Abstract: There is a large body of research on the topic of political communication in traditional media and in online media. Since President Obama has made use of new forms of participation and interaction in politics via digital media during his election period, the question about a potential media bias is discussed more than ever. Political topics in online participation processes - such as the 'Open for Questions'-campaign - and in social media - such as the blogosphere - are compared with their dispersion in traditional media, whereby the preliminary correlation analysis is subject to certain conditions. The aim of this paper is to show if there is a correlation between the reporting on political topics in different media sources on a topic-focused basis without going into a qualitative depth of the content of each source.

1 Introduction

It is hard to imagine democracy without professional journalism. An increasing number of journalists is concerned about what happens when the traditional media struggles to survive. The recent news that online advertising revenues surpassed those of radio broadcasting advertising (Hautsch 2008) made journalists fear a 'dark future' with a decreasing influence on public opinion and therefore a weakening democracy.

The top-ranked question on change.gov in December 2008, whether President-elect Obama considered legalizing marijuana (Change.gov 2009), received almost 8,000 votes and rekindled the discussion on whether the participants in online votings were interested in significantly different political topics than the common public because they're a relatively young and very Internet-focused target group.

Social media, collaboration, crowd-sourcing or user participation holds the big opportunity that collective wisdom represents the intelligence and opinion of the average individual and therefore contributes to a larger concern. Many websites have tackled crowd-sourcing techniques to determine the relevance of search results. Whilst these methods may help reduce the clutter of options, they suffer from one major
problem: bias.

Crowd-sourcing requires active participation from its users. The difficulty is that not everyone contributes. Only certain kinds of users are likely to make an effort, driven by a variety of motives, from a mere hope to be perceived in a crowd to an altruistic wish to help others, to a need to express rage about a negative experience. Generally, only a subset of the population participates, considerably limiting the sample pool and possibly distorting the results with personal bias and inexactness (Brave 2009).

Fig. 1: WhiteHouse.gov ended ‘Open for Questions’-campaign

This leads to the question whether the dispersion of political topics raised in social media differs drastically from the one in traditional media. This analysis lies beyond the scope of this paper, but a preliminary direction shall be laid out by the following approach.

The literature on presidential communication was analyzed for example by Owen and Davis, and political party communication by Norris in 2003, while the blogosphere in the United States was scrutinized by Lin and Halavais in 2004. Extensive research on how the public sphere can be influenced by traditional media has been conducted. One of the remaining questions is whether social media, including the blogosphere and participatory processes such as ‘Open for Questions’, can be seen as representative regarding political issues as the traditional media, i.e. newspapers.

This paper sets out to determine the degree of correlation between the reporting on political issues in different media sources on a topic-focused basis, without going into a qualitative depth of the content of each source.
2 Key terms

In order to demonstrate the interconnectivity of the terms 'public sphere', 'social media', 'mediasphere' and 'blogosphere', these are exemplified against the background of their respective influences on democracy and political decision-making processes.

2.1 The public sphere

On a descriptive level, the political public sphere can be understood as a number of communication forums, which can be accessed directly and are not restricted to any membership conditions, and in which individual and collective protagonists comment on political topics in front of a wide audience (Gerhards 1998). Combined with the concept of democracy, the term ‘public sphere’ becomes a normative approach. In modern democracies, public spheres constitute the primary physical place for an informative and communicative exchange between the people and its representatives, and form the precondition for the people's sovereignty despite a representative system (Zimmermann 2007). Therefore, the implementation of democracy is substantially linked to the implementation of a public sphere (Klier 1990).

While the academic opinion that the public sphere plays a crucial role regarding the functioning of democracies is to a large extent undisputed, the views on how this public sphere should be constructed vary. The connection of these two concepts is described by Ferree et al. (2002) as follows: "Democratic theory focuses on accountability and responsibility in the decision-making process; theories of the public sphere focus on the role of public communication in facilitating or hindering this process."

In modern democratic societies, the most influential form of political public sphere is the mass media. Political protagonists are dependent on accessing the common media system because of its capability to constitute continuous political communication interrelations. Until now, political protagonists have had to achieve visibility in the mass media in order to gain political impact indirectly (Zimmermann 2007). Since the new media has brought up new possibilities for all protagonists to participate and communicate about political issues and therefore influence the political agenda, there might be a shift from the traditional way of reporting to a more balanced and individual way of news coverage.

2.2 Social Media

When discussing participatory processes for stakeholder involvement, one has to be explicit about the definition of participatory processes. For this reason, the perspective of a public authority, confronted with developing a policy, is taken. The authority can make use of a range of instruments, i.e. informational web-sites, opinion surveys and citizen juries etc. to engage the public and address its concerns. As a result, participation implicates a process in which one or more instruments are incorporated. (Bayley, French 2007) This perspective was also taken when the White House (a public
authority) implemented the ‘Open for Questions’-campaign and asked citizens to post questions and vote them up or down (instruments for opinion surveys).

Since the key characteristic of web 2.0, according to O'Reilly, are user-generated data, making use of network effects and opening data and services for re-use by others (O'Reilly 2006), the Obama campaign, too, can be seen as an example of social media. In this case, the user generated content was restricted to questions which could be posted, commented on and rated by other users.

2.3 The blogosphere and the mediasphere

There is strong evidence that there is an interconnection between the blogosphere and the mediasphere. One reason is that media elites - editors, publishers, reporters or columnists - consume political blogs regularly.

In a November 2003 interview, New York Times Managing Editor Bill Keller said, “I look at the blogs… Sometimes I read something on a blog that makes me feel we screwed up.” New York Times columnist Paul Krugman gave an extensive interview to one blog in which he discussed the blogs that he read on a daily basis. Mr. Krugman himself writes a blog and became the first blogger to win the Nobel Prize. Other opinion columnists, like Michael Barone, Walter Shapiro and Fareed Zakaria, have pointed out that blogs are a vital part of their information-gathering, and prominent political journalists at The Washington Post, The New York Times, The Los Angeles Times, ABC News, The New Yorker, Newsweek, and Time Magazine have made similar statements (Drezner, Farell 2004).

Secondly, Sifry proves that journalistically relevant topics are also reported in the blogosphere. He analyzed the number of published blog postings in the blog search engine Technorati per day. There were unambiguous peaks on those days when there was a simultaneous occurrence of prominent news events. However, one can assume that only a fraction of the news postings are self-researched material, because in general weblogs reference to the reporting of mass media (Neuberger 2007).

The third sign of the relationship between the political part of the blogosphere and the mediasphere has been the degree to which individuals working in one setting have also contributed to the other activity. Many newspapers, networks and magazines have established their own blogs. This is a clear proof that media institutions are aware of their relevance. Moreover, bloggers have been institutionalized to provide mainstream media networks with online content (Drezner, Farell 2004).

The main difference between blogs and newspapers lies in the role of third actors. While blog content is largely unfiltered by gatekeepers, such as editorial offices, and mostly shaped by the writers’ individual intentions, newspaper data is usually highly pre-structured and selective (Baumgarten, Gruel 2009). This difference can also be applied to television and radio stations, since they have gatekeepers, too.

Overall, one can assume that between professional journalism and weblogs there is
primarily a complementary rather than a competing relationship. Bloggers, in their entirety, are seldom in a position where they can report and research in a continuous, thematically universal and up-to-date fashion. Basically, it is noted that the principles of 'profession' and 'participation' are not incompatible. Currently, many newsrooms are experimenting with new and broader forms of user participation, which include the integration of blogs in journalism sites (Neuberger 2007).

3 Hypothesis

The 'Open for Questions'-campaign is based on social media technologies, as blogs are as well (Fig. 2 grey oval). Both belong to the social media sphere, where content mainly stems from a broad number of users. Since the aim of this paper is to find out if there is a bias between the participants in social media ('Open for Questions' and blogs) and the public sphere (arrows with question marks) and since the direct influence cannot be measured without extensive surveys, the social media will be compared to the traditional media, exemplified by the checked arrows.

![Fig. 2: The interrelation of the media (model)](image)

It is presupposed that traditional media has a reciprocal influence on the public sphere (shown by the dark arrow): Journalists write about what people are interested in and vice versa. Likewise, bloggers write about topics that are discussed in the public sphere and represent a small part of the public sphere but are less formally organized and reviewed than journalists and often bloggers express very personal opinions.
H1: There is a significant correlation between the mentioning of topics in blogs and traditional media.

Because the white house campaign was open for everybody from the US who could access the internet during the campaign, one can assume a disproportionate sample of US citizens participating. On the other hand the ‘Open for Questions’ campaign has gained intense public attention in different media and deals with topics that potentially matter to every US citizen.

Therefore, our second hypothesis is:

H2: There is also a significant correlation between the mentioning of topics in the ‘Open for Questions’-campaign and in traditional media.

The task complexity to post a question or a comment on ‘Open for Questions’ is considerably lower than the effort to create a personal blog.

H3: The correlation of topics between blogs and traditional media is lower than the correlation between ‘Open for Questions’ and traditional media.

4 The quantitative approach

Because the US-government did not collect socio-demographic information about the participants of ‘open for questions’, we have no means to directly investigate the bias of topics discussed in the campaign. In order to show if there is a bias between the focus on political issues treated online and the traditional media, three different types of media were consulted. The campaign by President Obama gives an overview over political topics where users can decide which topics they are interested in and which questions they would like to have answered by their President by voting for such questions. The analysis of three major US-newspapers by Google news shows which topics the offline media reported and the study of Google Blogs shows the appearance of the same topics in the blogosphere.

This study is subject to several limitations: at the time of the research the data in the ‘Open for Questions’-campaign was not available for full text search. Therefore, in the framework of this paper, the classification of questions and votes in the campaign ‘Open for Questions’ is equated to subjects such as ‘education’ with the actual mentioning of the word ‘education’ in newspapers or blogs. Further research would have to prove that the mentioning of key terms is significantly related to the classification in the campaign. Furthermore, users could discuss topics and use other terms. Therefore, a coding scheme will have to be set up to actually classify newspaper articles, blog postings and entries in ‘Open for Questions’ to content categories like ‘education’.

The analysis of blog entries and newspaper articles was based on the search engine Google. Therefore, the results of this paper are dependent on the selection / inclusion of
blogs and newspaper articles by Google.

4.1 'Open for Questions'-campaign

President Obama invited all citizens of the United States to ask questions about the economy and rate other questions down or up on WhiteHouse.gov. In order to participate, one had to register with a US postal code, but without any other type of verification. Thus, there is no proof regarding the origin of posted questions. It is however assumed that the vast majority of questions stems from the US and therefore reflects the American society. From 24th until 26th of March, 2009, the moderator portal ‘Open for Questions’ was opened to the public. After less than 48 hours, 92,935 people asked 104,032 questions and voted 3,604,666 times in 11 different categories (WhiteHouse.gov 2009). All questions had to be asked in pre-defined areas regarding political issues, such as ‘education’ or ‘budget’. Subsequently, participants were allocated to these topics. Since people could ask or vote more than once on a given topic, the total amount of people in different categories exceeds the total amount of participants.

<table>
<thead>
<tr>
<th>Category</th>
<th>Votes</th>
<th>%</th>
<th>Questions</th>
<th>%</th>
<th>People</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>3,604,666</td>
<td>100%</td>
<td>104,032</td>
<td>100%</td>
<td>92,935</td>
<td>100%</td>
</tr>
<tr>
<td>Education</td>
<td>465,210</td>
<td>13%</td>
<td>13,711</td>
<td>13%</td>
<td>28,427</td>
<td>31%</td>
</tr>
<tr>
<td>Home Ownership</td>
<td>185,222</td>
<td>5%</td>
<td>7,971</td>
<td>8%</td>
<td>14,178</td>
<td>15%</td>
</tr>
<tr>
<td>Health Care Reform</td>
<td>384,742</td>
<td>11%</td>
<td>12,645</td>
<td>12%</td>
<td>23,700</td>
<td>26%</td>
</tr>
<tr>
<td>Veterans</td>
<td>106,834</td>
<td>3%</td>
<td>3,151</td>
<td>3%</td>
<td>7,968</td>
<td>9%</td>
</tr>
<tr>
<td>Small Business</td>
<td>88,730</td>
<td>2%</td>
<td>4,055</td>
<td>4%</td>
<td>8,862</td>
<td>10%</td>
</tr>
<tr>
<td>Auto Industry</td>
<td>71,912</td>
<td>2%</td>
<td>3,166</td>
<td>3%</td>
<td>7,815</td>
<td>8%</td>
</tr>
<tr>
<td>Retirement Security</td>
<td>112,978</td>
<td>3%</td>
<td>3,570</td>
<td>3%</td>
<td>8,744</td>
<td>9%</td>
</tr>
<tr>
<td>Green Jobs and Energy</td>
<td>324,766</td>
<td>9%</td>
<td>7,441</td>
<td>7%</td>
<td>20,105</td>
<td>22%</td>
</tr>
<tr>
<td>Financial Stability</td>
<td>385,328</td>
<td>11%</td>
<td>20,662</td>
<td>20%</td>
<td>27,055</td>
<td>29%</td>
</tr>
<tr>
<td>Jobs</td>
<td>924,797</td>
<td>26%</td>
<td>14,498</td>
<td>14%</td>
<td>35,777</td>
<td>38%</td>
</tr>
<tr>
<td>Budget</td>
<td>554,299</td>
<td>15%</td>
<td>13,110</td>
<td>13%</td>
<td>26,576</td>
<td>29%</td>
</tr>
</tbody>
</table>

Table 1: Participation by category

On March 26th, 2009, at 11.30 a.m. EDT, the online town hall meeting was held, where President Obama answered some of the top-ranked questions.

4.2 Google News

Google News is a computerized news aggregator by Google Inc. The software started offering indexed content from scanned newspapers in October, 2008. The advanced search option enables the user to conduct their search in sub-categories such as time periods, predefined media sources and regions. The conducted search was based solely
on keywords, which categorized the questions of the 'Open for Questions'-campaign into political topics as shown in Table 1. Since this paper sets out to demonstrate whether there is a tendency toward a major bias between different media sources, a qualitative analysis coding the articles was not accomplished in this study.

The time period in question was March 1st until March 30th, 2009, the same month in which the campaign took place. The possibility that the traditional media reacted to topics on which the president held his online town hall meeting was taken into consideration. This, however, is not unlike a standard speech to the press, which is given regularly and always has an impact on the journalistic output.

The region in focus is the United States. Three representative liberal newspapers were chosen: The New York Times, the Los Angeles Times and the Washington Post.

The relative results from the three different newspapers were interestingly similar. Comparing two newspapers to one another at a time lead to linear correlations (Pearson) of 0.891, 0.954 and 0.954, respectively. These extremely high coefficients denote a strong correlation between the different newspapers. Thus, in the following analysis the average of the three newspapers is taken into consideration in lieu of the traditional media.

![Fig. 3: Newspapers in comparison](image)

### 4.3 Google Blogs

Google Blog Search is a Weblog search engine with a continuously updated search index. The results include all blogs, not only those published by the Google owned
Blogger service (Google 2009). The advanced search option allows the user to search by date and language in which the blog is written. It is not possible to search by region because the origin of a website cannot always be traced.

Newspapers reach a broad audience while the blogs varydistinctively in reach. A ranking by page views or unique visitors could narrow the number of blogs taken into consideration.

The analysis conducted for this paper is based on keywords used by the ‘Open for Questions’-campaign and therefore on the same search items used for the Google News analysis. The research period in this context was also the 1st until 30th of March, 2009, and included only blogs written in English. The data was collected on the 7th of April, 2009. The number of people who participated in the ‘Open for Questions’-campaign and also write blogs at the same time could not be identified.

In total, almost 21 million blog entries containing the keywords mentioned above could be found. The dispersion of the various political topics at first sight was more extreme than in the newspapers (Fig. 4). For example, around 43% contained the keyword ‘jobs’ and 37% included the word ‘education’.

![Fig. 4: Dispersion of Blog entries](image)

5 Findings

Finally, the two different types of social media (the blogs and the campaign), were held against the traditional media (the average of the three newspapers, see Fig. 5). In the case of the ‘Open for Questions’-campaign, the relative value of votes was taken into consideration because it comprised the largest sample (3.5 million). The product
moment correlation between the relative values in the investigated blogs and the newspapers is 0.838, whereas the correlation between votes and newspapers added up to 0.860, with a significance of 99%.

As a result the hypotheses H1 and H2 can be supported, but H3 could not be proved. There is a significant correlation between the mentioning of topics in blogs and traditional media and between the mentioning of topics in the ‘Open for Questions’-campaign and in traditional media. But the correlation of topics (N=11) between blogs and traditional media is not lower than the correlation between ‘Open for Questions’ and traditional media.

<table>
<thead>
<tr>
<th>Correlations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Newspaper average in %</td>
</tr>
<tr>
<td>Sig (2-tailed)</td>
</tr>
<tr>
<td>N</td>
</tr>
<tr>
<td>Blogs in %</td>
</tr>
<tr>
<td>Sig (2-tailed)</td>
</tr>
<tr>
<td>N</td>
</tr>
<tr>
<td>Votes in %</td>
</tr>
<tr>
<td>Sig (2-tailed)</td>
</tr>
<tr>
<td>N</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

Fig. 5: Correlation by Pearson with SPSS

The product moment correlation sums up to 0 if there is no covariance at all. This is the case if variables are independent or if they have a non-monotonous relation to each other. The maximum values of +1 or -1 are only reached if there is a perfect linear correlation (positive or negative). Correlations > 0.7 can be regarded as relatively high. High (positive) correlations show that an above-average value of one variable also leads to an above-average value of the other variable (Kühnel 2001).
It is tempting to deduce cause and effect when observing a correlation. However, the ability to allocate causality depends on the creation of an experiment particularly designed to provide this kind of inference, which is not part of this paper.

Though this study is restrained by several limitations, the preliminary comparison of two kinds of social media and the so-called traditional media shows a significant coherence in the distribution of political topics mentioned in articles or blog entries.

6 Conclusion

Rupert Murdoch declared as early as 2005 a “revolution in the way young people are accessing news … they want their news on demand … they want control over their media, instead of being controlled by it” (Coultan 2005). The ever-increasing number of people going online for news and current affairs indicates a growing abandoning of traditional formats and a demand for new multimedia formats. New platforms, however, do not necessarily transport new content. While people are increasingly Internet-prone, they still have a tendency to gather their news from traditional news providers, albeit online. The shift of audiences to the internet suggests a desire to customize the media experience rather than a search for alternative content (Bolton 2006).

The new possibilities introduced by web 2.0 technologies provided an opportunity for
everybody to assume a journalistic role and to participate in political decision processes, as witnessed in the blogosphere and the campaign by President Obama. But does the argument that internet users, and especially contributors to social media, are a small and extraordinary target group that does not reflect the average, still hold true? The comparison of two kinds of social media and the so called traditional media showed a significant coherence in the distribution of political topics mentioned in articles and blog entries.

Further in-depth research including qualitative coding should be conducted to confirm or refute this thesis. It would also be interesting to prove statistically whether there are any causal connections between different media, since the demonstration of the public sphere, the blogosphere and the mediasphere was confined to a theoretical analysis. Moreover research would have to prove that the mentioning of key terms is significantly related to the classification in the campaign as mentioned in chapter 4.

However, the possibilities for unedited public conversation and dialogues that are less interrupted by gatekeepers are undisputed. The initial fears of democratizing capacities by interactive internet tools lead by a 'nerd minority' cannot be proven at this stage. Nevertheless, the opportunities offered by these tools are still to be utilized by a broader audience, for which the 'Open for Questions'-campaign was a considerable start.

Literature


