believes that too much emphasis has been placed on ensuring that individuals express themselves freely when they are online. But guaranteeing this freedom of expression seems to rely on visible posting only, whilst listening (reading posts) is not seen as being as valuable. Yet reading, listening, being the audience may represent a legitimate form of participation, a form of contributing to the community. Lurkers are important for others because *"if everyone is talking, is anybody listening?"*(Goggin & Hjorth, 2009, p. 2). Thus, according to Crawford, "listening" is the ideal metaphor for paying attention online, and, as readers and listeners, lurkers contribute a mode of receptiveness that encourages others to make public contributions. Crawford concludes that everyone moves between listening and disclosing online, both are forms of participation and both are necessary. In many contexts lurkers serve and are needed as listeners, as conventional mass media audience, making them the justification and target for certain online activities (e.g. commerce and advertising, Soroka & Rafaela, 2006).

Lurking can be an acceptable and beneficial behaviour. Some online groups encourage lurking because it helps potential new users get a feeling for the group, the kind of people who participate in it and how it operates (van Uden-Kraan, Drossaert, Taal, Seydel, & van de Laar, 2008). Lurkers can learn vicariously by reading the experiences other participants report (Arnold & Paulus, 2010) or receive help and support without having to disclose themselves. It often enables new members to learn community norms and see whether their concerns are relevant to the community. Lurkers do have opinions, ideas and information that can be valuable to the community, but they may be waiting for the right moment to contribute, are trying to see whether there contributions are appropriate to the online community or are gaging the community atmosphere at the time.

Even if they may have never posted a message, Nonnecke and Preece (2003) note that lurkers are active and goal-driven, using and combining different strategies (what to read, what to save, what to forward, what to delete) according to their skills, goals and tools. Lurkers can also be the indirect contributors of the online community's influence on its outside environment. Assuming that lurkers may have a strong and wide influence outside the online community, Takahashi, Fujimoto, and Yamasaki (2007, 2003, 2002) suggest that lurkers are active members, propagating information or knowledge gained from an online community to others outside it or using the information gained for their own personal or organizational activities. Furthermore, Takahashi et al. suggest that lurkers are active when their thoughts are changed and influenced by the online environment.

Lurking can be useful and desirable, particularly for very busy groups; if all members participate visibly, it could cause repetition of queries and result in an overload of posting. Lurkers avoid contributing to the chaos and information overload often found in communities, and by side-posting or contacting individuals directly instead, are engaging in pro-social and thoughtful altruistic behaviour (Haythornthwaite, 2009).

CONCLUSION

An overview of approaches and definitions reveals that lurkers are not only defined in many ways, but that some definitions and approaches are self-contradictory.

Even though Internet user studies now focus more on particular online behaviours rather than considering all online actions to be uniform (Howard & Jones, 2004), categorizations of online activities remain broad, making it difficult to understand who does what online and why. Kim (2000), for example, suggests the following classification of the users in online participation:

- Lurkers: those who don't post;
- Novices: were once lurkers, and are now members who need to learn about the community;
- Regulars: were once novices, but are now established in the community and are comfortable participating;
- Leaders: the volunteers and members that keep the community running and eventually become elders;
- Elders: those who regularly reply to posts in an online community.

This classification assumes that as lurkers do not post, they are not engaged, start learning only when they reach the next level of activity (as novices), and feel comfortable participating once they achieve the "regular" status. A more differentiated approach is offered by Preece and Shneiderman (2009): using a funnel model, they assume that some Internet users become readers, then move on to be contributors, collaborators and finally leaders. Each transition includes a certain number of steps and behaviours, increased confidence and activity. This model is also based on the amount of visible activity, the assumption that increased confidence is associated with more visible output, and that the lurker is neither a confident user, nor in a position to contribute or collaborate in any way.

Some definitions characterise lurking as an acceptable behaviour, yet use negative terms to describe it e.g. Webopedia (n.d.) "*to eavesdrop on a chat room or conference. In most online areas, lurking is perfectly acceptable behavior and is, in fact, encouraged so that you get the feel of the area before posting your own comments.*" Even when re-defined in positive terms, lurking is often referred to as introverted, passive or inactive rather than active behaviour. Morris and Ogan (1996) describe lurkers as readers, but describes readers as passive TV viewers. Stegbauer and Rausch (2002) believe that lurkers can have the function of connecting between isolated social spaces and passing contents between mailing lists, yet view this behaviour as passive. Soroka and Rafaela (2006), who suggest understanding online participation in terms of their Social Communication Network (SCN), categorise participants as "active" and "passive" so as to reveal the range of online behaviours and the complexity of online environments. Because lurking is deemed as passive participation, lurkers are understood as being at a disadvantage, such as obtaining less benefits (e.g. informational) than active participants (Amichai-Hamburger, 2005).

People lurk because that is what they enjoy doing, because they have nothing to say or because they are learning, reading, listening, forwarding or engaging in another way. Lurkers may not be contributing visible posts, but they are not depriving other contributors of resources or depleting the community. Lurking is a behaviour common to the majority of online users in information or collaborative environments (Cheshire & Antin, 2010), and it is necessary to understand the many facets of lurking. Given the premise "*that everyone is likely to lurk at least some of the time and frequently most of the time*" (Nonnecke & Preece, 2003, p. 112), lurkers obviously derive value from their activities, otherwise they would not engage in them (Strout, 2011).

FUTURE RESEARCH DIRECTIONS

Harquail (2010) notes that whilst comments made on blogs show that readers are engaging with the ideas presented there, there is nothing wrong with reading and not commenting: lurkers are neither "self-centered idea scavengers" nor "online introverts lacking in gumption," but participants who take the information gathered in one context and use it in another. Gossieaux (2010) describes lurkers as the hidden asset in online communities as they forward content and information from one community to others using a variety of different channels (e.g. telephone, in conversation, by email). Lurkers are therefore participants that able to support and innovate online communities, or, in former Yahoo! Executive Sanders' (2010, 2003) terms, are "lovecats," people who share knowledge freely and with good intent, serving others, facilitating relationship building and adding to group learning.

It is clear that lurking represents one form of communication, and that it may have wide-reaching consequences, even if not all of them are known yet. Research on lurkers is important because there are many differences between the people who go online, and a biased understanding of the online environment must be avoided. This makes a broad range of definitions important, as lurking involves a complex set of behaviours, rationales and activities in an online environment that provides many options. Misunderstanding lurkers leads directly to misunderstanding the online environment.

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KEY TERMS AND DEFINITIONS

Lurkers: Online users that are seen as not actively participating in online environments.

Non-Users: Those people who do not use any information and communication technologies.

Article IX

Cruickshank, P., **N. Edelmann** and C. Smith. 2010. “Signing an e-Petition as a Transition from Lurking to Participation.” In J. Chappellet, O. Glassey, M. Janssen, A. Macintosh, J. Scholl, E. Tambouris and M. Wimmer (eds). *Electronic Government and Electronic Participation*. 2010 edn. Linz: Trauner, 275-282. (3.4).

SIGNING AN E-PETITION AS A TRANSITION FROM LURKING TO PARTICIPATION

Peter Cruickshank[1], Noella Edelmann[2], Colin Smith[3]

Abstract – As one form of online political participation, the e-petitioning is seen as a response to a perceived decline in public trust of political institutions and the associated symptoms of political disengagement. This paper uses the psychological concepts of self-efficacy, prosocial behaviour and lurking and shows how they could be applied to e-participation, in particular in the context of the decision to sign a petition (or not). Different models are examined and some potential future research areas are identified.

1. Introduction

The internet is not only a communication channel, which can help people express themselves; it also equips users with tools, personal skills or positive feelings which are then transferred from the online to the offline environment, and can also increase individuals' feelings of effective self-efficacy. Individuals participate in offline and online environments for a number of reasons and motivations, and they will often show altruistic and prosocial behaviour. But in the same way that individuals choose to help others, many choose not to – they prefer to read or gain access to information, without contributing, a behaviour often negatively described as "lurking". A challenge faced by researchers is to understand why people choose to 'lurk' as passive observers of a process rather than actively participate, and why they move between passive lurking and active participation.

Educational, managerial, regulatory, and legal systems are being crafted to deal with the new realities made possible by the new online environments. In the area of political participation, petitioning is a simple yet effective tool which provides a first step for citizens who want to interact with and influence democratically-elected assemblies, from their Local Council to the European Parliament. Internet-based e-petition systems have already been introduced in some EU member states both at national and, increasingly, local levels in order to make it easier to gather signatures from a wider audience.

This paper looks at the extent to which signing an e-petition can be seen as a type of de-lurking and considers whether understanding the factors behind a citizen choosing whether or not to sign a petition provides a possible area for investigating behaviour around lurking.

This paper begins by following Cruickshank and Smith (2009) in giving a brief overview of the state of play with e-petitions. The main actors in the petitioning process can be placed into two groups:

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- *Internal actors:* (a) Officers of the assembly who are responsible for the operation of the system (forum moderators are generally considered to belonging to a subcategory of officer). (b) Elected Representatives (and their support staff) who respond to petitions individually and collectively.
- *External actors:* (a) Petitioners; that is, the person (or group) who initiates a petition after identifying an issue and follows its progress through submission to final feedback and outcome. (b) Citizens: that is, those persons who are entitled to sign the petition. Eligibility rules may vary here, and this raises important questions of identity and authentication which are beyond the scope if this article. However, Citizens can be broadly divided between those who are participating in a petition by signing it (referred to here as the Signatory), and the non-participating majority.

The main focus of this article is to examine approaches which enable more to be understood about the citizens' intentions either to engage or not to engage with an e-participation system such as EuroPetition. The theoretical contribution of the article is to establish that the an understanding of the psychological dimensions such as personality and self-efficacy has much to offer both practitioners and academics in understanding the patterns of uptake, the use of e-petitioning systems, as well as the factors that influence the decision of the citizen to simply access information or act as a participating signatory. The article proceeds via a brief overview of the current body of research in the area of e-petitioning.

2. The place of e-petitions in the democratic process

> "...with the spread of Information and Communication Technologies, a new practice has come into force, consisting of aligning the practice of petitions and the use of Internet technologies. This has led to the implementation of appropriate technical components... today citizens have more instruments to interact with the institutions, to make their voice heard and, eventually, to take part in the policy-making process" Santucci (2007)

Many advanced industrial democracies have adopted reforms designed to confront a perceived decline in the public's trust of political institutions and the associated symptoms of disengagement. It has been argued that, as a device to transform established representative democracies into more participatory democracies, e- petitioning has been the source for great advances (Linder and Ulrich, 2008).

Political scientists have conceptualized petitioning as a mechanism for making democratic inputs sitting somewhere between pure representative democracy and direct democracy (which bypasses representatives altogether), in a distinct category of advocacy democracy (Carmen, 2007a), where the participation activities are directed towards influencing the decisions of elected representatives, thereby mitigating the risks of weakening existing democratic institutions. On the other hand, since the policy impact is indirect as it is mediated by representatives, perceived fairness and openness in the process can be as important as the actual outcome, as illustrated by this letter in a national UK newspaper:

> "Can anyone name an e-petition to the Prime Minister that has achieved its aims? Each time I have signed one, I have later received an email telling me why the PM cannot agree." – Letter to Telegraph (London), 27 May 2009

It is necessary to remember that the participants in the petitioning process and e-democracy generally have been shown to be generally male, educated and older than the general population (Carmen, 2007a; Lindner and Ulrich, 2008). This is despite the potential of these

systems to widen the pool of participants in the decision making process; conversely, it is unrealistic to assume that universal participation could be achieved or indeed is desirable - there appears to be a realistic ceiling of ca. 30% active participation (Ferro and Molinari; 2009, Maier-Rabler and Reimer, 2009). Even more realistically, achieving the participation of 1% of citizens in any one e-petition would generally be considered a stunning success.

For these reasons, it is useful and important to understand the factors influencing the decisions made by individuals (or groups) about whether to participate in the political system by initiating, or simply signing, a petition, or to remain as 'mere' passive observers, no matter how well informed. Therefore, the core question arises of the need to understand and model the citizen's decision-making process around the use of e-petitioning systems.

3. Self-Efficacy: Understanding the factors behind use

The perspectives offered by a social-cognitive approach provide a stimulus to address personal and societal aspects. In contrast with previous studies of e-petitioning have focused on the technical and institutional perspectives (see Lindner and Ulrich, 2008, for further examples).

Social Cognitive Theory (SCT) broadens the analysis offered by traditional acceptance models with their history in behaviourist psychology and focus on perceived outcomes by giving prominence to the concept of *self-efficacy* – defined as beliefs about one's ability to perform a specific behaviour. Unlike efficacy, which is the power to produce an effect (in essence, competence), self-efficacy is the belief (whether or not accurate) that one has the power to produce that effect.

"People who regard themselves as highly efficacious act, think, and feel differently from those who perceive themselves as inefficacious. They produce their own future, rather than simply foretell it." Bandura (1986)

Expectations of positive outcomes of behaviour are meaningless if we doubt our capacity to successfully execute the behaviour at all; conversely, previous bad experiences can create a self-reinforcing cycle of expectations of negative outcomes. This could potential provide a model for understanding why citizens would choose to sign a petition, or just remain as an observer. There are two aspects to this.

The concept of Computer Self-Efficacy (CSE) is used to make individuals' judgment of their capability to perform a computer-based task central to the analysis (Compeau and Higgins 1995). CSE has been used to help understand the decision of an individual to use an application, generally in an institutional or business context rather than within a democratic system. However, is seems clear that CSE is an appropriate conceptual tool which can help illuminate the decision-making process around the use of e-participation systems. Further, while CSE is typically applied to 'professional' users, which in the e-participation context might equate to the 'internal actors' (council/assembly officers, elected representatives and their staff), it seems plausible and useful to apply it to the decisions of the external actors (petitioners and citizens) to submit and to sign or discuss a petition online respectively.

There are clear parallels to be drawn between Computer Self Efficacy and Political Self Efficacy (PSE) (Caprara et al, 2009). Where CSE is concerned with self-perception of the ability to produce an intended result with computer-based systems, PSE is concerned with citizens' perceptions of their own ability to bring about intended results in dealing with politics and public authorities. PSE addresses the estimations that citizens make about their

own capacities to effect a result through their actions (internal PSE), and also about their attitudes to the political system as a whole (external PSE). Therefore, while CSE effectively models the role of the confidence of citizens in engaging with an e-petitioning system, PSE models the role of both their confidence in their own ability to deal with public authorities, and their views on the extent to which public authorities can be influenced, affected or changed by individual or group actions.

The benefits of the SCT approach are twofold. Firstly, it allows judgment to be made of the role of efficacy-related factors in the decision to use the e-petitioning system to participate in a democratic process. Secondly, it highlights citizens' perceptions of the system. Fundamentally, it is also of interest to assess the interaction between CSE and PSE, and whether a citizen's confidence in their ability to utilize interactive systems is paralleled by a belief in their ability to successfully interact with the political system as a whole.

In other words, this framework allows exploration of environmental (social / cultural / institutional / educational) and personal factors (experience) behind the decision to either engage or not. The analysis therefore focuses on the participant's (or potential participant) subjective perspective as well as upon the objective context. Results from this analysis can therefore help to assess the 'core critique' that e-participation systems provide an additional channel for those who already have the skills, knowledge and confidence to interact with the political system, rather than widen the pool of participants. By so doing, the scope for providing information, support and other appropriate interventions can be identified.

4. Prosocial Behavior

The concept of prosocial behaviour can help understand the actions and motivations of individuals in the online context. Prosocial behaviour is defined as "voluntary intentional behaviour that results in benefits for another" (Eisenberg and Miller, 1987), and can include donating money, computer power, software and documentation, time and attention, information and emotional support. This kind of behaviour is increasingly important for solving social problems (Dourish, 2001) and is seen as the "glue" that helps people stay together so that they can collectively help solve each other's problems (Preece, 2000).

Different groups may use different technologies depending on the context and the subject being discussed, as is the case with signing an e-petition, often associated with an offline group activity such as a local issue-based campaign. Prosocial behaviours can be learned and sustained on the net, but social identification processes are instrumental in the group's collective definition of what is considered to be "helpful" or "harmful" behaviour in the specific context.

Individuals participate for altruistic or conformist reasons, to boost their self-esteem (McLure and Faraj, 2000) self-enhancement (Allport,1937) and self-efficacy. All behaviour is motivated in some way and individuals will engage in a particular behaviour in order to achieve a desired end (Atkinson and Birch, 1970), and prosocial behaviour will depend on the helper's motivation. Motivation is distinguished between intrinsic motivation and extrinsic motivation: intrinsic motivation includes the desire to feel competent and self-determining, show altruism, or seeking to increase the welfare of others; extrinsic motivations are usually associated with some sort of external reward. Motivations are enduring, exist across all situations and are expressed through the appropriate goals. Different motives and goals may underlie the same surface behaviour and the social and psychological consequences of participation may be different for different users (i.e. some participate to gain information or

support, others to communicate). The motivations and goals for using the online resources will determine how they will be used.

This means that there are a number of reasons why individuals choose to contribute and participate, for example because they believe that their visible participation is important for the group's performance, that their contributions to the group are identifiable, or because they like the group (see e.g. Markey, 2000). Individual group members benefit from prosocial behaviour, and are often grateful for it. The whole group as a whole also benefits with increased reputation, learning (Lakhani and von Hippel, 2003) and identification.

Altruism has been identified as a major motivator for encouraging prosocial behaviour as well as contribution and collaboration (Maloney-Krichmar and Preece 2005); it reflects the desire to give back and is also known as reciprocity (Axelrod, 2006). Generalized reciprocity, a process in which an individual gives back to the community, rather than directly to the person from whom the contribution was received, can also be seen in the online environment (Wasko and Faraj, 2000). Joyce and Kraut (2006) found that the more often users contribute content to an online community, the more likely that they will continue to participate in that community. Although people will contribute time and effort (Butler, Sproull, Kiesler and Kraut 2007), traditional "offline" problems such as the bystander effects or diffusion of responsibility (Barron and Yechiam, 2002) and simply lack of participation do occur.

5. Lurking: still participating

Lurking is both a special form of behaviour, often found in online environments, and central to understanding participation in online environments. Lurkers are one of the 'silent majority' in an electronic forum – they posts occasionally or not at all, but are known to read the group's postings regularly.

It is assumed that lurkers receive informational benefits from passive participation, but less so than active participants (Amichai-Hamburger, 2005). Preece, Nonnecke and Andrews (2004) note that only few lurkers intend to lurk from the onset – they believe that the majority of lurkers become lurkers as a result from previous interactions with the community - and there are obvious parallels to be drawn with the ideas behind self-efficacy being influenced by past experiences.

Lurking should not always be seen as a "negative" form of behaviour: lurking still implies a positive choice to pay attention to what is happening in a community. One challenge that e-participation set itself as a subject area is to move even beyond those who are lurkers - and to focus on the "ignorers", competing against rival streams in the attention economy (e.g. sport or entertainment), and trying to bring citizens back to focus and take an interest in the democratic decision making process: from this perspective, for a citizen to become a lurker is the first, hardest, step in engagement.

Preece and Shneiderman (2009) provide one model that differentiates between levels of participation, and suggest the "Reader-to-leader Framework" as a way of understanding and motivating participation. Starting from "all users", these move to become readers (i.e. lurkers), then contributors, collaborators and finally leaders. Participation in each of the phases is characterized by certain behaviours and motivations which need to change, be encouraged and supported. Each transition includes a number of steps and behaviours; the aim is to increase the user's confidence and activity, knowing that at the same time many will also terminate their participation for a variety of reasons. Reading is a typical first step toward

more active participation (Preece et al., 2004) - for some people, overcoming their resistance to novelty may require strong encouragement, while others tend to embrace new experiences.

The most understandable motivation for people to read content is that they can personally benefit from doing so. The next step, getting return visitors is more difficult, as is making a contribution and collaborating. Preece and Shneiderman (2009) argue that those factors that motivate readers are also important to those who then decide to contribute and gain the confidence to do so: for example, a sense of belonging, a welcoming environment, safety, support for newcomers, and contacts to ask questions. They also mention other issues such as the ease for making small contributions, visibility of contributions made, recognition of quality and quantity of contributions, rewards, etc.

The users' changes in the different participation stages little understood, and even less understood or discussed are the reasons why participants terminate or why they give up collaborating and return to individual contributions or merely reading. Variables such as the community size, personality of participants, topic, social interactions, such as conflicts and other, external factors such as worldwide news events (Preece, 2009), can undermine participation. Political, social, and economic changes may also be tied to effective participation in social media. Changing user (consumer and citizen) values with respect to societal and political issues as well as changing attitudes, for example, concerning privacy, also have an impact on participation.

6. Conclusion

One of the challenges that e-participation has set itself as a subject area is to start the engagement process by proving tools to help the transitions between ignoring, lurking and actively participating in relation to societal issues and the democratic decision making process. E-petitioning is arguably the most mature area of e-participation, in that it is well-established and often makes useful inputs to political processes, giving insights that can be applied to other forms of e-participation and online engagement generally.

This article has sought to identify some of the psychological aspects which impact e-participation. The article presented Social Cognitive Theory (SCT) to give prominence to the individual's (implicit or explicit) decision to perform a specific behaviour. Self-efficacy shows that expectations of positive outcomes of behaviour are meaningless if we doubt our capacity to successfully execute the behaviour at all; e-petitions require citizens' belief in their ability to successfully interact with the political system as a whole.

It has to be recognized that the last few years have shown that participation in the majority of civic platforms and networks have still not been as successful as anticipated. As Adar and Huberman (2000) note, systems based on altruistic reciprocity may experience problems and fail but given that the online environment can be used as a learning or testing environment, the internet could actually encourage participation in real life (Putnam, 2000) if the challenges modelled by (for instance) self-efficacy can be faced.

We would argue that in the same way as informing oneself about a political issue is still a positive action, lurking should not always be seen as a "negative" form of behaviour: lurking still implies a positive choice to pay attention to what is happening in a community. Finding a mechanism to capture the factors behind the decision to sign a petition and the consequences both in terms of prosocial behaviour and its impact on self-efficacy could give a new perspective on the de-lurking process in general and understanding the (psychological)

processes behind the phase changes in the levels of participation described by Preece and Schneidermann (2009). There are of course methodological issues to be addressed in collecting data from those who are not predisposed to participate online, raising questions around how to access the lurkers and non-participants.

Despite this, we believe that the factors discussed here establish some principles that can usefully inform ongoing work and future research questions in understanding the uptake of e-participation systems and possibly online engagement generally.

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Collaborative Behaviours in E-participation

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Abstract: *E-participation needs technology such as the internet and social media, but there are other factors which need to be considered too. This paper looks at participation, collaboration and cooperation in the open government and e-participation context from a psychological point of view. It provides a brief overview of some online behaviours which are relevant to e-participation and governments, beginning with individuals hyperlinking, to more complex behaviours involving larger groups such as online communities and crowdsourcing. Online participation and collaboration, with all its potential, also has its limitations, not only due to technology, but also individuals' behaviours, their motivations and expectations as well as the social relationships which govern the online environment.*

Keywords: Individuals, collaboration, participation, government, e-participation, e-government

The internet has always let many people fulfill their most important social needs such as affiliation, support and affirmation over the internet (Sproull & Faraj 1997). Availability and affordability of the internet have led to personal and social changes and, as more human activities and communication move on to the online environment, personal habits, human culture and governing are changing. The internet has not only profoundly changed the way people communicate and behave, but also their expectations regarding society and politics.

Many institutions are gaining experiences with collaborative and participatory innovations, but the tensions are visible: both citizens and politicians are disappointed by the promises offered by e-participation (Chadwick 2006; Coleman & Blumler 2009). E-participation initiatives and research (e.g. the EU-funded FP6) have until recently mainly focused on the technology and providing information, but successful e-participation will require a better understanding of human behaviour in the online environment, as well as activities such as participation, cooperation and collaboration. The aims of this paper are twofold: to present an overview of those online social and collaborative behaviours relevant to government and e-participation, and to consider some limitations to collaborative behaviours which may be due to, for example, technological determinism and the assumption that technology can change democratic values, information overload and problems which may arise when people work together in the online environment.

1. Online Participation and Collaboration

Social relationships have always been an important motive for internet use, to find friendship and romance (Hardie & Buzwell 2006) but also for providing support, information and opportunities for connection, and conferring social and psychological benefits (Biao-Bin et al. 2006). Individuals largely define themselves in terms of the social connections they have or don't have (Barak 2008),

and the internet has expanded people's social connections through a variety of tools and with varying levels of social involvement (Skitka & Sargis 2005). Online participation requires individuals to devote time and effort, which they are willing to do: "*Never have so many communicated so much, on so many screens, through so many channels, absorbing so many hours of irreplaceable human attention about communications*" (Gitlin 2007, p.4).

People engage in collaborative behaviours which influence their workplaces, communities, national democracies, and the global economy at large, and at the same time, have social benefits, such as making governments more transparent and accountable (Coleman & Blumler 2009; Müller 2010; Williamson 2010). Collaboration is based on individuals engaging in loose voluntary associations, sometimes using technologies to achieve shared outcomes. Collaborative behaviours harness human skill, ingenuity and intelligence efficiently and effectively. This openness, peering, sharing and acting globally is increasingly replacing some of the old tenets of business and governments (Tapscott & Williams 2006). Successful online collaboration can be seen in different areas (private, public,and non-profit organizations), take on different forms, and using different online media platforms so as to share content. Examples range from Flickr, Slideshare,, Wikipedia, MIT OpenCourseWare[1], Open Source, Peer-to-Patent[2], Barak Obama's presidential campaign, protest movements[3] and crowdsourcing activities led by the UK government in 2010 („Programme for Government"„Your Freedom", and „Spending Challenge").

How do people learn how to interact, participate, and collaborate in such online environments? Netiquette guidelines[4] have been around for a long time, guides and information sheets help to understand and use the internet tools[5], and public platforms and social networks often state their expectations as to how users are to interact[6]. Some scholars (e.g. Jennings & Zeitner 2003) believe that the characteristics of the internet such as anonymity and reduced observable social cues encourage discussions and generate interesting arguments, i.e. they are "*conducive for public deliberation by attenuating the effects of the undesirable social-psychological influences on opinion expression*" (Ho & McLeod 2008, p. 191). Others believe that it is the degree to which participants value the benefits obtained from their group that will also predict the amount of collaborative, cooperative or community building work (Butler et al. 2002), or that it is related to the amount of fun users have (Nov 2007).

The internet provides the infrastructure necessary to support and encourage high levels of altruism such as volunteerism, providing assistance and emotional support (Amichai-Hamburger 2008; Barnes 2008). These behaviours are known as prosocial behaviour (Eisenberg & Miller 1987), and people sometimes behave more kindly to others on the internet, perhaps more so than they would in similar real-life situations (Amichai-Hamburger 2005). Forms of prosocial behaviour that occur online are consensus and collective action (Rheingold 2002), reciprocation (Adamic et al. 2003), contribution of time and effort (Butler et al. 2002).

According to motivation theory, all behaviour is motivated in some way, and people will engage in a particular behaviour in order to achieve a desired end (Atkinson & Birch 1970). Motivations are enduring and pan-situational, may lead to different goals, behaviours, and consequences, and determine how the online resources will be used. Motivations and goals determine how online tools will be used and the behaviours participants choose to engage in. The participants' expectations and motivations brought to the online environments will structure the outcome, enable and

[1] www.ocw.mit.edu
[2] www.peertopatent.org
[3] www. unibrennt.at; #unibrennt; #Protest #Gaza; ttp://twitter.com/ProtestWatch/status/14615246031294464
[4] http://tools.ietf.org/html/rfc1855 or http://www.faqs.org/faqs/usenet/primer/part1/
[5] http://www.iriss.ac.uk/publications or http://www.wheremostneeded.org/reference-new-web-tools-f.html
[6] http://www.facebook.com/#!/principles.php

constrain their experiences and payoffs. Social networks themselves and the relationships between users may motivate and lead to people connecting and taking collective action (Melucci 1996). It is important to understand the role of motivation as it is one of the factors that may lead to lack of participation and collaboration, but also to disenchantment, a negative attitude to government or those in power, and low levels of use of government sites (Maier & Reimer 2010).

The "*culture of generosity is the backbone of the internet*" (Tapscott & Williams 2006, p. 206), but it is clear that relationships and contributions should not always be seen simply as due to altruism and prosocial behaviour. Hars and Ou (2001) suggest that although altruism is a behaviour found in the online environment, altruistic motivation alone cannot always explain why people will engage in prosocial behaviour or participate in online groups: in the Open Source environment, contributors view their participation as an investment from which they expect future returns. "Wikinomics", a term coined by Tapscott and Williams (2006) is an idea based on Wikipedia and is an economic model based on peer-production, where people participate, contribute and collaborate in the online environment without receiving direct payment but indirect rewards such as gaining status and the subjective value of information. Benefits that result from being involved can be personal visibility and in external promotion. The online participatory culture where people will work for free is extremely important in social and economic terms (Punie et al. 2009; Haythornthwaite & Kendall 2010; Ciciora 2010). Socially, the internet provides a platform for just about anyone to contribute, and everyone benefits by having many different angles on a news event or topic; economically, the ease of publishing web pages challenges traditional media and business (Haythornthwaite & Kendall 2010) but also had benefits such as speeding up processes, as can be seen with the Peer-to-Patent application in the US.

1.1. Hyperlinking

There are a number of different ways to collaborate online, from small individual acts such as posting a hyperlink to participation in online communities. Hyperlinking, which historically began as a citation mechanism, is now part of a huge network, an industry, which affects the size and shape of the public sphere by facilitating the wide sharing of information (Halavais 2008). They express social relationships in the public space for others to see (Adamic 2008), and have shifted the dynamics of human conversation (Hespos 2008), guiding users (Hargittai 2008) and their attention, and by letting others know what matters to them and what they believe may matter to others (Weinberger 2008).

As part of everyday life, hyperlinks are "*created and situated in a political-social context*" (Turow & Tsui 2008, p.21) and Castells (1996), who argues that networks are the organising principle of modern society, suggests that hyperlinks are "*becoming the currency and connective tissue of the networked society*" (in Turow & Tsui 2008, p. 48).Hyperlinks can be useful for providing trust and providing support (evidence), transparency, credibility (Tsui 2008), and they may facilitate political accountability. Schudson (1998, 2000) uses the concept of hyperlinks to build a new model of citizenship: the ideal informed citizen who carefully studies political issues and candidate platforms before casting a vote. This ideal makes most citizens look ill-informed and ineffective, and ignores the fact that citizenship has expanded and is increasingly complex (Coleman & Blumler 2009). Whilst there are benefits to the informed citizen, Schudson also states that it is neither realistic nor necessary; rather he suggests a modified model, the 'monitorial citizen', i.e. citizens who are informed and alert enough to identify danger to their personal good and to the public good. Not all citizens can or need to be effective monitors, but hyperlinks and social networks (e.g. Facebook and Twitter) can help spread information more quickly, and help monitorial citizens spot the danger before it is too late.

1.2. Communities

People have a need for inclusion and the company of others, and communities provide the opportunity for feeling included and being with like-minded people (Schutz 1966). Definitions of community are often based on current interpersonal communication theories on trust, politeness and cooperation as the central features of communication competences. Putnam (2000) and Schuler (2009) for example, see the community as supportive social ties, based on civility and creating trust; communities represent networks of civic engagement, foster reciprocity and encourage social trust. Adams (2001), on the other hand, believes that intimacy and close social ties as desirable qualities for a community are neither necessary nor sufficient conditions, and suggests that a community is also defined by who is not included.

Granovetter (1973) suggests that communities rely on 'weak ties' i.e. interpersonal connections that are not particularly intense, close or emotional, yet have an indispensable function of holding together groups of people who may not have that much in common and may not share the same view of the world. Without weak ties, internally homogeneous groups of people would be completely isolated from others outside their groups and social interaction would only occur between like-minded people. Weak ties reduce social fragmentation and expose people to cross-cutting views, allow information to diffuse more widely and ideas to be exchanged between different groups of people.

'Online community' is a term is used for many kinds of social interaction, but in broad terms, an online community describes any collection of people who communicate online, and may share goals, activities, governance, cooperation, and pleasure. Due to a number of reasons, such a reduced civic engagement, the increasing urban sprawl, and extensive entertainment available on TV and online (Prior 2008), people feel detached from their geographic communities, and thus seek inclusion, attachment, community in the online environment (Putnam 2000). Online communities are increasingly seen as important for solving individuals' (Preece 2000) or social problems (Dourish 2001).

1.3. Crowds

The debate about whether online communities are 'real' communities has centered on whether these initiatives can support social relationships and lead to commitment to community goals and values. Some scholars (e.g., Haythornthwaite, 2009) see online communities as suitable environments for collaboration, knowledge co-construction, and communities of practice. But Haythornthwaite also urges to consider and differentiate between crowds and communities as two ends of a spectrum. Whilst crowdsourcing is about harnessing the knowledge and talents of many (relatively) anonymous individuals through online systems, communities form and define knowledge through the continued efforts of known participants.

Each community has different patterns of contribution, participation, aggregation and evaluation in their organizational structures. Haythornthwaite describes this form of organisation, participation and collaboration as "heavyweight", emphasising the commitment an individual has to the collective enterprise, which may include learning about the topic, equipment, methods, and norms of production around this domain of knowledge.

Crowdsourcing projects on the otherhand are described as "lightweight", as such forums exist to draw in contributions, responses and comments, with a limit to the types of input and the visibility of individual contributors and contributions. Crowdsourcing contributions range from isolated, minimal, discrete, objective and often anonymous contributions (e.g., the NASA ClickWorkers[7]) to

[7] www.clickworkers.arc.nasa.gov (the original site)

efforts that are more personal and encourage social presence such as tagging others' content, commenting, providing data and corrections. Individuals need to adhere to site norms and practices, but they do not have to engage directly with each other.

There is a tendency to believe that valuable knowledge is held by an expert, or that one person will be able to take the good decision. Experts' opinions are believed to be better, yet "*under the right circumstances, groups are remarkably intelligent, and are often smarter than the smartest people in them*" (Surowiecki 2004, p. xiii). Society relies on individuals having access to new information and ideas for innovation. The internet can help bring together people's creativity and thus encourage innovation. Society and government thus need the so-called 'wisdom of the crowds' (Surowiecki 2004), although it is unlikely that the crowd fully understands how their actions lead to a certain output nor are they necessarily aware of how their action contributes, they "*create, perpetuate, and/or modify structures that direct the attention of others*" (Webster 2008, p.28).

Crowdsourcing is collective intelligence, and although it requires encouraging self-interested, distrustful people to work together, even in situations where narrow self-interest would dictate that no-one should take part, different groups can take good decisions and solve problems. Crowdsourcing works well when people cooperate, and requires rules to maintain order and coherence and members must interact and learn from each other.

2. Collaborative Behaviours and Government

Participation and collaboration can improve public sector governance, enrich democracy and, at a more local level, can help empower citizens improve their communities (Tapscott et al. 2007). Collaboration can help modernise government service delivery and interaction with citizens – but its potential for public sector innovation has barely been tapped. Governments need to restructure their interactions with citizens, organise, coordinate and control complex policy domains as well as provide platforms for encouraging communication with and between citizens, institutions and business.

In Open Government concepts, public value no longer needs to be provided by government alone, but can be provided by any combination of public agencies, the private sector, community groups or citizens. The biggest current challenge for many governments is twofold: a lack of money to deliver services and the need to establish a framework where the government itself defines the roles of these new institutions of governance which then effectively use the society's innovative capacity. The traditional organisational structure of public administration is that of a hierarchical, closed entity. This closed, hierarchal government is increasingly becoming untenable, but public administration has not yet found its new role in this virtualized environment. As mentioned in the previous section, there are examples of peer production in public administration, either triggered by the administrations themselves or as bottom-up approaches, but the informal, non-hierarchical nature of mass collaboration, facilitated by electronic communication technology is not yet fully endorsed by public administrations. Citizens, with the free collaborative tools at hand, thus engage themselves and create the services they miss from the public administration.

Any collaboration model requires a certain degree of transparency. Participation can be seen as a traditional form of participating in a joint activity to find common solutions for problems and challenges that are affecting a number of people or the society as a whole. The Austrian standards for public participation ("Standards der Öffentlichkeitsbeteiligung", 2008) can provide the necessary help to solve such problems. On the one hand, new media enables administrations to use new instruments of mass collaboration to find solutions to pending problems. On the other hand, high numbers of participants involved in collaborative work does not necessarily mean high quality results. According to Pisano and Verganti (2008) different models of collaboration depend on the

governance structures (flat vs. hierarchical) and forms of participation (closed vs. open) to support innovation. The advantage of open forms of collaboration is that new ideas are brought up by the community which are well beyond the traditional way of organisational thinking. Innovation malls and innovation communities are two types of open innovation collaboration models (Pisano & Verganti 2008) which can either be flat or more governed, and used in administrative and for policy making processes.

According to Fountain (2001), good networks lead to social capital. Social capital can be seen as "*the contribution of ongoing productive relationships to institutionalise effectiveness, measured by economic performance and innovation in policy making*" (Fountain 2001, p. 73). This recognises the importance of relationships for sharing knowledge, experiences and resources in new ways. Networks and collaborative environments need to have ties to agencies, supply chains, sources of knowledge and platforms which help citizens and agencies work together to achieve mutual productive gains. The expertise necessary can be provided by governmental and external experts. By including the public in the administrative processes or policy cycle, the administration or the government can take efficient decisions by using the external knowledge and innovation capacity. Governments can use collaborative behaviours and tools to support productive relationships with citizens. Using external sources increases innovation (Chesbrough & Garman 2009) and weak links (Granovetter (1973), see below) can offer sources and possibilities not found within the organisation. Collaborative behaviours encourage transparency and foster participation but also mean adopting changing values of governance. Collaboration can help legitimate and improve decision-makers' actions.

Müller (2010) suggests that digital technologies make collaboration in and with government simpler. Citizens and the user-generated content they produce have an impact on both political and production processes, and lead to new organisational forms and ways of thinking. Governments thus need to develop new strategies which include transparency and many-to-many communication. Openness will improve government and public administrations' efficacy, capacity and legitimacy. In order to achieve this, it is necessary to consider the policy cycle (initiation, formulation, implementation, evaluation), collaborative tools to be used at differerent stages of the cycle, and how to manage the relationship between governments, public administrations, citizens and communities. Some tools are already being used, but not yet to the extent for them to have an impact on macro-economic indicators.

3. Limits and Tensions

3.1. The Limits of Online Collaborative Behaviours

The internet is a social environment, and for many, it is a normal way of life (Joinson et al. 2007). Collaborative initiatives, such as the Open Source initiative show that collaboration and peering is successful when the object of production is information or culture, tasks can be chunked into bite-sized pieces, and the costs of integrating those pieces is low (Tapscott et al. 2007) .

Van der Laar (2010) lists a number of opportunities and risks associated with using technology for participation and collaboration. They provide opportunities for citizens to be active: participate in networks and be involved in dialogues. For governments, participation and collaboration offers the opportunity to gain access to new ideas and expertise as well as a profounder and deeper understanding of citizens. But there are risks too, such as the digital divide due to the reliance on the internet, an overload of initiatives and other opportunities, low levels of commitment and low levels of interest.

The internet allows for a large number of political initiatives, political networks and political activities to be possible, but it is important to remember that the internet cannot change democratic

values. Keen's (2007) criticism is even harsher: the real consequences of openness, participation and collaboration are less culture, less reliable news, a chaos of useless information, obfuscation of truth and manipulated public opinion. He fears that the internet and activities such as crowdsourcing lead to a degeneration of democracy, where democracy is ruled by mob and rumour, and the topics are no longer politics, economics and foreign affairs, but amateurs discussing their own favourite topics.

The Momentum Report (Charalabidis et al. 2009) and work by Andersen et al. (2007) clearly show that e-participation and e-democracy are about the users, communication, interaction and the tools they choose to adopt, use and implement, often in new ways, yet the technological assumption still dominates (Punie et al. 2009). Whilst the technology used can be designed, online collaboration requires leadership, cooperation with citizens, acting either as individuals or community members to plan and guide policies that provide the framework for social growth, behaviour and expectations (Preece 2000).

3.2. The Unavoidable Tension between the Individual and the Social: Factors Impacting Human Behaviour

Adams (2001) believes that there is an unavoidable tension between the individual and the social: "*it is in our nature to be social, yet our individuality often is at odds with our desire to be part of a group*" (p. 37). Reciprocity in online peer-to-peer contexts is not as prevalent as expected (Adar & Huberman 2000), and both the bystander effect and the diffusion of responsibility occur in the online environment (Yechiam & Barron 2003). In a wide range of settings, people contribute less than the optimal amount of public goods and consume more than their fair share of common resources (Ledyard 1995). According to Nielsen (2006, 2009), user participation follows a "90-9-1 rule", where 90% of users are lurkers (i.e., read or observe, but don't contribute), 9% of users contribute from time to time, and 1% of users participate a lot and account for most contributions, often replying just minutes after a post has been made. Regardless of the changes social media and networks have brought, and the well-known notion that the internet is about communication rather than content, the user is often seen as an information gatherer rather than a social being (Wallace 1999). This means that certain characteristics of human behaviour are sometimes forgotten or ignored, which can lead to a number of problems when institutions decide to involve citizens.

Hyperlinks determine how user attention is allocated to content on the web thus playing a central role in how attention is allocated to material online, in what content becomes popular and what information is seen (Hargittai 2008). Search engines also determine what society will share as important and who gets to be heard Google is built on the assumption that *"hyperlinks somehow transmit power or credibility*" (Hindman 2008). Using search machines such as Google is not a democratic activity as the current norms of searching (based on popularity) are not an appropriate model for civil society (Finkelstein 2008).

Participation and deliberation in online groups may have a number of effects such as opinion sway, majority and minority group effects. Powerful social and psychological forces work against the notion of the 'weak ties' – people prefer advice from like-minded people, do not like disagreement, try to avoid the discomfort of unpleasant experiences, and adjust their own attitudes to avoid cognitive dissonance (Sunstein 2006). Whilst Huckfeldt et al. (2004) believe that citizens often have weak ties and develop more balanced, ambivalent political opinions, others fear that encounters with other opinions are becoming rare – media exposure is becoming increasingly selective, i.e. choice is reducing the diversity of political exposure, (Mutz & Martin 2001). Low levels of participation may be also due to information overload, that is, being unable to deal with large amounts of data. Perceiving others and one's relation to them requires cognitive processing

capacities – and people only have finite resources for processing. Too much information and social information has measurable impacts on both individual behaviour and social cohesion, leading to social arrangements where the value of attention is accentuated and given a price sticker, and human caring and attentiveness are rationed (Davenport & Beck 2002; Rafaeli et al. 2005).

4. Conclusion

The new technology tools are changing the relationship between citizens and governments by making it easier for them to collaborate, coordinate, and for citizens to participate and give voice to their concerns. Technology can also help governments be more open, transparent and foster the relationship between administrations and citizens as well as increase trust between the stakeholders. For open government and e-participation to be successful, to harness innovation and the power and creativity of citizens will require an understanding both of public administrations' new aims and roles.

Technology is able to support online prosocial behaviour, participation, contribution and collaboration in a number of situations which have impact on other individuals, political, societal and economic contexts. Such contexts rely on individuals who are affected both by the possibilities and limitations of technology, but also who pay more or less attention to the social relations and group norms, have different motivations (which are not always altruistic), expectations, beliefs and will act accordingly. Considering the human factors play an important role in determining the success of e-participation and government initiatives, i.e. whether citizens will participate and collaborate.

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Noella Edelmann completed her Psychology Degree at the University of Strathclyde and Master's Degrees at the University of London and the Danube University Krems . She is presently working on her PhD at Leeds Mertopolitan University, where she focuses on lurkers, motivations and emotions in e-participation.

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