



The Strategic Value of Design for E-Democracy

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Abstract: *The paper arguments that a design approach will be essential to the future of e-democracy and e-governance. This development is driven at the intersection of three fields: democracy, information technology and design. Developments in these fields will result in a new scale, new complexity and demands for new quality of democracy solutions. Design is essential to answer these new challenges. The article identifies a new generation of design thinking as a distinct new voice in the development of e-democracy and describes some of the consequences for democracy and governance. It argues that, to be able to design new solutions for e-democracy successfully, current approaches may be too narrow and a broader critical reflection is necessary for both designers and other stakeholders in the process.*

Keywords: *e-democracy, Design, Design Thinking, Strategy, e-government*

Introduction

The adoption of a design approach for e-democratic and e-governance solutions has slowly increased during the last decade. This article describes this trend and identifies the opportunities and challenges associated with it. The rather ad hoc selection of examples below shows how design has been associated with democracy.

- 1997: Schneider and Ingram title their book 'Policy design for democracy'
- 1998: the American Institute for Graphic Arts (AIGA) initiates its programme 'design for democracy' 'to increase civic participation by making interactions between the U.S. government and its citizens more understandable'
- 2002: Andrew Reynold publishes 'The architecture of democracy: constitutional design, conflict management, and democracy'
- 2007: AIGA's Design for democracy project does ballot and election design. It results in field guides to support better quality design of ballots and a series of posters and videos that inspired the American public to vote, created election design fellows
- 2010: Andrew Reynold writes 'Designing democracy in a dangerous world'.
- 2014: Josh Lerner 'Making democracy fun: how game design can empower citizens and transform politics'
- 2013: the subheading for 'the Centre for Civic Design' is 'democracy is a design problem'.

The publications and projects above show the challenges of the association of 'design' with democracy and governance – the term is used in diverse ways, denoting different products and different processes. But beyond such ambiguous and diverse use of the term this article indicates that the actual application of a design approach to democracy is also not without problems. That is

why, as a design approach will become more common, the opportunities and challenges of a design approach for e-democratic solutions have to be addressed.

The growing interest to apply a design approach to democracy and governance has three drivers: (1) the challenges democracy faces and the new quality solutions needed and (2) the growing possibilities of information technology developments and (3) the new direction that the field of design has taken. At the intersection of these three developments fundamentally new opportunities and challenges for e-democracy appear. To answer those challenges effectively it is essential to adopt of a design approach to create better and more successful e-democracy solutions, but it is not without its challenges. Below is an overview of the developments in each of the three fields of democracy, IT and design that, although sketchy, indicate the challenges.

Challenges in Democracy and Governance

The development of democracy has seen great transitions in the last decades. Between 1975 and 2000 the number of nations with a democratic regime increased from less than 30% to more than 60% of all nations worldwide. This led to the perceived universality of democratic principles and their assumed compatibility with diverse religious and cultural traditions. But it also resulted in an increasing diversity of democracies that half way the nineties attracted the attention of researchers (Diamond & Plattner, 2001, p. xi xii). The diversity of democratic implementations made it apparent that a gap existed between form (such as free elections) and substance (such as liberal political freedom and deliberative quality) in the different democracies. Diamond concludes that the third wave of democratization is over, with many of the newly democratic states being far from liberal. Riker (1975) and Diamond (1996) note the challenging nature of this situation because when no valid alternative seems to have arisen, 'most constitutional regimes of the third wave appear "condemned to remain democratic", at least in form' (Riker, 1975 quoted in Diamond, 1999, p. 60). In 2008, 30 years later, the situation is worsened as Boisen and Norrman write that "Democracy, under its short, fragile existence seldom has been more threatened"(Boisen & Norrman, 2008, p. 15). In is why many older and newer democracies try to reconnect citizens to their governments through engaging them in the policy processes, through social participation or increased transparency.

As a possible course forward for democracy Diamond envisions a process of consolidation (Diamond, 1999, p. 69) that results in a regime where democratic institutions are 'the only game in town' (Diamond & Plattner, 2001, p. xiii). Such consolidation requires a shift in political culture consisting of a change in norms and beliefs as well as behaviour on three levels of society: the elite, organizations and the mass of the public. When considering a design approach for e-democracy, the designers involved in the development of new solutions should be able to take this larger context into account: in what state in the democracy they design for and what do they aim for?

This dynamic and its challenges are broader than just democratic forms of governance. China and other regimes have similar challenges in governance. Although not seen as democratic in nature they are facad with question of legitimacy (Holbig, 2006), the relation between state and corporations (Liu, 2006) and the role of communities and decentralized self-governance (Bray, 2006; Howell, 1998).

In this situation any new solution for e-democracy does not function in a stable context. Its designers may be asked to create a new experience of democracy in the hope that citizens will

reconnect and be stimulated to actively contribute to a civil society. Solutions that simply extend the current situation will not contribute positively and their designers will need to work from an understanding of the underlying processes that shape civil society and consequently its democracy.

Developments in Information Technology

The fields of e-government and e-democracy originate both when public Internet in the mid-nineties enables citizens to exchange digital information amongst themselves and between themselves and public bodies. One way to outline the development of e-democracy is to relate it to the development of the Internet. The first phase of e-democracy 1.0 is mostly focussed in online communities and informing citizens. With the onset of web 2.0 in 2004 e-democracy development and research focus increasingly on the contributions of social media. These have been looked at for established democracies (John C. Bertot, Jaeger, & Grimes, 2010; John Carlo Bertot, Jaeger, Munson, & Glaisyer, 2010) as well as for newer developments such as those during the Arab spring (Howard & Duffy, 2011).

Although these decades saw a great increase in the quality of e-government solutions, the results in the field of e-democracy have been much less obvious (OECD, 2005). The e-democracy solutions that are developed have an individual character being are project or single issue based. e-Petitions is one of the larger initiatives that, because it acts as a separate process, was relatively easily to implement and could be introduced without interfering with other aspects of the primary process. But generally the effects of these e-democratic developments are still uncertain (Tomkova, 2009) and specific solutions have contributed relatively little to the overall quality of democracy (OECD, 2005; Peña-López, 2011a). It doesn't mean that the information society was without influence, but a greater effect on the quality of democracy has been seen from developments like digital online media and social media in general. Compared to the e-democracy solutions that embrace the new possibilities of technology (websites and social media) remarkably little development has taken place to support the day-to-day issues of existing democratic processes or the structural reporting of financial aspects of political issues (Mulder & Hartog, 2012).

Continuing this trend e-democracy will follow the ongoing development of IT, internet and web technology. The development of web 3.0 and 4.0 solution for e-democracy will create new opportunities but at the same time pose challenges for democracy. The semantic web (web 3.0) will standardize the machine-readable expression of knowledge. By facilitating access to knowledge it may stimulate democratic participation. The increasing transparency of decisions and processes may create a level playing field between those that have knowledge and those that don't and between professionals and laypeople (Vossen, Lytras, & Koudas, 2007).

When web 4.0 will facilitate machine-readable argumentation it may facilitate an easier understanding of the complexities of political issues, a development that may consequently lower the barrier to participation in a civil society and its democratic process. The same holds true for model-driven business solutions that automate processes and decision-making. The availability of big data and open data collections may provide us with new ways to keep an eye on society, but much research is needed to see what we may measure and what the results mean (Peña-López, 2011b). Its possible contribution to democracy may be that it provides citizens with direct information on what is going on and create greater transparency.

Such coming developments not only create new opportunities but are also wrought with ambiguity. They will move e-government and e-democracy solutions beyond the context of administrative services and social media into a next generation of digital complexity. Processes of decision-making may be automated. Knowledge may be integrated in real time where necessary. This creates a possibility of government and democracy being increasingly data and algorithm driven. It creates forms of digital government and democracy as a complex ecology where data, information, artificial intelligence and customized presentation of information together may provide more advanced solutions to citizens and civil servants. This is how the semantic web, big data, open data and model driven business solutions have the possibility to be game changers just as social media is now. It is clear that such solutions are no longer value free and will and that such new complexities will need to be researched carefully, not only in their technical aspects, but certainly also in their political and democratic consequences.

New Directions in Design

As shown in the beginning of this article the field of design has been increasingly associated with e-democracy and e-democratic solutions. The increasing association can be seen to express the more general development of the design field answering the broader and more complex issues in society. After the first generation of graphic and product designers that worked individually to create individual products, from the 1980's the second generation of design goes beyond such functional design in different ways. It starts to apply itself to broader social and cultural challenges of society such as poverty and quality of life where designers find themselves designing solutions to social problems in suburbs, schools, healthcare and public administration. In the following examples teams of designers work together with the stakeholders on problems in a process called participatory design or co-design.

- 2000: Stanford University initiates its Center for Social Innovation
- 2004: During the EU funded Spark! Project design students work on solutions to social problems in neighbourhoods in London, Oslo and Latvia. Such problems would otherwise have been the field of social professionals and welfare workers (Verwijnen, Karkku, & Thackara, 2004)
- 2006: the UK Design Council's RED team outlines how they developed 'transformation design' methods for public services (Burns, Cottam, Vanstone, & Winhall, 2006)
- 2007: Geoff Mulgan writes 'Social innovation – what it is, why it matters and how it can be accelerated' for the Oxford Said Business School (Mulgan, Tucker, Ali, & Sanders, 2007)
- 2009: Tim Brown introduces the concept of 'design thinking' in his book "Change by design" (Brown & Katz, 2009)

Richard Grefé, the chairman of AIGA (the American Institute of Graphic Arts) explains the long term development of the design field as one that moves from design with a focus on form to design with a focus on both form and content, and finally to a focus on form, content and context (Design Thinking documentary, at 1:10:05).

Characteristic of this development of the design field is the shift from the material to the immaterial. Krippendorff refers to this as 'the semantic turn' (Krippendorff, 2005), a paradigmatic shift in design where the emphasis is on semantics – the meaning of the artefact designed for those

that use it. Krippendorff distinguishes science from design where science is attuned to measuring past events and theorizing those occurrences that stay the same. Design, on the other hand, creates artefacts, practices and narratives that must then be realized in a network of stakeholders. Design, in his terms, to the extent it is innovative, may well break with past theories, overcome popular convictions, and challenge stubborn beliefs in a history-determined future. Fundamentally, past observations can never prove the validity of truly innovative designs. The challenge is how this relates to the experienced and required quality of existing or new democracy. Are the designers of e-democracy solutions able to formulate those 'new solutions' and 'design requirements' for democracy?

Another characteristic in the development of the design field is the move from the simple to the complex. Tim Brown introduces the concept 'design thinking' (Brown & Katz, 2009) to stand for a more collaborative, human-centred approach that can be used to solve a broader range of challenges in care, government, poverty and ecology. Design thinking distinguishes itself not by its phases (define, research, ideation, prototyping, choosing, implementing and learning) but by its application to complex challenges. Its interdisciplinary teams open-mindedly start with re-defining the initial design question. Brown's concept of design thinking becomes quite meaningful to other fields but less so in the design field itself despite a long history of academic development and debate (Johansson-Sköldberg, Woodilla, & Åtinkaya, 2013). In his book 'The design of business: why design thinking is the next competitive advantage' Roger Martin (Martin, 2009) describes design thinking as creating a balance between analytical and intuitive thinking. Where analytical thinking optimizes financial indicators, design thinking follows the constantly developing user needs. The question is whether solutions for e-democracy, forming part of an complex social, cultural and political contexts, would benefit from 'design thinking'. AIGA's Grefé illustrates design thinking when he explains what they did when asked to redesign the ballot:

"For democracy to work well there has to be trust between the government and the citizen. And trust is established by understanding and communication. And almost all of the communication between a government and a citizen is based on asking for information or giving information. Which means that democracy depends on information design. When the government came to us and asked us to redesign the ballot we said we wouldn't redesign the ballot. But what we would do is redesign the election experience, because it's not the ballot that is critical. It's the experience from a time a citizen discovers that there will be an election to the point at which they understand the issues and go through the process of actually getting to a voting place, marking a ballot, and then leaving the space confident that it was marked properly and it was counted. And that's the whole election experience. Now there's a case where instead of designing a ballot we redefined and designed an entire experience."

(Design Thinking documentary at 00:46:30)

These developments in the design field show that the increasing adoption of a design approach to e-democracy isn't an isolated event but part of a much broader trend where design and designers actively develop new practices.

To be able to reflect on design and the challenges may create it is necessary to have a clear notion of design. In trying to develop a formal definition of design Ralph and Wand (Ralph & Wand, 2009) analyse more than 30 different definitions. It doesn't seem possible to define the concept 'design' in a single general and precise way and the many diverse definitions are specific to the contexts in which the practice is being applied. Consistency appears only at the most general level:

"Design involves two different environments: the environment of the design object, and the environment of the design agent." and: "the design process, or activity also occurs within some environment".

In the different definitions of design the term may refer to an artefact (the thing to be designed), a process (the design process itself) or a system (the totality of the design approach and its process and results) and the result of which may be an artefact, a solution or a plan. Design projects adopt a design worldview – 'a way of looking onto the world' – and instantiates a design approach and strategy - 'a set of beliefs about how design (and related activities) should be done'.



Figure 1: Elements of design

The products of design may be as diverse as physical artefacts, processes, symbolic systems, symbolic scripts, laws, rules and policies or human activity systems. The elements of the process of design are object, agent, goals, object environment, requirements, primitives and constraints. Adding to these different aspects of design Cross (Cross, 2001) introduces the term 'designerly way of knowing' to distinguish it as being separate from other 'ways of knowing' such as the scientific and the artistic. And when we apply design thinking to democracy it is this way of thinking that creates a difference.

Design Approach Essential for E-democracy

Three reasons determine why a design approach will be increasingly essential in developing solutions for democracy and governance: scale, complexity and quality.

The ongoing adoption of ICT in general will stimulate the creation of an increasing number of e-democracy solutions. The current individual and isolated systems will be joined by e-democracy services built into the day-to-day processes of e-democracy. The increasing number of individual e-democracy solutions and as well as their interactions create an e-democracy 'ecology' that will require a design approach to maintain quality.

The complexity of e-democracy increases when, next to informing citizens and engaging them, new solutions address will create automated digital systems for knowledge management, data, argumentation and decision making. These directly influence the quality of the primary process of democracy and will require design that is able to take the democratic and political consequences into account.

Quality refers to the better quality needed when e-democracy solutions become more effective and users become more educated and demanding. Here design brings its experience of usability, design thinking, co-design and participatory design to involve users and create systems that closely match their requirements.

Designing Democracy: Challenges

Embracing a design approach for e-democracy is necessary to address the new scale, complexity and quality of solutions and yet it is not without its fundamental challenges. What worldview will drive the process? Does its functional and innovation driven design approach relate favourably to the political context? In the design environment, for what democracy are we designing? What does it take to think in terms of design products? Below four areas of challenge are indicated with an initial direction for solutions.

The Design Worldview: New Contextual Thinking for Designers

Any design, like any activity, departs from a worldview, implicitly or explicitly. Does design and do designers have a worldview that is comprehensive enough to support design for democracy? Pouredhnad (Pourdehnad, Wilson, & Wexler, 2011) argues that although design may bring its own viewpoint, it actually lacks an integrated worldview. To compensate for the lack the authors propose to integrate design thinking with systems thinking and suggest that this might create the third generation of design.

“Systems thinking replaces reductionism (the belief that everything can be reduced to individual parts), cause and effect (environment free theory of explanation), and determinism (fatalism) with expansionism (the system can always be a sub-system of some larger system), producer-product (environment-full theory of explanation) and indeterminism (probabilistic thinking). Additionally, it replaces analysis (gain knowledge the system by understanding its parts) with synthesis (explaining the role of the system in the larger system of which it is a part). Analysis is useful for revealing how a system works but synthesis reveals why a system works the way it does? (Pourdehnad, Wilson, & Wexler, 2011, p. 3)

Expressed in this way systems thinking adds a fundamentally different quality to the design process and might be one of the requirements when designing for democracy. Another criticism to design thinking was that, regarding the complexity of the problems it undertook, it wasn't going far enough. Paul Pangaro (Pangaro, 2010) suggests, reasoning from a cybernetic point of view, that designers should be concerned at a higher level and engage in four different conversations that are interlocked through iteration and evaluation:

- Conversation to agree on goals
- Conversation to create new language
- Conversation to design the designing
- Conversation to agree on means

The level of reflection these questions introduce might be what is needed to prevent solutions that are too simplistic when striving for truly sustainable solutions for e-democracy.

Both these criticisms point out that with the development of the design field towards design thinking comes the need for a deepening reflection. With regard to the design of democracy the question is whether such quality of reflection is not a prerequisite. Answering Pangaro's four questions would lead to new thinking for democracy as well as for design and is not something done lightly by most. This is in line with the more general criticism to design thinking that only few are able to do so. While researching new design directions in The Netherlands, an audience of 100 designers estimated that about 5-10% of all designers may be able to tackle the new complexity

of social design challenges (Krabbendam, 2007). What designers should design for democracy and which of those are able to do so?

Without such a deepening reflection on design, its role, process and outcome there is the possibility that the design for democracy generates products and services 'by popular design', based on the simplest of notions, not placed in a larger context and not resulting in sustainable solutions.

The Design Approach: Functionality versus Democracy

Design aims to create value, but in the context of democracy such 'value' goes beyond simply a better quality of solutions. When design thinking is sometimes described as being strategically important for business (Martin, 2009), could it play a similar role for governance and democracy? In fact, Farrel and Goodman report so explicitly (Farrell & Goodman, 2013, p. 1):

'...what works today is a more disciplined, systematic approach to solving public-sector management problems—in short, government by design. Government by design calls on public-sector leaders to favour the rational and the analytical over the purely ideological, and to be willing to abandon tools and techniques that no longer work. Four principles are at its core: the use of better evidence for decision making, greater engagement and empowerment of citizens, thoughtful investments in expertise and skill building, and closer collaboration with the private and social sectors. Each of these principles is central to creating more effective yet affordable government.' (Farrell & Goodman, 2013, p. 1).

They see the design approach compensating for the less constructive dynamics of politics with great possible value:

'The value at stake is staggering: prior McKinsey research suggests that improvements in government performance could amount to as much as \$1 trillion in increased productivity and cost savings by 2016 in the G8 countries alone.³ Through government by design, public-sector leaders can move beyond partisan debates and politicized headlines, and make true progress on society's most pressing problems.' (Farrell & Goodman, 2013)

Here we see a normative aspect in the application of design: it strives to create better solutions, taking the different viewpoint of users into account. But as Farrell et al. state, this 'better' is a different better than the choices that are made in the political context of democracy. The fact that solutions for democracy are decidedly 'political' and that 'government by design' is decidedly 'functional' may show to be a fundamental issue and should stimulate us to invest in research and reflection. Farrel and Goodman identify the possible positive effects of design for government, but what are the possible perverse effects? The fundamental ambiguity of functionality in relation to democracy is illustrated by a remark from the director of the Second Chamber of the Dutch parliament:

*"The reason for the existence of parliament is the prevention of war through facilitating dialogue. Efficiency is not a measure for that activity."*¹

A functional design approach to create and implement government solutions may irk citizens and their reaction may be quicker and more forceful than an approach of research and reflection. Recently the Behavioural Insights Team of the UK government started to use the

¹ Personal communication, 1996

insights of behavioural psychology to stimulate citizens to adopt policy such as healthy ways of living. They attracted unfavourable attention and were described in the media as 'the sinister nudge unit' (Gill, 2014). This is a possible reaction to the more explicit and public use of effective and functional design methods in matters of government policy.

The Design Environment: What Democracy to Design for

Democracy is not a singular concept, and designing for democracy requires sensitivity to its range of possible expressions. There is criticism that many e-democracy solutions are in fact addressing a limited field. Carl diSalvo argues that a lot of design for democracy is implicitly focussed on creating consensus while neglecting other possible dynamics of what he calls agonistic pluralism (DiSalvo, 2010). Agonistic pluralism has a central role for those processes that reveal information and challenge the status quo. In such a view of democracy access to information is not a necessary basic right. His argument is that e-democracy should focus on more than just deliberative liberal regimes. Designers of systems should have the ability to create fitting solutions in both cases. This would require them to be able to work on a dimension of possible solutions embracing both consensus based solutions at one end and agonistic pluralist solutions at the other. Any design for democracy would need to know where its solution located on that dimension and why it is there. All involved in the design of solutions should be aware of these distinctions, but in today's design education there is little attention to such issues.

Along similar lines is the critique about the relationships between participation and democracy through e-democracy may be contested (Pateman, 1970) and in fact has been contested since the 1930's (Schumpeter, 2010). As, in design thinking, the first step consists of [re]formulating the original design question those involved in the design of solutions for democratic processes should be aware of such issues. What is the larger context? The question is whether design methods such as co-design or participatory design are powerful enough to create solutions that bypass such often held notions surrounding democracy of whether they to be explicitly aware of the worldview they work from.

A design approach has the ability to create new solutions for tomorrow: does design create solutions for today's democracy or that of tomorrow? When today's solutions are judged to be inadequate we will strive for the new. But solutions will need to sustain a consistent experience of democracy while at the same time providing new inspiration to citizens and compensate for current inadequacies and instabilities. The 'newness' that comes so natural to a design approach, may become a sensitive issue when applied to democracy solutions.

And finally, the experience of living in a democracy may be determined by much more than just systems and solutions to democratic processes such as policy development or voting. When we enlarge the notion of democracy to that of a civil society, the question becomes whether our healthcare solutions, our economic organizations and our learning institutions contribute to a civil society that creates the feeling of being embedded in a democracy. This would mean that democratic quality may be designed into many different systems and that, in order to be successful it may be advisable to develop democratic design patterns that are easy to implement in different contexts and, although they have different goals, still create an awareness of a civil society and democratic quality in their users.

The Design Product: the Fundamental Materiality of Democracy and Governance

An essential quality of design is its focus on the materiality of the product it creates. That makes embracing a design approach for democracy challenging for the other stakeholders involved in democracy. For all its abstract and political notions, in the end democracy shows itself in the material experience of papers, screens, events, conversations, sounds and images. That power of artefact, infrastructure and process and the fact that the quality of (the experience of) democracy is determined by the quality of those material expressions is mostly underestimated by other stakeholders. In a recent design workshop on the question “where do you meet Europe in your daily life” the audience (an international group of policymakers and NGO’s) could not identify the concrete moments and situations in which they actually met Europe. Their dominant rhetoric was that of in fields of democracy and governance: abstract political and policy concepts. Only after repeated attempts they could specify specific material situation that calayed a notion of ‘Europe’ in their daily life, and only after that they were able to envision and design new products and services that would enhance that notion. The structural introduction of a design approach for democratic systems and solutions will lead to an increased awareness of the materiality of democracy and the importance of its quality.

Design for Democracy: Opportunities and Challenges

Embracing a design approach to e-democracy seems necessary and unavoidable, but there are opportunities as well as challenges. Applying design may create better quality solutions that are more attuned to the wishes of citizens. The implementation of such solutions, being created in a methodical way, may be scaled up easier. But looking at the different elements of the design process several issues come up. The design worldview would have to embrace systems and/or cybernetic thinking to be able to deal with the inherent complexity of the context and should be aware of the larger context of democracy and politics. The design approach may be more inclusive of citizens, but will have to be aware that such methods may create solutions that are too narrow to be sustainable in the long run. For other stakeholders involved in designing democracy solutions it will help when they are aware of the contribution that the material expression adds to the experience of democracy. Design for e-democracy requires a new level and quality of critical reflection that needs to be developed alongside the activity of design itself. The design field should identify the new opportunities and challenges of good design for e-democracy at the level of the world view, the design view, the design process and the possible products. To create awareness of and knowledge and design skills for good quality solutions there should be adequate curriculum to educate designers, clients and other stakeholders.

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