

## WEB 1.0, Web 2.0 – IS IT TIME FOR THE PEOPLE’S WEB?

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### Abstract

This paper is about the evolution of the web, and its potential to allow social expression and understanding, or to limit these things. It is about how –as the web currently stands – just by visiting pages, we may be inadvertently endorsing points of view that we otherwise might not support. In effect, by just visiting or linking to a page, users are contributing to its prominence and popularity. A main concern here is that this may not only occur unintentionally, but even more so as a user tries to counter the promotion of particular ideas.

This in itself is a concern, but in fact it exists in the context of a far bigger and deeper problem, the importance of which is explained in the context of two other familiar areas: politics and the marketplace. This bigger social problem is prevalent in many of our current democratic voting systems. However, if the problem cannot be easily tackled more broadly, it can at least be tackled within the limited domain of the web where there is potential to address it.

In light of the specific unintended side-effects of participating on the web as identified, and democratic voting limitations more generally, a proposal is made for how web technology may be adapted to try and reduce the inadvertent effects of participating as a user on the web and to provide a higher democratic standard on the web than what is encountered in many of our other democratic systems. The proposal is that a franchising service could provide the tools needed to democratise the web and improve search ranking results. Two possible implementations of the service are presented along with a discussion of how the service could be monetised.

**Keywords:** Web, Democracy, Search Engines.

### 1. Introduction

It is well established that ‘two essential principles are involved in Google’s organisation of online information: popularisation and customisation’ (Segey, 2010 p. 166). Segey (2010) argues that these two principles arise in large part due to Google’s desire to achieve advertising revenue. The drive for revenue seeks to both promote what is popular and to target people’s interests. Thus, according to Segey (2010, p 114) search engines prefer popular, entertaining or commercial news as this increases the size of their audience, and enhances their control over the production and dissemination of information. In concert with this the customisation of information, an important feature of search engines, is ‘enabling users to focus on specific interests and avoid exposure to other issues’ (Segey 2010, p. 55; El-Bermawy, 2016). This can lead to problems such as political homophily or, to use a less formal term, echo chambers (Colleoni, Rozza & Arvidsson, 2014). Another problem is that these principles encourage ‘gaming the system’. A well-known example of this is the case of a few Macedonian teenagers manipulating content to

gain advertising revenue during the 2016 campaign for the US presidency (Persily, 2017; Subramanian, 2017).

This paper proposes that the isolating effects that arise from the application of the principles of customisation and popularisation might be to some degree offset by a technical addition to browser software that allows for greater user expression on the web. In particular, allowing user-provided meta-data on web resources. It is argued that allowing democratic quality meta-data on web resources may help offset negative effects of the prevalent ranking principles in relation to homophily and the promotion of popular, yet unreliable, information on the web.

Section 2 looks at why the absence of user provided quality meta-data leads to distortions of popularity and therefore inaccurate page-ranking. Section 3 explains how this distortion may be in part addressed through user-provided meta data as well as the potential draw-backs of collecting such meta-data. Section 4 explains how the proposed changes might be implemented technically and Section 5 discusses how the proposed service could be financial viable.

## 2. Voting Systems

It has been said that Australians do not vote governments in, but rather vote governments out (MacKay, 1993 p. 180). This is perhaps in part because of Australia's limited voting options, whereby the only way voters can express dissatisfaction with one political party is by supporting another. In truth, a particular voter may support neither, but that is something our voting system does not allow the voter to directly express, a process acknowledged by Carrick (2010 p. 98). It turns out there are many other ways in which we are limited in expressing ourselves facebook 'likes' is another example. In the absence of a 'dislike' button sites might appear to be highly endorsed by popular opinion when fact they are highly contentious. Such skewed valuing of information places a difficult burden on web-users who require constant and careful judgement of various sites and issues, especially given the growing prevalence of phenomena such as 'fake news', and the common promotion of extreme views many of which, if popular, might be highly ranked by search engines, as was seen in the Macedonian situation (Hern, 2017)

But to understand this problem better, we can examine the effects of limited options for expression using the market place and politics as examples. We will begin with the market place.

Consumer sovereignty is an economic concept in which the market is considered as a kind of democracy in which consumers rule (Von Mises 1945). Under this theory of markets, dollars are considered as being somewhat equivalent to votes, and in consequence consumer purchases are seen as indicating the desirability of producing various goods and services. According to this theory, if consumers spend increasing amounts of money on a particular good or service, that will spur on production of more of that particular good or service. It has been asserted that this is empowering for everyone, presumably as everyone participates in the marketplace, to which all (in theory) have equal access. There are a number of possible criticisms of this theory (Knox, 2005), but in relation to democratic voting, there are at least three main arguments. The first one being that of course in the market not everyone has equal voting power. People who earn more will, in general, have more say in what is produced than those who earn less. Secondly, not all the players are people, governments are also players in the market, as are businesses and corporations, who knows what effects these have? But for the purposes of the argument in paper, I focus not on these first two problems and the various undemocratic outcomes that they may contribute to, but on the third problem, which is that – like facebook - the system of 'dollars as votes' only allows positive voting i.e voting in favour of particular goods and services, not against. This may lead, for example, to the production of luxury yachts, when really what most people want is more low-cost housing or perhaps better quality food. The monetary system allows people to vote in favour of the production of more luxury yachts, but allows no votes directly against. The end result may be – in fact is likely to be - entirely

undemocratic, and poor people with little money (few votes) who desperately need houses may go without. But, even if all the players do have equal voting power, such a voting system still panders to special interests. A group of people – and perhaps it is a large group, but is still a minority – may express their desire to produce more diesel trucks (for example) and no-one can vote *directly* against it. Even if the vast majority of people opposed the production of more diesel trucks perhaps the best they could all do would be to try and collectively invest in a railway system – an alternative that is magnitudes of difficulty harder than simply buying a truck.

I argue that similar effects arise on the web due to the limited voting options. A special interest group – perhaps a large one, but still a relatively tiny minority – can create a site that appears incredibly popular, in terms of visits, and perhaps likes and links, and no-one can directly challenge it. The best they can do is set up a competitor site and then engage in a kind of popularity contest. But, unfortunately in doing so, they will probably increase the traffic to their competitor as people visit it to see what all the fuss is about. Indeed, it was exactly this bias of search engines to promote popular pages that was exploited for profit during the Trump campaign, where outrageous claims were made leading to many hits and much advertising profit for the few Macedonian teenagers mentioned in Section 1.

There is another aspect of this problem which is perhaps best explained using the context of politics. As mentioned above, political elections in many countries have a voting bias, in that you can vote for one party, but not against another. Historically, in Australia, America and Great Britain this may not have been seen as a major problem. There are usually only two major parties that are viable options for taking government. But it certainly is a major problem once you have more than two viable choices. And the more choices you have the more significant it is to not be able to ‘vote down’ other options. In Australia’s political voting system by expressing your support for a minor party you are in effect losing the option to vote against one of the major parties by voting for its main opponent party. In the end, such a system may well prevent the rise of alternative parties, as few wish to give up their say on which current major party ends up being the next government (or not). There are two problems here, you are forced into creating or finding an alternative for every site you wish to ‘down’ vote. Creating sites is no simple matter. And whether you create one or find one this approach may lead to votes being scattered across a variety of opposing sites, with the risk that none of them gain meaningful prominence. Finding a site has the added complexity that in supporting it, you may be also supporting other views that are not quite in alignment with your own.

In short, in the absence of an explicit and direct ability to ‘dislike’ or ‘down vote’ a site a large segment of the voting population is being effectively disenfranchised. That all said, recently there has been an increase in systems that offer both positive and negative voting (i.e that support both ‘like’ and ‘dislike’ voting). Most commenting systems, such as Disqus, allow comments to be voted up or down, and this may affect the rankings of comments in a prioritised list. YouTube also provides users with a complete franchise, and in addition indicates the number of viewers. Such information may allow users to better judge if a comment or article truly is popular or whether it has simply received a lot of attention.

But perhaps, the biggest potential for improvements based on a fully enfranchised voting population is in the area of web-search engines – like Google. Currently pages are ranked in large part on the number of ‘hits’ they receive and back links to them i.e their popularity (Segev, 2010). Users of search engines often rely on such rankings as a default assessment of the worth of a page i.e the more hits and links the more ‘credible’, or at least the more ‘popular’ that page is. But, the way popular search engines currently work users cannot know if the site is popularly approved, or popularly disapproved, or even highly contentious. A fully enfranchising voting system would provide more information for users making such assessments. Voting

information could be provided as additional information in the search query results, or maybe even used to change the priority of sites in the ranked list of search results.

So why is this so important? Well, it could be a factor in not only influencing election outcomes, but also shaping people's opinions on a range of issues (Rogers, 2015; El-Bermawy 2016). Google's search engine is one that has been accused of bias for presenting results that are skewed (Grandoni, 2015). Currently, both Google and facebook have editors that manually seek to manipulate search results and remove sites from their platforms (Solon & Levin 2016; Tufekci, 2016). Google claims that these sites are offensive or low quality, but sometimes the editors' decisions are contentious (Sullivan, 2017; Maxwell 2017). Perhaps this type of activity is too important to be done piecemeal by a relatively few editors? And perhaps the use of editors is ineffective in many cases and where effective gives too much power to organisations such as Google and facebook? I suggest that in any case, little is to be lost, but much possibly gained by simply designing a platform that fully enfranchises its users.

### **3. Drawbacks of the Proposal and Alternatives**

One danger of collecting users voting information for websites is that such systems provide another source for the collection of private user data, and in this case, quite possibly, information in relation to their political preferences. With the collection of such information, there is potential for it to be taken advantage of in ways that users may consider a mis-use of the information collected on their preferences. While this is potentially a serious problem, it seems that such information is already being captured across a broad range of technologies, and dealing with the protection of user data is another pressing issue to be solved but which will be left aside in this paper (Bixby, 2016). There are alternatives to democratising the web, one of which has already been discussed, which is the use of human censors, perhaps acting on, or aided by, user reports of website content. This does, however, place considerable power in the hands of the censors, and may place burdens of proof on the operators of websites, which could be expensive and time consuming to resolve, especially if legal action is required to reach a resolution. Another alternative which has emerged recently is a form of user vigilante groups such as Sleeping Giants (Battersby, 2017). These groups run campaigns to remove funding from websites that they deem to be negatively impacting on society. This runs the same risks as editors provided by search engine companies (eg. Facebook, Google) but also carries additional risks that such groups may become politically motivated. The anonymity of the groups also may make these groups less accountable than registered corporations, which are required to identify key personnel and also abide by corporate laws that to some degree ensure fair trading.

### **4. Implementing the Proposal**

Given that the development of franchising tools is seen as desirable, there are multiple possibilities for the implementation of such tools. Here, two possibilities are briefly outlined. The first option is a browser plug-in that provides icons in a browser tool bar for users to click on to provide feedback. The tools could be as simple as up and down arrows for voting on the currently viewed page, but an option could also be provided for submitting comments on the page. Along with the feedback, mechanisms in the tool bar, summary statistical information could be provided eg. The number of voters and the count, or proportion, of up and down votes. A further icon could provide for viewing comments provided and the registered vote of each commenting participant.

The implementation of the tool would be a secure socket connection, perhaps using HTTP tunnelling, back to a database which records the viewed page URL, an identification for the registered user and the voting and comment information. To protect the integrity of the voting system from automated voting systems, which may try and skew the statistics, users would need to register for the franchising system using an email verified process and back-end checks to



ensure each user votes only once on any particular URL. The drawback of this option is that it would then depend on search engine providers to use the information provided by the franchising tool to determine the ranking of pages, otherwise the voting will not influence page ranking, although the information will be available for the pages once selected from the ranked list.

The second option is a meta-level page for viewing results. For example, rather than going to Google to search, users would go through the franchising service's own search interface. This interface may well just collate results from other engines, such as Google. In this sense, the franchise service is operating as a kind of infomediary, which takes the search results from other engines, and then reorders them according to the voting of its users (i.e taking account that additional information). However, once the page is selected from the franchise service's ranked list then tools are still needed for users to vote on the pages and provide comments if they wish. Options for this include browser plug-in tools as mentioned above, or perhaps the insertion of code into the page that is served to the user that provides access to these tools through the provided web-page – much in the same way as advertisements or other content may be inserted in pages as currently done by search engines.

### **5. Monetising**

The above two implementation options are based on the assumption that the franchising tools are not provided by existing search engines, but rather created by a third-party (e.g. a new start-up). This raises the issue of how the franchising service could be financed. One possibility is that search engine providers are required by law to provide such tools. However, this has the drawback that it allows already powerful organisations to collate even more user information. Another possibility is that users subscribe to the service and pay a small fee upon registration, renewable periodically. This, however, is likely to present a significant barrier to initial adoption of the tool. Perhaps the most viable option is that of the franchise service acting as the infomediary (discussed as option 2 in Section 4) which places itself between the user and existing search engines. The infomediary could then offer advertisers the option of having their paid pages presented more prominently than they would be if listed organically. This is in effect an equivalent of Google's current AdWords system. It has three main implications. The first is that the need to support such paid promotion of pages requires the development of a complex range of tools for both the internal ranking algorithm and for advertisers to register their sites, enter their search terms, monitor performance and manage payments. The second is that it recreates an existing problem of placing pages higher in search result rankings than what would organically appear based on the other information about the page. The third is that such a monetisation system may threaten the income of existing search engines, which could affect their ability to provide an effective search engine service and/or may result in legal action by existing search engines based on the use of their content. Some sort of income sharing arrangement between the service provider and the search engine companies may be possible to overcome these problems.

### **Conclusion**

This paper has discussed the problem of page ranking distortions due to popularity and the associated difficulty of users to both depend on search engine rankings for reliable content and the lack of information for users to assess themselves the content provided. The paper has positioned this problem in the context of democratic voting systems and suggested that the implementation of fully franchised voting systems would be an improvement for users in relation to finding and assessing the value of web-pages and sites. The paper has described how voting systems could be used to provide this information and outlined some possible ways in which the proposal could be technically implemented. Finally, possible ways of making the

proposal financially viable were discussed along with the broader implications and impacts of different options.

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