A Global Advisory Parliament Integrated with the Social Web: How Transitive Delegative Democracy could Reduce the Democratic Deficit and attain Critical Mass

Wybo Wiersma Oxford Internet Institute University of Oxford mail@wybowiersma.net

1 Introduction

As the number of internet-users approaches three billion, the internet has started to impact politics in several ways. Parties are using ICTs and web-technologies to solicit funding and to better target voters, as in the successful Obama campaign. Most MPs now stay in touch with their constituents using e-mail and various web-platforms, such as those provided by mySociety [76]. Even the government is harnessing the power of IT to provide better government services [21]. And yet, the legislative process itself, still remains largely untouched by the internet.

This goes contrary to expectations commonly expressed in the 1990s, such as ideas about the internet's supposed intrinsic democratic potential, and lengthy treatises about it enabling the introduction of large-scale direct democracies. Some even predicted a watershed change in politics akin to the French Revolution [15, 29, 53, 78]. Nothing of the sort has happened, though with the lower cost of organization online, the recent eruption of movements such as the Arab Spring, Indignados, and Occupy Wallstreet movements, and the rise of citizen engagement in online activism, it nevertheless seems plausible that the online public sphere - if properly aggregated - could still play a significant, and beneficial role in the legislative process.

In this paper, two related questions will be addressed. First of all, can an Online Global Advisory Parliament (henceforth OGAP), improve legislative functioning? In a brief answer it will be argued that it could begin to address some of the legitimacy issues that are plaguing modern Western democracies, and that it could give the online public sphere what William Dutton has called the Fifth Estate — and popular social movements a more focused and permanent voice [33, 34]. And such a voice is important, because the Arab Spring in part failed exactly for lack of such a focused voice. They left a power-vacuum after the fall of Mubarak, that was then quickly filled by the military and other traditional forces.

Secondly, how can an OGAP be set up for it to gain traction, and make a difference? To begin, three challenges to the success of an OGAP are discussed: First of all, it is hard to change existing institutions, especially in ways that involve web-technology, and therefore an OGAP should be a civic initiative, with only an advisory function. Secondly, as direct democracy demands too much from citizens, and gives little incentive to each voter, another voting system than direct democracy will have to be used. And thirdly, it will be argued that attaining critical mass is the greatest challenge facing an OGAP; but one that might be overcome.

Then Transitive Delegative Democracy (TDD) is going to be discussed as an alternative to direct democracy. It is a hybrid of direct- and representative democracy, which provides incentives to maximize representation, and also combines many of the virtues of both plurality systems and proportional representation. Finally, several strategies for making the attainment of critical mass more likely, are going to be discussed: such as integrating it with Facebook - the primary platform that helped spread the recent wave of movements across the internet -, and replicating the agenda of national parliaments, which should help make its advise relevant for media and politicians. But first, the limits of this paper are going to be set out.

1.1 Limits

It should be clear from the start that this paper is highly experimental, and at best offers a (somewhat) rigorous analysis of an interesting, but arguably outlandish, project proposal. As for the proposals content, it should be noted that in this paper only an advisory OGAP is proposed, and not the amendment of existing institutions. In addition, no autonomous mechanism for agenda-setting will be devised. Instead it will be proposed (one of the novel contributions of this paper) that the OGAP replicates the agenda of traditional institutions.

Secondly, the focus in this paper will be on global-, and to some extent national issues. Its usefulness for local decision making, or use within organisations, will not be discussed at length. Also, though important, the digital divide, whether in terms of access, skills, or motivation, and its impact on democratic justice, will not be discussed [75]. Neither will issues be discussed that are specific to the 3rd world, or relating to the impact of regional cultural differences, for reasons of space.

In addition, theories on the role of deliberation, the origins of political interests (whether private, or based in public discourse), and their impact on legitimacy, will not be delved in too deeply, even though these are contested and important issues [1, 18, 28, 26, 31, 101]. Deliberation will only be mentioned where it could be furthered by an OGAP. The focus will be on voting systems, their democratic legitimacy, and on the incentives affecting them.

It should also be pointed out that this paper is not written from a technological deterministic position. It does not argue that the type of media and form of government, are related [9]. ICTs can both enhance democracy and Orwellian control, and which way things fall is largely a function of collective decisions. Technologies at best provide an environment that affords or limits certain choices. But neither does this paper go to the other extreme of only focusing on the use of IT within traditional institutions, when looking for changes brought by the internet [18, 75]. It will in fact be argued that traditional legislative institutions have mostly been, and likely will be, left untouched.

Finally, this paper will not be discussing security issues surrounding electronic voting, nor will it propose or discuss a specific design for an OGAP, or things such as specific webtechnologies or (mobile) devices, and their usability aspects, even though such matters are likely to be crucial for the attainment of critical mass [8, 11, 62, 63, 65, 83].

2 Why an OGAP would improve legislative functioning

2.1 Issues of trust and the democratic deficit

There are widely felt legitimacy issues with democratic representation in Western democ-The level of trust in politicians is racies. at an all-time low. Something which is not helped by political scandals that figure prominently in the news, a generally reduced respect for elites, politicians involvement with lobbyists, their dependence on private donors and bankers, and the professionalization of political communication — not to speak of spin during Election campaigns. [13, 14, 23, 29]. In 2003 no less than 72% of the British public felt disconnected from their MP [24]. Turnout for elections has gone down as well over the last decades, as has loyalty to, and membership of parties [90]. And discontent with established politics was recently illustrated again by Occupy Wallstreet, the London Riots, and other major protests [49, 43].

Another force that is undermining the legitimacy of national democracies, is globalisation, and with it a rising number of increasingly urgent border-spanning issues. Well known ones are global warming, nuclear threats, infectious diseases, and the depletion of limited resources. Then there is the regulation of international trade, and the issue of corporations that are externalizing costs (such as pollution) upon foreign populations [74]. And then of course there is the internet, which also permeates borders, even if extensive filtering is increasingly happening [59]. All these make that our collective fates are no longer shielded by national borders. Thus, even if traditional national poleis had been in good shape, they would still be becoming less relevant now [32, 52, 51, 59].

Finally, even where there is international legislation and regulation happens, such as through the WTO, the World Bank, EU, and UN, democratic oversight is absent, weak, or indirect [89, 93]. Meaning that at best people appointed by democratically elected governments are involved in the negotiations. In these negotiations, however, economic and military might and other strategic considerations, rather than the fraction of the worlds population represented by negotiators, determines the outcomes. This is called the democratic deficit [15, 77]. A global OGAP, assuming it attained critical mass (see section 3.2), could bridge this gap to some extent, as well as revitalize politics by strengthening the online public sphere, which will be discussed now [80].

2.2 Reconnecting politics and the public sphere

The other reason an OGAP could improve the legislative process, is that it could (re-)connect the political process with the public sphere [29]. The online public sphere, which has been identified as the Fifth Estate, is one of networked individuals, rather than formal organizations. Thanks to the lower costs of communication and organization on the internet, citizens can increase accountability, through what has also been dubbed the monitory democracy [10, 59]. In addition, it also allows citizen to go beyond traditional institutions to organise themselves, and to articulate and aggregate their interests [18].

Publications on how the internet can harness collective intelligence are several, but in short it comes down to the fact that as a manyto-many-medium, it allows ordinary citizens to collaboratively produce things and to filter information. Production happens in projects such as the Linux OS, the Firefox browser, and Wikipedia [42, 84, 50, 84]. While filtering and aggregation are done most clearly on news-sites, such as Slashdot and Reddit, where ordinary readers function as editors by voting on reader-submitted news-stories [86]. The process that determines whether a story appears on the front page is similar to that of the market in its distributed nature, in that countless individual decisions also determine aggregate-level effects, such as the flow of information (rather than goods). An OGAP could, without going into specifics, filter political ideas and views in a similar way.

While it is true that the success of online platforms generally is determined by a small core of active participants, this is true for offline political action as well. Even if (initially) limited to an active core, aggregating peoples ideas and views in the public sphere, would be a good idea for two reasons. First of all, it can provide a clear, ongoing focus for deliberation, with every won supporter tallied, giving online social movements a process to rally around. Secondly, it would provide a clearer and more legitimate message to politicians about peoples preferences.

Naturally, sample polling, and possibly automated sentiment analysis of (most) online communications, could provide information on public opinion as well, but explicit TDD votes are still more legitimate, more inclusive, and are/can be made harder to game/spam. More traditionally, articulation and aggregation were some of the main roles of political parties, but as noted, trust in parties is declining, and many people have turned their back to politics. While at the same time one-issue politics is growing. This makes political disinterest seem not to be intrinsic, but rather indicative of problems in communication and citizen representation [17].

Related to this, there is the notion of a weak, and a strong public sphere. Where a strong public sphere is one in which there is a direct way for citizens to influence policy, while in a weak one there is not (and cynicism about politics dominates) [40, 93]. As Robert Dahl noted, the current public sphere is weak: He identifies five types of participants in politics: those in office, bureaucrats and lobbyists, informed citizens, habitual voters, and finally non-participants. He argues that broadcast media allow the first two types to influence habitual voters, while removing informed citizens from the equation [25, 92]. Or to speak with Coleman, who noted something similar: broadcast media are very good at making people aware of issues, and maybe at working through them in televised debates, but not at allowing citizens to take part in debating and choosing resolutions [23, 27]. An OGAP could help informed citizens take part again, even if it were not granted any formal (advisory) powers. More on institutions now.

3 Challenges to such improvements

3.1 Existing institutions are hard to change

It would be best if an OGAP were established independently and in an informal advisory role, rather than as a formal part of government. As A. Strauss has argued, there are four ways in which an (advisory) world parliament could come into being: as an amendment to the UN (which would require a 2/3rd majority in the council), as a subsidiary of the UN, as is proposed by the UNPA project, through inter-state treaties (as happened regionally in the EU), or as an initiative of civic society [38, 95, 96]. The first three require significant changes to, or powerful support inside, existing institutions, while the latter does not.

As always there is a tension here between enhancing and going around existing institutions because institutions are inert [90, 95]. And legislative institutions are particularly inert. Significant changes to the legislative process have only happened over periods of several decades or even centuries; an eternity compared to the pace of change on the internet [55, 64]. Considering the urgency of currentday global problems, this is time we might not have. In addition, some would also argue that there is a risk in altering the cores of institutions such as parliaments and constitutions, that have kept despotism at bay.

Reforming a party, or introducing a new one, might be an alternative strategy. Yet the introduction of online democratic elements in existing parties is very challenging. While ICTs are used within them for administrative purposes, for targeting voters and for topdown communication, they rarely are to any real extent used for consulting members [22, 53, 61, 68]. Even NGOs rarely do so [60]. Another complicating factor is that existing party elites stand to lose from bottom-up influence [1]. As for new parties, there currently is one: Demoex, a Swedish party with one seat on a city council which mirrors peoples votes in online polls [79]. But as a fringe phenomenon it remains somewhat associated with the far left. Finally, introducing a new party stands no chance in countries without proportional representation.

Rather than reforming parliament, or injecting online elements through a new party, an OGAP that shadows real parliaments remains the best option. It could offer a gradual route for political innovation, growing on the side, and sending its resolutions as recommendations to politicians. Also, it would not be the first time that an internet-endeavour went around existing institutions. While generalization has its limits, almost all internet success-stories have so far: Amazon was not started by a bookstore chain, Facebook not by a private members' club, and E-bay not by an auction-house. If anything, the internet — with its lowered costs of organization could afford an advisory world-parliament to come about as a citizen initiative [10]. However, even a fully functional OGAP will face challenges, the biggest of which is attaining critical mass, about which more now.

3.2 Critical mass as the main challenge

Attaining critical mass is a notoriously hard problem for new web-communities. The crux of it is that if there are no users it will not be useful for newly arriving visitors, but unless it is useful, there are never going to be initial users to make it useful. In the current context this means that as long as few are represented by the OGAP, its recommendations will not have any impact, but until its recommendations have some force, nobody will care to partake in it [81].

Critical mass has only been studied to a limited extent. In sociology it is mostly limited to collective action in protests, charitable giving, and especially free-rider problems, and the extent to which information or organisation(s) can impact these [70, 71, 69]. In economics, and the economics of adoption, most literature exists on cases in the offline world, such as the introduction of fax-machines [3, 35, 102]. What those teach us is that difficulties in attaining critical mass come from startup problems with network-effects [57]. A phone network is the simplest example of a system that exhibits network-effects: If you were the only one in the world who owned a phone, you couldn't call anyone. So you wouldn't buy one, unless others did so first (except perhaps as a status-object).

There is little agreement on a definition of critical mass across (sub)disciplines [5, 35, 41, 44]. The definition that we will use here is

that of a minimum core group of active users needed to sustain a community; the number of participants needed to make participation worthwhile for interested newcomers (attracting them at a higher than defection rate). It is analogous to the concept of critical mass in physics: the smallest mass that will sustain a reaction [36, 5]. The most important factor in the attainment of critical mass for a growing platform, is whether from the start, the incentives are right for people to participate, and remain so as it grows. As will now be argued, traditional direct democracy fails in this respect.

3.3 Direct democracy does not work

As will be argued now, direct democracy does not work, and is not suitable for an OGAP. Ever since the nineties, online voting (and TV-voting before that) has been pictured in terms of a direct democracy: everybody votes on everything, following a one (hu)man one vote-principle. An example of a project employing this approach is the American website vote.com. On it, a series of yes-no questions are put up every day, which attract a couple of thousand votes. A notable feature of the site is that its results are sent on to politicians, so it is advisory [13]. On *MetaGovernment.org* twenty more projects can be found, none of which very large or active [72].

There are good reasons for representation, as Miller, and classical political philosophers, such as Hamilton and Madison, have clarified: selecting experts (the filtering ideal of representative democracy), and creating room for debate and rational consideration (limiting the influence of mobs) [85]. But the biggest is that direct democracy isn't scalable. Not in terms of meeting-size limits, or the cost of tallying the votes, as those restrictions have indeed been lifted by technology, but in terms of incentives [1, 73]. Informing oneself, and voting about every issue takes time, and arguably expertise, while in large nations, let alone globally, each vote has such a minute influence on the outcome, that for most individuals the rational, self-interested course of action, is to spend their time on something more profitable [46, 47]. This is called *rational ignorance* [39, 54]. Thus even if a direct democracy were to attain critical mass, it would never be able to maintain widespread participation.

Several alternatives have been proposed for reshaping the incentives, such as sampling referenda, which select those who can vote as a random sample of the population, and deliberative polling, where the sample is asked to debate the issues under consideration, before a vote is called [7, 37, 39, 91]. And while there is something to say for these sortitionbased models, TDD will be argued for instead, because, besides doing better on incentives, it can provide representation for everyone, which is important for trust. More on TDD now.

4 Transitive Delegative Democracy as a voting system

4.1 Providing incentives to vote through delegation

TDD is a hybrid between direct and representative democracy that provides better incentives to vote. A delegative system was first proposed by Charles Lutwidge Dodgson (also known as Lewis Carroll, from *Alice in Wonderland*), a scholar at Christ Church Oxford, and then extended and formalized by G. Tullock in 1967. It, and very similar ideas, are also named proxy voting, liquid democracy, and delegable- or delegate cascade democracy [98, 46, 86]. Its core idea is delegation. That is, citizens can either vote directly, or voluntarily assign their vote to a proxy that will represent them, similar to how this happens in stockholder voting.

Also, as in stockholder voting, people can change their mind and choose to vote themselves instead. The selection of a proxy can either be pictured as temporarily passing on ones voting-right, or as automatically copying the proxies vote onto ones own ballot paper. Another important property of TDD, and the one that makes it different, is that delegation is transitive, in the sense that the representative can, in turn, transfer his collected votes on to another proxy, creating a tree or — as not all votes are proxied on – rather a forest, of influence (see figure 1) [2, 46].

TDD improves incentives for all involved: For those passing on their vote, the marginal cost of political participation is even lower than in representative democracy with its recurring election-days, as in TDD the absolute minimum requirement is to select a proxy only once in ones lifetime. Also, because of transitivity, citizens first-layer proxies can be people they know and trust personally, rather than distant politicians, thus empowering informed citizens. While proxies, thanks to the extra votes they collected, will be more incentivised to vote and to really consider the issues under consideration [46]. And both the greater impact of votes (for proxies) and lower marginal costs to voting (for those selecting proxies), have been shown to increase turnout [12, 54]. In political theory, besides the filtering ideal, there is that of representativeness, where representatives should best mirror the general population. By increasing turnout TDD will strengthen this ideal as well [39].

However, TDD will also strengthen the filtering ideal, because it does not leave people atomized: (voluntary) filtration starts at a local level, and flows up along personal relationships of trust. Assuming current (Western) levels of education and personal freedom, there is little reason to suspect that voters and proxies together will be less dependable than politicians. Especially as mob behaviour is rare (at least different) in online collaborative spaces, and might even be limited to physical space [87, 20, 37]. It is true that occasional flame-wars happen in the online sphere, which can drive out knowledgeable partici-

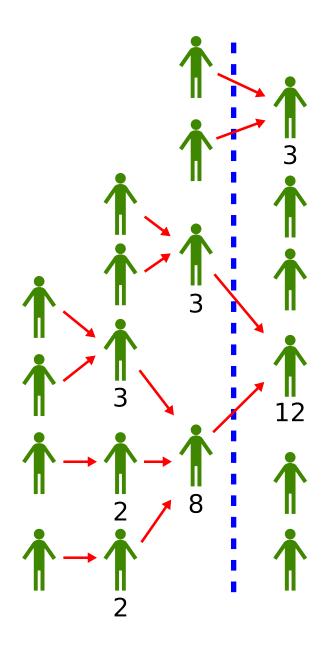


Figure 1: A schematic representation of TDD. People delegating their votes are shown at the left of the dotted line (recursively in 5 cases). While those that vote on issues themselves are shown to its right. Some of them have higher voting-power, because of collected votes (image by William Spademan).

pants [18]. But flame-wars can be contained by separating the voting system from the deliberative spheres (by allowing it to be embedded in many web-platforms and forums).

At the other extreme, there is the risk of elites dominating the system. For example the top 10 political bloggers are all well-educated and male, and the Gini-coefficient (measure of inequality) of traffic to blogs is 0.75, which is higher than that for incomes anywhere in the world [53]. This probably will remain a major concern (of any, even the current voting system) [48]. Though, as long as most websites remain open to user-comments, and limits are put on the number of votes anyone can personally proxy for (say 0.5% of the total), then there should be little room for dictators.

Another danger that is often mentioned, is that of vote-selling, and/or pressuring people into proxying. Possible guards against this exist however. First of all one could make it impossible to determine whether someone selected somebody else as their proxy, driving the price of votes to zero. This could be done by providing indistinguishable dummy profiles (which can be shown to buyers of proxy votes instead of the real one) and adding a randomness factor to the reported number of proxies received. Secondly, it may be true that proxy-voting works best in environments which, as a whole, are relatively free and equal, as is arguably true for democracy in general. In which case restrictions could be introduced on it, where necessary (for example by not allowing spouses to be eachothers' proxy). Finally, the sale of votes is already illegal in many countries, and strictly enforcing this (through hefty fines, or even by taking away the vote from those involved) could provide additional protection.

4.2 Between district-based and proportional systems

Most democracies in the world use either party/slate based proportionate representation, where seats are allocated according to the percentage of votes received by nationwide parties, or a first past the post, plurality system, with one (or a few) seats per electoral district. An advantage of proportionality is that every citizen is represented, and that there is less need for strategic voting. The main advantage of district-systems is that citizens are personally represented by a specific representative [64]. TDD combines these advantages, by offering proportional representation, while enabling an even more direct connection between voters and their representative [1].

Yet in TDD there are no districts, and representatives can be close to voters in other ways than simply geo-spatially [73]. Even geographically dispersed groups such as environmentalists, or religious minorities, can be properly represented [16]. Not having districts also rules out gerrymandering (the manipulation of district borders) and other district-related issues [1]. In district systems up to half the votes are lost, and if there are more than two candidates, lost votes can go well over 60% [73]. More specifically, in de US, fifty one out of a hundred senators, represent only 16% of the population [90]. Safe seats are another problem, with certain districts being held by the same representative for 20 years, or the same party for over 50 years. This not only limits incentives for good governance, but also leaves sizeable groups without hope of representation.

Another advantage of TDD (especially in an online, advisory setting) is that it could reduce the influence of parties, and overcome the bundling of candidates [73]. Parties play four main roles in politics: 1) Leadership recruitment, which in TDD could happen at the local/personal level, 2) the articulation of ideas, which could be done by bloggers and other public discourse. While 3) national points of reference would become less crucial, given local proxying, and could also be provided by NGOs (if they would be allowed to act as proxies), and the final 4); direction to government, which would not apply in an online advisory setting. Thus the first two could be provided in other ways, and the latter two would be less relevant for an OGAP. Also, without strong parties and the backroom coalition deals that come with them, fringeinterests would be unlikely to gain disproportionate leverage as tie-breakers [46].

Even if TDD maximizes the incentives, non-participation remains the main issue for already existing TDD-based OGAPs. The first project is the World Parliament Experiment. It aims to be a role-model for a worldparliament, and strives for a united, democratic world. It was set up by former Harvard student Rasmus Tenbergen. A novel feature of the site is that the votes of people that neither vote directly, nor select a proxy, are randomly assigned to proxies [95, 97]. Another project, or rather set of projects, is Liqd.net., ran by a German group. They develop two Free Software TDD voting applications: Adhocracy (web-based), and Votorola (peer to peer) [2, 100]. They host Adhocracy for a few dozen organisations and clubs. Among these are Die Linke, a German left-wing party, and the Munich city council, which uses an instance to gather ideas for online government services. Yet none has more than a thousand sign-ups, or is very active; they do not have critical mass. Two ways for enhancing the chance of attaining critical mass for an OGAP will be discussed now.

5 Attaining critical mass

5.1 Integration with a social network

The first way in which an OGAP could be made more likely to attain critical mass, is integrating it with a social network, and thus with the social web [86]. Integration with existing platforms is crucial, as it lowers hurdles and builds trust [82, 99]. An additional benefit of integration with a social networking site, is that it makes it easier for people to select a proxy from among their friends [16]. For three reasons Facebook would be the natural choice. First of all, it has more than 1.4 billion users, and thus provides a large existing network to traverse. Secondly, Facebook allows third parties to develop applications on top of it, and thus enables such integration in a practical sense. And finally, Facebook (perhaps with Twitter) was the primary web-platform used in the Arab Spring, Indignados and Occupy movements.

Integration with Facebook would also make an OGAP more visible. When somebody joins the OGAP, this would be shown on their profile (and possibly be broadcast in their news feed), thus introducing virality. A further way to increase virality, would be to automatically make people represent all their Facebook friends in the OGAP, unless those friends sign up as well, and choose a different proxy (or were already represented by somebody who joined earlier). Other ways of providing virality, such as providing badges for on peoples blog, or homepage (showing the number of people they represent, or the most recent vote) could also be employed.

Another way to spread adoption of an OGAP app, could be if as part of its functionality, it would allow voting on matters internal to social movements or organisations. This would not only co-opt adoption by existing (and new) organisations, but it might also strengthen them. If for example the Occupy movement had established a network of proxies for internal decision making, then formulating demands on the bankers, while maintaining the movement, would have been much easier. While now it lost its centre when Wallstreet and other central squares were cleared (by the police and / or the cold of winter) [43].

Some people would also argue that a commercial site such as Facebook should not be used as a platform/substrate for something of (potential) political importance. There are two answers to this. First of all, Facebook might be used as scaffolding, where the OGAP would also offer normal (non-Facebook based) accounts, so that once critical mass is attained, it can stand on its own. A second approach, would be to use Facebook as an initial domain for reform [16]. There might be leverage for this, as considerable numbers of people are worried about privacy issues, and might want to have a say in Facebooks policies on this. Which is not entirely unfounded, as Facebook has access to more private information than the largest states. In 2009 there was a vote on Facebooks new privacy policy, and even though only 0.03% of users voted, this still added up to 600,000 people.

Another good way to attain initial traction is to make the site/service useful to the individual before critical mass is attained [88, 102]. One way to do this, is to present it as a means for expressing individual political preferences to Facebook friends or - for example — on ones blog. At least in the offline world, self-expression was found to be an important motivator for political action [58]. In addition, the OGAP might initially be set up as a permanent proxy-network that makes it easier for people to support petitions, for example all those by a certain NGO. Several platforms for cross-petition promotion and signing already exist in the form of Avaaz, and Change.org, and they are highly successful, and between them have more than a hundred million members [4]. A demand thus exists.

Finally, there might be an issue with people being afraid to express their political opinions in view of their friends, co-workers, or boss. Fear of consequences could lead to a spiral of silence: where political activism is futile, and apathy becomes the group norm. However the spiral of silence might be unwound when people start to see that their friends have political opinions as well [21]. Such shifts in culture should not be impossible, as the appropriateness of discussing political topics has differed throughout history, and still does between cultures.

5.2 Replicating the public agenda

Then for the second way to critical mass; if an OGAP as an 'institution' is to be successful, it not only needs to be embedded in the social web, but also has to interact well with the institutions of government [13, 17]. The authors of the Federalist Papers already noted that how institutions interact, is a crucial part of their design. And a way to drastically improve such interaction for an OGAP, is to have it replicate the agenda, and possibly the bills under vote, of one or more influential national/regional parliaments (or global summits, where relevant).

It might seem attractive for the Fifth Estate to be able to set its own agenda [6]. Agendasetting, after all, is an important right in any democratic system, and there seems little legitimacy in letting national parliaments set the agenda for a global advisory OGAP. Yet replicating existing agendas brings two benefits. The first is that it keeps the OGAP in sync with the public agenda and thus with news reporting, both online and in traditional media. This makes it easy for such channels to embed a voting widget, or to cover/discuss recommendations by the OGAP. Secondly, it makes sure that the voice that the OGAP provides for the Fifth Estate, is well-timed to be taken into account by the relevant decision makers.

Another choice that can help or hamper the attainment of critical mass, is which audience a project targets first. Generally, starting out with the most willing contributors is considered a good strategy. Which suggests picking activists as a starting audience. Not only are they more politically interested, and active, but they are also likely to be more socially connected to other activists, thus harnessing local network effects (similarly, early adopters' being more likely to want to call other pioneers, sped up the adoption of the telephone) [94]. Yet this should be done in moderation, as TDDs unique strength lies with allowing people with varying levels of motivation, and (time) resources, to participate and/or be represented.

Other very approachable groups might be those near the political fringes, such as (far) left- and right-wing groups, as well as certain minorities. Not only might they welcome an outlet (especially in district-systems), but their disagreements might also spice up debates and raise the stakes at votes. Especially as, contrary to offline settings, it was found that in the online sphere disagreement furthers debate, and triggers responses, rather than inhibiting them [19, 45]. Naturally, one would have to invite such groups in moderation, as being overly identified with them, could hurt adoption. Though, sticking to existing agendas, and thus limiting the votes to mainstream issues, should provide some protection against the fringe influence.

Another important factor for critical mass attainment, are user rewards. Facilitating self-expression was already discussed, but more can be done. Giving roles recognizable names, such as calling proxies representatives, can help people relate to them. A thing to keep in mind here, though, is not to get too high-brow, as one of the reasons Wikipedia gained initial traction, for example, was that it was presented as a drafting platform for an online encyclopedia that would function along more traditional lines [30]. Reasoning on from this, the OGAP could even be presented as something educational, as a simulation similar to World Model United Nations, or even as a game (allowing people to match political preferences against those of friends) [13]. It could also target youth, or students (who are also more likely to be heavy internet users) [56, 67, 66]. The choice between these frames would depend on the situation, but in any case, how things are presented is very important, as it was found to account for up to 2/3rd of peoples feelings towards a site [23].

Finally, even if everything is optimized for early participants, initial incentives for joining the OGAP will still be small [94]. As even in the offline world, elections of less powerful bodies have lower turnout [12]. Another thing to keep in mind is that in terms of user-decisions, critical mass purely depends on perception. Only when enough users think there will be critical mass, can this belief work like a self-fulfilling prophecy [3]. As experiments with online petitions have shown, information on the number of supporters affects decisions positively only if the numbers are large (over a million) [69]. Which makes it a good idea to not prominently display the number of participants until such figures have been reached.

6 Conclusion

To conclude, it has been argued that the democratic deficit, as well as low levels of trust in politicians, leave room for additions to our democratic landscape. An OGAP aggregating the Fifth Estate, could re-connect politics to the global public sphere, by offering a focal point for debate between online social movements. And as existing institutions are best kept in place, an OGAP should only aspire to advisory powers. The biggest challenge to the efficacy and influence of an OGAP, is attaining critical mass. TDD can help with this, as it creates the right incentives for people to vote. And at the same time, it combines the advantages of district- and proportional systems, in terms of full representation while still maintaining a personal connection between the voters and their representatives.

However, TDDs incentive structure is not enough by itself to attain critical mass, and therefore two further ways of achieving it were discussed. First of all integrating an OGAP with an online social network should firmly embed it in the social web, and provide exposure, virality, and permanence to social movement structures. Secondly, rather than it setting its own agenda, having the OGAP replicate the agenda of national parliaments, would increase the relevance of its recommendations to both news-media, and politicians. Whether these proposals can make the difference, is hard to say. Critical mass requires more than building and managing the right online app. A measure of luck and good timing may be necessary as well [75]. Yet one thing is clear: Without critical mass, an OGAP will never be effective and influential. Other design-, legitimacy- and procedural issues are important, but they will not make or break it. Getting the incentives right will be crucial, exactly because ultimately only the people, through millions of small, seemingly insignificant decisions, will determine whether an OGAP will come to be.

In the meantime democratic revolutions have cascaded through the Middle East, yet again brought about by humanitarian and political injustice, high food prices, and accelerated by the communicative capabilities of the internet. In addition to tweeting and liking, we must strive to keep alive hopes of democratic regeneration. Not only in the Middle East, Africa, and China, but also in the heartlands of democracy, where it all began, not once in Athens, nor twice, in France and the United States, but several times over, throughout history. If ever, the time for experiments with new forms of democracy, is now.

Bibliography

- S. Albrecht. "Whose voice is heard in online deliberation?: A study of participation and representation in political debates on the internet". In: *Information, Communication & Society* 9 (2006), 62–82.
- [2] Michael Allan. "A Medium of assent and its fit with society". In: *The ITP* news: Newsletter of the information technology and politics section, american political science association 4 (2008), 12–13.
- [3] David Allen. "New telecommunications services: network externalities

and critical mass". In: *Telecommunications Policy* 12 (1988), 257–271.

- [4] Avaaz! The world in action. 2013. URL: https://www.avaaz.org/.
- [5] Philip Ball. *Critical mass: how one thing leads to another*. Arrow Books Ltd, Feb. 2005.
- [6] B. Barber. "Which technology and which democracy". In: *Democracy and new media* (2003), 33–48.
- [7] T. L Becker and C. D Slaton. *The future of teledemocracy*. Praeger/Greenwood, 2000.
- [8] G. Beenen. "Using social psychology to motivate contributions to online communities". In: *Proceedings of the 2004 ACM conference on Computer supported cooperative work* (2004), p. 221.
- [9] D. A Bertelsen. "Media form and government: Democracy as an archetypal image in the electronic age". In: *Communication quarterly* 40 (1992), 325–337.
- [10] B. Bimber, C. Stohl, and A. J Flanagin. "Technological change and the shifting nature of political organization". In: *Routledge handbook of Internet politics* (2009), p. 72.
- [11] J. Bishop. "Increasing participation in online communities: a framework for human-computer interaction". In: *Computers in Human Behavior* 23 (2007), 1881–1893.
- [12] A. Blais. "What affects voter turnout?" In: Annual review of political science 9 (2006).
- [13] J. G Blumler and S. Coleman. "Realising democracy online: A civic commons in cyberspace". In: (2001).
- [14] J. G Blumler and M. Gurevitch. "The new media and our political communication discontents: Democratizing cyberspace". In: *Information, communication & society* 4 (2001), 1–13.

- [15] J. Bohman. "Expanding dialogue: The Internet, the public sphere and prospects for transnational democracy". In: *The sociological review* 52 (2004), 131–155.
- [16] P. Boldi. "Voting in social networks". In: Proceeding of the 18th ACM conference on Information and knowledge management (2009), 777–786.
- [17] A. Chadwick. "Bringing e-democracy back in". In: *Social science computer review* 21 (2003), p. 443.
- [18] A. Chadwick. "Web 2.0: New challenges for the study of e-democracy in era of informational exuberance". In: *ISJLP* 5 (2008), p. 9.
- [19] G.W. Chen and M.M. Chiu. "Online discussion processes: effects of earlier messages' evaluations, knowledge content, social cues and personal information on later messages". In: *Proceedings - Sixth International Conference on Advanced Learning Technologies, ICALT 2006* 2006 (2006), pp. 756–760.
- [20] Donna Chu. "Collective behavior in YouTube: a case study of 'Bus Uncle' online videos". In: Asian Journal of Communication 19 (2009), p. 337.
- [21] S. L Clift. "E-Government and democracy". In: *Representation and citizen engargment in the Information Age* (2004).
- [22] S. L Clift. "Sidewalks for democracy online". In: *Rebooting america: Ideas* for redesigning american democracy for the internet age (2008), 101–07.
- [23] R. Coleman. "Public life and the internet: If you build a better website, will citizens become engaged?" In: New media & society 10 (2008), p. 179.
- [24] S. Coleman. "The lonely citizen: Indirect representation in an age of networks". In: *Political communication* 22 (2005), 197–214.

- [25] R. A Dahl. Who governs? Yale University Press, 1989.
- [26] L. Dahlberg. "Extending the public sphere through cyberspace: The case of Minnesota e-democracy". In: *First monday* 6 (2001), 615–33.
- [27] L. Dahlberg. "Rethinking the fragmentation of the cyberpublic: From consensus to contestation". In: *New media & society* 9 (2007), p. 827.
- [28] L. Dahlberg. "The Internet and democratic discourse: Exploring the prospects of online deliberative forums extending the public sphere". In: *Information, Communication & Society* 4 (2001), 615–633.
- [29] P. Dahlgren. "The Internet, public spheres, and political communication: Dispersion and deliberation". In: *Political communication* 22 (2005), 147–162.
- [30] Andrew Dalby. *The world and Wikipedia: how we are editing reality.* Somerset: Siduri Books, 2009.
- [31] T. Davies. Online deliberation: design, research, and practice. Center for the Study of Language and Information, 2009.
- [32] R. J Deibert. "International plug'n play? Citizen activism, the Internet, and global public policy". In: *International studies perspectives* 1 (2000), 255–272.
- [33] W. H. Dutton. *The Fifth Estate: Democratic social accountability through the emerging Network of Networks*. June, 2008.
- [34] W. H. Dutton. "The Fifth Estate emerging through the network of networks". In: *Prometheus* 27 (2009), 1–15.
- [35] Nicholas Economides and Charles Himmelberg. "Critical mass and network size with application to the us fax market". In: (Aug. 1995).

- [36] C.L. Elam. "Identity, social networks, and relationships: theoretical underpinnings of critical mass and diversity". In: *Academic Medicine* 84 (2009).
- [37] A. Etzioni. "Are virtual and democratic communities feasible". In: *Democracy and new media* (2003).
- [38] R. Falk and A. Strauss. "On the creation of a global peoples assembly: legitimacy and the power of popular sovereignty". In: *Stan. J. Int'l L.* 36 (2000), p. 191.
- [39] J. Fishkin. "Virtual democratic possibilities: Prospects for Internet democracy". In: Conference on the internet, democracy and public goods. Belo Horizonte, Brazil (2000).
- [40] N. Fraser. "Rethinking the public sphere: A contribution to the critique of actually existing democracy". In: *Social text* (1990), 56–80.
- [41] H.S. Fullerton. "Microeconomic theory and critical mass". In: *Telecommunications Policy* 13 (1989), pp. 167–168.
- [42] G. Garzarelli. "Open source software and the economics of organization". In: Markets, information and communication: Austrian perspectives on the Internet economy (2004), p. 47.
- [43] Paolo Gerbaudo. *Tweets and the Streets: Social Media and Contemporary Activism.* Pluto Press, Oct. 2012.
- [44] J. Goldenberg, B. Libai, and E. Muller."The chilling effects of network externalities". In: *International Journal of Research in Marketing* (2009).
- [45] Sandra Gonzalez-Bailon. "The positive effects of negative emotions in online forums". In: *Forthcoming* (2011).
- [46] J. Green-Armytage. "Voluntary delegation as the basis for a future political system". In: Unpublished manuscript (2010).

- [47] W. Güth and H. Weck-Hannemann. "Do people care about democracy? An experiment exploring the value of voting rights". In: *Public choice* 91 (1997), 27–47.
- [48] A. Halavais. *Search engine society*. Polity Press, 2008.
- [49] Michael Hardt and Antonio Negri. "The Fight for'Real Democracy'at the Heart of Occupy Wall Street". In: Foreign Affairs 11 (2011).
- [50] A. Hars and S. Ou. "Working for free?: motivations for participating in open-source projects". In: *International Journal of Electronic Commerce* 6 (2002), 25–39.
- [51] D. Held. *Models of democracy*. Polity Pr, 2006.
- [52] D. Held. "Regulating globalization? The reinvention of politics". In: *International sociology* 15 (2000), p. 394.
- [53] M. Hindman. The myth of digital democracy. Princeton University Press, 2010.
- [54] R. Jankowski. "Buying a lottery ticket to help the poor". In: *Rationality and society* 14 (2002), p. 55.
- [55] H. Jenkins and D. Thorburn. *Democ*racy and new media. MIT Press, 2004.
- [56] Joseph Kahne. "The civic and political significance of online participatory cultures among youth". In: *DMLcentral working papers* (2011).
- [57] M. L Katz and C. Shapiro. "Network externalities, competition, and compatibility". In: *The American economic review* (1985), 424–440.
- [58] B. K Kaye and T. J Johnson. "Online and in the know: Uses and gratifications of the web for political information". In: *Journal of broadcasting & electronic media* 46 (2002), 54–71.
- [59] J. Keane and Inc ebrary. *Global civil society?* Wiley Online Library, 2003.

- [60] L. J Kenix. "In search of utopia: An analysis of non-profit web pages". In: *Information, communication & society* 10 (2007), 69–94.
- [61] G. Kippen and G. Jenkins. "The challenge of e-democracy for political parties". In: *Democracy online: The prospects for political renewal through the Internet* (2004), 253–265.
- [62] J. Lazar and J. Preece. "Social considerations in online communities: Usability, sociability, and success factors". In: *Cognition in a digital world* (2002), 127–151.
- [63] J. M Leimeister, P. Sidiras, and H. Krcmar. "Success factors of virtual communities from the perspective of members and operators: An empirical study". In: *Proceedings of the 37th Hawaii International Conference on System Sciences* 7 (2004).
- [64] A. Lijphart and B. Grofman. *Choosing an electoral system*. Praeger, 1984.
- [65] H. Lin. "An empirical study of web-based knowledge community success". In: System Sciences, 2007. HICSS 2007. 40th Annual Hawaii International Conference on (2007), 178c–178c.
- [66] Professor Sonia Livingstone. Young people and new media: Childhood and the changing media environment. Apr. 2002.
- [67] S. Livingstone and L. Haddon. "EU kids online". In: Zeitschrift fur psychologie-Journal of psychology 217 (2009), 236–239.
- [68] H. Margetts. "The cyber party". In: ECPR Joint Session Workshops (2001), 6–11.
- [69] H. Margetts and P. John. "Experiments for web science: examining the effect of the internet on collective action". In: (2009).

- [70] G. Marwell, P. E Oliver, and R. Prahl.
 "Social networks and collective action: A theory of the critical mass. III". In: *The american journal of sociology* 94 (1988), 502–534.
- [71] Gerald Marwell and Pamela Oliver. *The critical mass in collective action*. Cambridge University Press, Nov. 2007.
- [72] Metagovernment Government of, by, and for all the people. 2013. URL: http://metagovernment.org/ wiki/Main_Page.
- [73] J. C Miller. "A program for direct and proxy voting in the legislative process". In: *Public choice* 7 (1969), 107–113.
- [74] G. Monbiot. *The age of consent*. Flamingo, 2003.
- [75] P. Muhlberger. "Access, skill, and motivation in online political discussion: testing cyberrealism". In: *Democracy* online: The prospects for political renewal through the Internet (2004), 225–237.
- [76] mySociety. 2013. URL: http://
 www.mysociety.org/.
- [77] P. Nanz and J. Steffek. "Global governance, participation and the public sphere". In: *Government and opposition* 39 (2004), 314–335.
- [78] P. Norris and J. Curtice. "If you build a political website, will they come". In: *American Political Science Association conference* (2004).
- [79] K Ottesen. "Flexible representation by use of delegated voting - a case study of practical use". In: *Unpublished manuscript* (2003).
- [80] O. Perez. "Global governance and electronic democracy: E-politics as a multidimensional experience". In: *Democracy online: The prospects for political renewal through the Internet* (2004), p. 83.

A Global Advisory Parliament Integrated with the Social Web

- [81] J. Platt. "Social traps". In: *American Psychologist* 28 (1973), 641–651.
- [82] P. Prasarnphanich and C. Wagner. "Creating critical mass in collaboration systems: Insights from Wikipedia". In: 2nd IEEE International Conference on Digital Ecosystems and Technologies, 2008. DEST 2008 (2008), 126–130.
- [83] J. Preece. "Sociability and usability in online communities: determining and measuring success". In: *Behaviour* & *Information Technology* 20 (2001), 347–356.
- [84] Eric S. Raymond. The cathedral and the bazaar: musings on Linux and open source by an accidental revolutionary. 2001.
- [85] J. Reedy and C. Wells. "Information, the internet, and direct democracy". In: *Routledge handbook of internet politics* (2009), p. 157.
- [86] M. A Rodriguez. "Smartocracy: Social networks for collective decision making". In: (2007).
- [87] D. Rowland. "Griping, bitching and speaking your mind: Defamation and free expression on the internet". In: *Penn State law review* 110 (2005), p. 519.
- [88] E. Santos-Neto. "Individual and social behavior in tagging systems". In: Proceedings of the 20th ACM Conference on Hypertext and Hypermedia (2009), 183–192.
- [89] P. M Shane. *Democracy online*. Routledge, 2004.
- [90] P. M Shane. "The electronic federalist: The Internet and the eclectic institutionalization of democratic legitimacy". In: *Democracy online: The prospects for political renewal through the Internet* (2004), p. 65.
- [91] Peter M. Shane. *Building democracy through online citizen deliberation*. 2008.

- [92] M. Shubik. "On homo politicus and the instant referendum". In: *Public choice* 9 (1970), 79–84.
- [93] C. Sparks. "The Internet and the global public sphere". In: *Mediated politics: Communication in the future of democracy* (2000), 75–98.
- [94] G. M. Swann. "The functional form of network effects". In: *Information Economics and Policy* 14 (2002), 417–429.
- [95] R. Tenbergen. "Towards a world parliament: A summary of the debate and a proposal for an electronic world parliament on the internet organized by civil society". In: *The first virtual congress* on world citizenship and democratic global governance (2006).
- [96] The UNPA Campaign. 2013. URL: http://unpacampaign.org/.
- [97] The World Parliament Experiment. 2013. URL: http://www.tgde. org/.
- [98] G. Tullock. *Toward a mathematics of politics*. University of Michigan Press, 1967.
- [99] C. Wagner. "Creating a successful professional virtual community: A sustainable digital ecosystem for idea sharing". In: *Digital Ecosystems and Technologies* 3 (2009), pp. 163–167.
- [100] Willkommen bei Liquid Democracy e.V.
 liqd.net. 2013. URL: http://
 liqd.net/.
- [101] T. Witschge. "Online deliberation: Possibilities of the internet for deliberative democracy". In: *Democracy online: The prospects for political renewal through the internet* (2004), 109–122.
- [102] U. Witt. "Lock-in vs. critical masses industrial change under network externalities". In: *International Journal* of Industrial Organization 15 (1997), 753–773.