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INVESTIGATING THE EFFECT OF PARTICIPATION-LIMITING STRUCTURES ON OUTCOMES OF E-DEMOCRACY SYSTEMS

(Research in Progress)

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Abstract

Modern information systems provide a technical foundation for greater participation of citizens in the agenda-setting and decision-making processes of government. Information systems researchers and designers will need to address a number of issues to design IS applications for the effective functioning of evolving forms of democracy. This paper identifies a research agenda at the intersection of information systems research, economics and political science research and avenues for information systems researchers to contribute to the research agenda.

Keywords: e-democracy, social choice theory, discourse theory, citizen welfare, decision-making.

1 INTRODUCTION

The capabilities of modern information systems (IS) to support communication, coordination and decision-making involving multiple participants have led many scholars to speculate on the impact of IS on government. Many scholars have long speculated on the possibility of employing IS to transform the functioning and governance of democratic governments in ways that transform the relationship between citizen and state (Behrouzi 2005; Macpherson 1977; Päivärinta and Sæbø 2006). In particular, the capabilities of modern IS enable a much higher level of citizen participation in the agenda-setting and decision-making processes of government than are evident in even the most liberal democracies. The normative expectation is that e-democracies enable a mechanism for aggregating citizen preferences in ways that more legitimately reflect the collective will of the citizens and will lead to better outcomes for citizens and improve social welfare (Arrow 1951; Sen 1999).

A key issue in the design of IS for e-democracy is the design of participation-limiting structures. While IS provide the capabilities to introduce high levels of citizen participation (Habermas 1999), pragmatic considerations suggest the need for limits to participation in the interest of achieving closure on decisions. For instance, structures that limit discussion on an issue to a certain time frame, or mandate voting on an issue on a certain date are examples of participation-limiting structures. Representative democracy is an example of a participation-limiting structure which limits participation by limiting the number of participants.

However, different participation-limiting structures are likely to have different impacts on social welfare. An important issue for both IS researchers and practitioners is the identification and design of participation-limiting structures that will be built into IS for implementing e-democracies. This is an important issue as the success of e-democracy will depend on the legitimacy and effectiveness of participation-limiting structures. This paper identifies a research agenda for e-democracy research that is at the intersection of IS, economics and political science research. Drawing on social choice theory, discourse theory, theories of democracy and IS research, this research-in-progress paper first identifies research questions that contribute to the research on e-democracy. It then presents a research design to empirically investigate those issues.

2 E-DEMOCRACY AND REPRESENTATIVE DEMOCRACY

This paper defines e-democracy[1] as a form of government in which the capabilities of modern IS are employed to support citizen participation in the agenda-setting and decision-making processes of government. Many such initiatives are under way around the globe. For instance, the U.S. Government runs a website that aims to improve citizen "access to and participation in the federal regulatory process" (www.Regulations.gov, accessed December 6, 2010). The website enables "citizens to search, view and comment on regulations issued by the U.S. government," thus eliminating the need for citizens to "have to visit a government reading room to provide comments … Today using Regulations.gov, the public can shape rules and regulations that impact their lives conveniently, from anywhere." As of December 6, 2010, the website had received over 400,000 public submissions.

Similarly, the Government of Singapore has a website whose objectives include "Gathering and Gauging Ground Sentiments", "Reaching Out and Engaging Citizens", "Promoting Active Citizenry

[1] We distinguish e-democracy research from a related stream of research that goes under the label of e-government research. While we define e-democracy research as being concerned with the transformation of the relationship between citizen and state, e-government research is concerned with "the adoption of information and communication technology (ICT) in government organisations to improve public services" (http://project.hkkk.fi/ecis2011/track_evolution_EGovernment.htm, accessed December 7, 2010).

through Citizen Participation and Involvement" and, to "encourage and promote public participation in shaping government policies" (http://www.reach.gov.sg, accessed December 6, 2010). Similar initiatives to increase citizen participation in and control over government have been reported in Israel, Norway, Denmark, Sweden, Brazil and India (Chua et al. 2007; Fung 2003; Päivärinta and Sæbø 2008). E-democracy initiatives are being reported at local, district, state and national levels of government, and also in other collectives such as workers unions, student unions, political parties and virtual communities (Dai and Norton 2008; Hercheui 2009; Kang and Dyson 2007).

While these initiatives are still in their infancy and touch only peripherally on changing the relationship between citizen and state, they do suggest more IS-enabled initiatives in the future for citizens to participate in governance. The current initiatives primarily use IS as another channel to supplement communication between citizens, elected representatives and governments, creating a public sphere for deliberation (Habermas 1984; Habermas 1999). However, given continuing activist pressure for more citizen participation in governance, coupled with governments' search for legitimacy, future initiatives are likely to devolve more control to citizens. For instance, the government of the Canadian province of British Columbia created a citizens' assembly of 160 near-randomly chosen citizens to deliberate on and design a proposal for electoral reform which was put to referendum in 2005 (Warren and Pearse 2008). Such agenda-setting and decision-making initiatives underscore the importance of the role IS would play in the future as governments respond to citizen demands for greater IS-enabled participation.

In contrast, the dominant model of democracy, found in the USA, Australia and Western European democracies, among others, is representative democracy. This form of democracy is characterized by election of officials by citizens to run the government, government control over the agenda and only implicit participation by citizens in the decision-making process (Hirst 1990; Päivärinta and Sæbø 2006). In this model, decisions are taken by elected representatives of the citizens and, once representatives have been elected, citizens lose direct control over decisions. Citizens retain some influence, but not control, over the agenda and the decision-making process through the forum of robust public debate. The assumption underpinning this model is that, through the election process and the periodic election and re-election of representatives, the elected representatives represent the will of the people and that robust public debate ensures citizen influence over government, and protects citizens against the tyranny of the state (Sartori 1987; Sen 1999).

The representative democracy model is viewed by many scholars as a practical compromise for implementing an idealized form of democracy characterized by direct citizen control over the agenda and an explicit role for citizens in the decision-making process (Päivärinta and Sæbø 2006). This model is closely identified with idealized descriptions of democracy in Greek city-states where agenda-setting and decision-making were carried out publicly and collectively by citizens (van Mill 2006). This idealized model of democracy is referred by many scholars as the direct democracy model, and is characterized by citizens directly running the government (Warren and Pearse 2008).

However, direct democracy becomes infeasible when the number of participants increases. The processes involving large number of citizens to negotiate and agree on an agenda and decisions can become so complex and time consuming that the process of governance comes to a standstill. Any benefits of the democratic form of governance over alternatives are far outweighed by the collective paralysis of decision-making that could occur in such a situation. Representative democracy is one solution to this problem. It overcomes the production bottleneck problem by limiting the participation of citizens but still preserves citizen influence on agenda and decision-making, though indirectly.

3 E-DEMOCRACY AND PARTICIPATION-LIMITING STRUCTURES

There is a widespread belief that the realization of democratic ideals has been thwarted by the limitations of representative democracy (Baskoy 2009; Behrouzi 2005; Dai and Norton 2008;

Hercheui 2009; Insua 2008). In particular, the participation-limiting structures characterizing the representative democracy model have some inherent limitations that have led to expected undesirable outcomes. These include the rise of party politics, ideological rigidity of political parties, political corruption, and the power of special interest groups to thwart the will of citizens (Hirst 1990; Macpherson 1977). This has led to a general disaffection of citizens with politicians, political parties and the political process, declining levels of citizen engagement, and questionable legitimacy of democratic governments (Hirst 1990; van Mill 2006; Warren and Pearse 2008).

The normative expectation is that e-democracy would lead to better social and individual outcomes and enable the realization of democratic ideals (Behrouzi 2005; Locke 1690/2005). This is on account of the much less restrictive participation-limiting structures that can be enacted in e-democracy as compared to representative democracies. However, participation-limiting structures are a part of e-democracy too. While some such structures could be a consequence of the design of the IS artifacts underpinning e-democracy systems, it is possible that some such structures could emerge too as a consequence of the broader social context within which e-democracy is enacted. An understanding of the emergence and effects of participation-limiting structures on social choice and citizen welfare are important issues in the design and successful implementation of IS for e-democracy.

Hercheui's (2009) research is an excellent illustration of the effect of decision-making and participation-limitation structures on the legitimacy and transparency of community decisions, and on the welfare of and outcomes of e-democratic processes for citizens. Hercheui studied democratic debates in virtual communities and examined the emergence and effects of participation-limiting structures in an e-democracy setting: "These communities present themselves as informal collectives … which have the aim of discussing environmental education mainly through discussion lists, and of mobilizing political efforts to influence the government and private organizations in their policies related to the theme" (p. 3). Hercheui conducted in-depth interviews with 58 members belonging to four virtual communities and transcribed and analysed the interview data to uncover factors "fostering and constraining democratic debate" between members (p. 5). Discussions and debates between members were primarily conducted through the internet, as would be done in an e-democracy.

Hercheui's analysis highlights that within these supposedly democratic communities fostering freedom of speech, participation-limiting structures emerged to constrain and compromise democratic debate in many ways. For instance, members with minority opinion and those whose opinions diverged from those of the leaderships of the group were suppressed, publicly shamed and even expelled from the group; private interests of powerful social actors shaped the debate and activities of the group; and rewards (sanctions) to participants who expressed views aligned with (opposed to) those of powerful social actors. Hercheui observes that while the objective of the communities is to democratise the debate, "community members feel constrained in these very same virtual spaces as they understand they do not have freedom of opinion, especially in situations in which they would like to criticize the mainstream ideas and oppose the interests of powerful social actors" (p. 8). Hercheui concludes that even within these communities dedicated to fostering democratic debate, the space for pure democratic debate is limited: "on the one hand the communities appear as spaces for the democratization of the discussion … and on the other hand members constrain their opinions, respecting established structures of authority and fearing the surveillance of more powerful members" (p. 3).

Hercheui's study serves to highlight the role of democratic processes themselves as an important area for future research. The design of IS for e-democracy needs to be shaped by our understanding of the effect of democratic processes on the outcomes that the state is expected to deliver for citizens. We develop below an agenda for IS researchers to investigate these issues.

3.1 Democratic Processes, Welfare and Citizen Outcomes

Democracy is one solution to the problem of aggregating the preferences of multiple participants in deciding on collective actions (Arrow 1951). The literature on social choice theory identifies multiple social mechanisms for aggregating preferences (Arrow 1951; Schofield 2002). Those social

mechanisms underpin multiple forms of democracy which deliver varying levels of democratic values. For instance, the voting rule commonly employed in a direct democracy is one-person one-vote and the option favored by the majority is accepted as the collective decision. Representative democracy has a more complex version of the same rule. However, as observed by Arrow (1951) in his impossibility theorem, all voting rules are in conflict with some basic democratic norm, such as non-imposition and non-dictatorship. While democracy has been argued to be better than other alternatives (Sen 1999), it is arguable if one version of democracy is better than others. It might be difficult for proponents of direct democracy to make a case that a direct democracy is more democratic than a representative democracy. Rousseau (1762/2005) makes such a case arguing that an individual should not have to subjugate him/herself to the state, as is required in a representative democracy.

There is also an inherent conflict between the democratic process and the rationality of outcomes. Discourse theorists offer one perspective on the democratic process, focusing on the legitimacy of collective decisions and actions. They argue that a democratic process ensuring long, equal and open collective deliberation would deliver consensual and legitimate outcomes (Habermas 1999; van Mill 2006). In contrast, social choice theorists argue that a democratic process produces outcomes that are irrational and unstable (van Mill 2006). Attempts to resolve this conflict suggest that procedures that limit participation and impose justifiable limits on freedom can produce stable and rational social outcomes (Hercheui 2009; van Mill 2006). Representative democracy too can be viewed as a participation-limiting structure that improves the efficiency of the collective decision-making process.

However, neither discourse theory, nor social choice theory, nor their apparent resolutions have been the subject of rigorous empirical examination (van Mill 2006). In the e-democratization process, such questions will need to be resolved in the design and development of IS artifacts underpinning e-democracy. This presents a new agenda for IS researchers:

Research Agenda: To investigate the effects of alternative IS-enabled decision-making and participation-limiting structures on the legitimacy, stability and rationality of collective decisions.

Specifically, we identify the following questions for future research:

RQ1: How do different decision-making and participation-limiting structures embedded within the IS artifact influence the efficiency of the collective decision-making process?

RQ2: How do different decision-making and participation-limiting structures embedded within the IS artifact influence the rationality and legitimacy of outcomes?

RQ3: How can structures embedded within the IS artifact aid in effectively discovering the impact of decision-making and participation-limiting structures on the efficiency, legitimacy and rationality of outcomes and make them transparent to citizens?

RQ4: How can structures embedded within the IS artifact aid in effectively changing existing decision-making and participation-limiting structures to improve the outcomes of decision-making processes?

RQ5: How do different decision-making and participation-limiting structures embedded within the IS artifact influence the political identities and social preferences of citizens?

3.2 Principal-agent Problem and Citizen Welfare

An almost impossible problem with representative democracies is how to resolve the conflict between the interests of the citizens and their representatives. Representative democracy is subject to the agency problem (Eisenhardt 1985). Elected representatives are agents of the people but the interests of

the elected representatives and the people they represent are not aligned. At times, they may even be opposed. This can give rise to opportunistic behaviors on the part of elected representatives. There are ample examples in the popular press of elected representatives not acting in the interests of the people they represent but in their own interests, for instance frequent reports of political corruption.

However, even though in an e-democracy there are no principals to represent the will of the people in the decision-making process, there is the possibility that decision-making and participation-limiting structures could offer mechanisms for influencing outcomes and generating decisions that do not represent the will of the participants. We offer the following question for future research:

> RQ6: How do different decision-making and participation-limiting structures embedded within the IS artifact address the principal-agent problem?

In addition to democratic values, democratic governments are also more likely to deliver positive social benefits as compared to autocratic alternatives (Locke 1690/2005). In addition to the emancipatory outcomes expected of democracies, states are also expected to deliver certain social outcomes and 'common goods', such as economic prosperity, individual rights, property rights, law and order and national security (Locke 1690/2005; Rousseau 1762/2005; Sartori 1987). While there has been considerable discussion in the literature on fair voting schemes and closer proximity of e-democracy to the democratic ideal (Behrouzi 2005), there has been less discussion on the outcomes for citizens and nations. Will an e-democracy deliver, for instance, greater economic prosperity, less crime, more egalitarian income distribution, and greater national security?

> RQ7: How do different decision-making and participation-limiting structures embedded within the IS artifact contribute to citizen welfare?

4 CONDUCTING E-DEMOCRACY RESEARCH

While it is difficult to imagine a full-scale implementation of e-democracy within which the above research questions can be investigated, many decision-making processes at different levels of government can be investigated to address the above questions. In particular, many local governments have decision-making processes that require citizen input as part of the decision-making process. As an example, local governments often invite comments from interested citizens on development applications before they can be considered for approval. However, the decision-making and participation-limiting structures exhibit wide variation across local governments. The level and influence of citizen involvement and control over the process vary across local governments. Further, citizen welfare in terms of economic growth, property prices, rents and public services also varies. Such variations offer an interesting avenue for researching the above questions and informing the design of IS for e-democracy. In addition, future research could also investigate the effect of IS artifacts, such as negotiation support systems, on the outcomes from participative decision-making processes. This research intends to address the e-democracy research agenda by investigating the effect of different decision-making and participation-limiting structures in local governments and other settings on the legitimacy, stability and rationality of collective decisions.

5 CONCLUSION

E-democracy is an important emerging phenomenon that has the potential to transform both government and society. However, a number of issues need to be addressed to effectively inform the development and implementation of e-democracy. This research-in-progress paper has identified a research agenda for e-democracy research that is at the interface between economic, political science and IS research. It has also identified a potential research design for investigating this research agenda. Such research will contribute to shaping the future of government and society. IS researchers are well positioned to extend their existing research traditions to contribute to e-democracy research.

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