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Abstract: The emergence of online reader comments over the past years has made opinions of readers more visible to journalists and users of news websites. This article discusses whether online reader comments provide a representative picture of the opinion of news site users and how this affects the perceived public opinion. Findings of an online survey among the users of eight Swiss newspapers indicate that comments are not representative since people who write comments tend to differ from those reading the comments with respect to gender, age, and political orientation. Of special interest is the finding that those writing comments tend to be politically further right than those reading comments and that “rightists” are writing more frequently. However, readers of the comments are not aware of this bias, leading to a systematically distorted perception of public opinion. Different types of regulation are discussed with respect to their acceptance as well as their potential impact on comments.

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Thomas N. Friemel & Mareike Dötsch

Online Reader Comments as Indicator for Perceived Public Opinion

1 Online Reader Comments: An emerging phenomenon

Over the past ten years an increasing number of news websites provide readers the opportunity to post comments on an article and thereby publishing their personal opinions. Richardson and Stanyer (2011, p. 986) found that 90 percent of major newspapers in Great Britain offered this opportunity in 2008. For Germany and Switzerland these numbers are lower but still indicate that this functionality has become a standard for online newspapers. The frequencies for Germany were 41 percent in 2007 (Neuberger, Nuernbergk, & Rischke, 2009, p. 183), 46 percent in 2008 (Sehl, 2010, p. 89), 75 percent in 2010 (Piksa, 2010) and 75 percent in 2012 (Hallermayer & Friemel, 2012). In Switzerland 64 percent of all newspaper websites offered the possibility in 2012 (Friemel & Hallermayer, 2012).

Today online reader comments are the most popular form of user-generated content in online newspapers followed by surveys and forums (Trost & Schwarzer, 2012, p. 95). Due to its high prevalence and the large number of comments posted this new type of content and its impact on journalists and readers has become of increasing interest for researchers and practitioners alike. Hereby, researchers were most interested in users' motivation to write comments (Chung & Yoo, 2008; Springer, 2011; Springer, Engelmann, & Pfaffinger, 2015), content analysis of the comments (Baden & Springer, 2014; Bergt & Welker, 2013; Neurauter-Kessels,

2011; Weber, 2012), and the impact on journalists work (Domingo, 2011; Singer, 2011). One topic that encompasses all three areas is the deliberative function of online reader comments. At the antecedence of the internet the various interactive possibilities of the new medium were praised for their potential to enable deliberative processes (Papacharissi, 2004, p. 260).

In an ideal setting a deliberative process would include all affected persons in a communicative process without power restrictions [herrschaftsfreier Diskurs] (Habermas, 1971, p. 137). However, over the years several limitations have been found inhibiting this ideal type of online deliberation. This includes both the persons involved in the processes as well as the characteristic of the process. Dahlberg (2001) refers to six shortcomings of discussions in online forums with respect to an ideal deliberative discourse. These include 1) lack of reflexivity, 2) lack of respectful listening, 3) difficulty to verify arguments, 4) dominance by certain groups, 5) exclusion of certain social groups, and 6) increasing influence of economic interests.

Whilst most of the respective research has focused on online discussion forums (e.g. Schultz, 2000; Wright & Street, 2007; Poletta, Chen, & Anderson, 2009) and blogs (e.g. Koop & Jansen, 2009; Zhou, 2009; el-Nawawy & Khamis, 2011) online reader comments have received comparatively little attention (Reich, 2011, p. 100). Nevertheless, it became apparent that some shortcomings identified by Dahlberg also hold true for political discussions by the means of comments. With respect to the first two criteria Richardson and Stanyer (2011) come to a devastating conclusion for the British Guardian Online: "The discussion on Guardian Online was frequently characterized by childish point-scoring, name calling and repeated quotation of prior posts accompanied by rhetorical questions and distorted conclusions" (p. 997).

Nagiller's content analysis of Austrian online comments on a newspaper website showed that more than 60 percent of the comments are emotional and just 36 percent are factual (Nagiller, 2013, p. 99). Furthermore, she found only in four percent of the comments a focus on consensus in contrast to more than 50 percent conflict-focusing comments (Nagiller, 2013, p. 100). Tsaliki (2002) came to a similar conclusion in her content analysis of online forums in Greece, Britain, Netherlands and Italy: "In some cases, participants did not seem to approach the forum in order to engage in conversation with fellow citizens and exchange opinions. Instead, it looks as if people simply wished to air their own views with-

out being particularly interested in listening to what others had to say” (p. 107). Hence, it can be assumed that a substantial number of online comment writers use comments as opportunity to speak up and not to discuss with other commentators. Springer (2011) refers to this type of users as self-presenters, which typically are among the heavy-users of a platform (p. 262). Beside these findings from qualitative research regarding motives of use and the above mentioned content analyses, little is yet known about the persons participating in this type of online deliberation. Based on digital divide research it can be assumed, that the exclusion of certain social groups has declined by the means of having access to the internet with the exception of a few groups like seniors (Friemel, 2014).

However, internet access is a necessary but not sufficient condition for participation in online deliberation. Hence, there might be differences between those reading an online newspaper, those who read the comments, and those who write comments. People who show a high political engagement online (utter their opinion and engage politically) tend to be men, have an above-average level of education and interest in politics and are significantly younger than the comparable offline-group (Köcher & Bruttel, 2011, p. 50). The Pew Research Center came to similar results, but couldn't find a gender difference of online news participation (Purcell et al., 2010, p. 45). This article will address this research gap based on a large scale survey regarding the websites of three major publishing houses in Switzerland including users of eight daily newspapers. More specifically it will be of interest, *who is writing and who is reading online reader comments (RQ1)*.

2 Public opinion and its perception by the audience

Online forums for political issues are normally used by a rather specific group of people with high political interest (McKenna & Pole, 2008, p. 101). In this context, it has been shown that the majority of readers of political weblogs has a high political interest, tends to be male and young but does not show a clear tendency concerning the level of education (Emmer, Vowe, & Wolling, 2011, p. 137). Strandberg's (2008) results of the survey data from the Finnish national election survey 2007 and a content analysis of online comments during the time of the parliamentary election show that “Finnish on-line political debaters are significantly much more likely to be active in off-line politics, to use off-line me-

dia for political purposes and to have a high level of political interest” (p. 81). But it would be inaccurate to conclude that only people who talk politics face-to-face do so online. In a secondary analysis Stromer-Galley (2002, p. 31) found out that 15 percent of the interviewees avoid face-to-face discussions about politics with acquaintances but engage in online conversations. Hence, online discussions are not only a replication of offline discussions but bring new voices into the (online) public sphere (Emmer, Vowe, & Wolling 2011, p. 178).

Furthermore, news sites are among the websites with the largest number of users reaching large parts of the population. The newspaper websites *20min.ch* and *Blick.ch*, for example, are among the top ranked websites in the German speaking part of Switzerland with more than 1.9 million unique user per month (NET-Metrix, 2014). Hence, online reader comments do not only give voice to a large set of opinions regarding issues of public interest but also make these opinions public to a wide audience. Given the low entry barrier and the large reach one is tempted to think of online reader comments as a kind of public opinion. Nonetheless, it is noteworthy that restrictions like mandatory registration have a negative effect on the number of online reader comments (Weber, 2012, p. 229).

Even though public opinion is a central concept for media and communication research there is little consent about its definition (Gerhards & Neidhardt, 1990, p. 4; Schweiger & Weihermüller 2008, p. 536). Since this article focuses on perceived public opinion by the readers it is of special interest how lay people think of public opinion. Herbst (1993) distinguishes four concepts of lay theory about public opinion:

- 1) public opinion as aggregation of individual opinion,
- 2) the opinion of the majority,
- 3) a consensus which results from a public discourse and
- 4) a reification which is merely a fictional construct of the elite and scientists (pp. 445-449).

The first three concepts refer to distinguished ideas of processes and measurement whereas the fourth is putting the concept as a whole into question. Transferred to online reader comments the aggregation concept (1) would require to take all comments into account. Hence, public opinion would be represented by the entire set of comments. A kind of majority concept (2) is given if

other readers can rate comments. In this instance, public opinion would be represented by the comment with the most positive rating. The consensus-concept (3) is the one that would result from an ideal deliberative process where every comment takes the previous into consideration. Sorting out the unlikely case of a consensus and disregarding the fourth perspective of a fictional construct, one is left with the aggregation and majority concepts. Hence, if online reader comments are regarded as a kind of public opinion and one is interested in how this public opinion is perceived by news site users it is most likely that this is a result of an aggregation of multiple comments and/or an interpretation of the rating of these comments (majority concept).

Of course the *published opinion* as expressed by online reader comments should not be set as equal to the public opinion which would be found by representative survey or a poll vote. However, the large number of comments and their potential reach might have an influence on the *perceived public opinion*. Hence, the second research question addressed by this article is *whether online reader comments are regarded as indicators for the readership of the respective website or the populace in general (RQ2)*. It is important to note that this phenomenon is new and cannot be compared to the letter of editors known from printed newspapers. Whereas letter to the editors represent a set of a few selected letters with rather elaborated arguments the online reader comments are often a less filtered conglomeration of opinions (Büsser, 2013; Domingo, 2011; Dorostkar & Preisinger, 2013; McCluskey & Hmielowski, 2011, pp. 12-13; Reich, 2011, p. 107).

3 Challenges to media regulation

Online reader comments are regarded by editors as being important to bond readers to a website (Nagiller, 2013, p. 92; Vujnovic, 2011) and it has been found that political controversial issues are the ones which are read and commented the most (Tenenboim & Cohen, 2013). With respect to a deliberative process this is of course desirable. However, if different groups of the political spectrum are more or less likely to post comments (RQ1) the online discussion might become biased. This bias in published opinion then potentially leads to a misperception of the opinion of news site users or the populace (RQ2). This misfit of published and public opinion can become critical in different respects. First, it can become

problematic for the news site since readers might get a biased idea of the typical user. If this bias is large enough and clashes with the personal values of a user he/she might stop using the news site. Second, a biased perception of the public opinion might have an impact on the likelihood to raise one's voice (Glynn, Hayes, & Shanahan, 1997; Glynn & Huges, 2007) and/or even affect political behavior. Finally various rights need to be protected and improper comments need to be filtered or sanctioned (e.g. racist, defamatory or insulting comments). In most countries the publisher of the news sites are made responsible for the comments published on their websites, which requires them to manage and edit the comments (Singer, 2011).

The necessity and the process of editing reader comments gives rise to a myriad of research problems – from a macro level of democratic theory and deliberative processes (Dahlberg, 2001) to the micro level of editorial practices (Hermida & Thurman, 2007, p. 17; Domingo, 2011). This article focuses on the user's perspective. Hence, we are interested in the question, *what kind of control, selection, rating, and moderation mechanisms the readers and writers of comments perceive as appropriate (RQ3)*.

4 Methods

4.1 Research setting

In collaboration with eight major newspapers in Switzerland an online survey was conducted in August and September 2012. Among these newspapers several collaborate closely for publication of their online versions. The three titles "Blick", "Blick am Abend" and "Blick am Sonntag" used the very same website accessible by a single address (blick.ch). The three printed titles and their online version can be categorized as yellow press. "Blick" and "Blick am Abend" are daily newspapers whereas "Blick am Sonntag" is the Sunday version. "Blick am Abend" is a free tabloid distributed at public transport infrastructures every evening. "20 Minuten" is a free tabloid distributed in the morning.

The printed as well as the online version have the largest reach per month among all Swiss newspapers and news sites respectively. This is illustrated in Table 1, which reports the unique user per month, week, and day as well as their ave-

Table 1: Newspaper and websites participating

Online-Portal	Newspaper	Website	Unique user per		
			month	week	day
20min	20 Minuten	20min.ch	1.532.000 (28.9%)	874.00 (16.5%)	365.000 (6.9%)
Blick	Blick Blick am Abend Blick am Sonntag	blick.ch	1.503.000 (28.3%)	916.000 (17.3%)	425.000 (8.0%)
Newsnet	Tagesanzeiger	tagesanzeiger.ch	1.181.000 (22.3%)	617.000 (11.6%)	241.000 (4.5%)
	Basler Zeitung	baslerzeitung.ch			
	Berner Zeitung	bernerzeitung.ch			
	Der Bund	bund.ch			

rage reach among all persons being online in the respective period. The website blick.ch is on second place in this ranking. While “20 Minuten” and the “Blick” title are distributed and read all over the German speaking part of Switzerland the four newspapers “Tagesanzeiger”, “Basler Zeitung”, “Berner Zeitung”, and “Der Bund” have a stronger geographic focus. However, they share a common web infrastructure (Newsnet). The websites are branded with the respective logo but most of the content is equal on all four Newsnet sites. A registration for commenting on the news sites is not mandatory on the three platforms, but the writer have to accept the terms of use and give their real names to comment an article. “Blick.ch” additionally requires an email address which is verified. “20 Minuten” offers a voluntary registration by mobile phone (text message). All websites check the comments manually but also make use of software automated filtering. “20 Minuten” and “Newsnet” have specialized teams for this task meanwhile at “Blick” the editorial staff is doing this job (Büsser, 2013).

The participants were recruited through three different types of announcement (see table 2). *Teaser* refers to a very short article (two sentences) embedded in the edited section of the website. *Comment* indicates that a special button was added in the comment section of every article. *Banner* refers to skyscraper and rectangle banners displayed on the website. Teasers, banners, and buttons were

designed by the respective website but all referred to the university responsible for the survey. About half of all persons who have accessed the survey completed it. Additional data cleaning was conducted on the basis of completion time, inconsistent or extreme answer structure, and seriousness checks at the beginning and at the end of the questionnaire. Finally only persons of 14 years and older were included to meet the criteria of the official readership research. After this cleaning 4.782 cases were included in the analysis.

Table 2: Recruiting and attrition of participants

Online-Portal	Recruiting	Survey accessed	Survey completed	Included in analysis
20min	Teaser	5.811	2.777	2.198
Blick	Banner	2.726	820	595
	Comment	2.216	840	649
Newsnet	Teaser	1.341	731	535
	Comment	1.763	1.065	805
Total		13.857	6.233	4.782

4.2 Measures

Frequency of online *newspaper reading*, *comments reading*, and *comments writing* were measured for each website separately on an ordinal scale including “daily”, “once or several times a week”, “once or several time a month”, “once or several times a year”, “less frequent” and “never”. To reduce the selection bias all survey participants were asked to indicate frequencies for all newspapers (irrespective on which platform they were recruited).

Beside sociodemographic characteristics it was of special interest to categorize survey participants with respect to their political orientation. *Political orientation* was measured on a metric scale from 1 = “politically left” to 7 = “politically right”. This question of political classification on a bipolar scale is standard in

Switzerland (Kriesi, 2012). The extent to which people perceive comments as a proxy for the *opinion of the populace or a specific news site* was measured by the consent to the following two items: “When reading comments on the news site xy, I get a good picture how the users of www.xy.ch think” and “Reading comments on the news site xy shows me how the Swiss populace thinks”. Answer categories ranged from 1 = disagree to 5 = fully agree.

Also the *acceptance of various types of regulation* was measured by a five-point agreement scale (1 = disagree; 5 = fully agree). Items included the question 1) whether one should only be allowed to publish comments when disclosing the real name, 2) one should be able to post comments without registration, 3) the editorial team should check all comments before publication, 4) one should be able to report troublesome comments, 5) it should be possible to rate comments, 6) one should be able to respond directly to a specific comment, and 7) whether the editorial staff should get back to critique in the comments section with own comments.

5 Results

5.1 Characteristics of readers and writers of online reader comments

First of all it is of interest, *who is reading and who is writing online reader comments (RQ1)*. For this purpose the survey data are compared to the official user data of the different news sites as reported by NET-Metrix (2014). Since “Newsnet” includes four newspaper a weighted mean is calculated for this website (weighted by unique users per month). Table 3 reports gender and age groups for the users of the three news sites. Percentages indicated refer to the proportion of unique users per month (e.g. for “20 Minuten” 58% of unique user per month are male and 47% are between 14 and 34 years old). It becomes apparent that there is a tendency towards young male users for all news sites. To enhance comparability the survey answers were recoded according to the categories of Netmetrix (i.e., frequency of article reading, comments reading, and comments writing were dichotomized on the level of monthly use). Thereby it is found that, 65.3 percent of survey participants who read at least once a month an article on “20 Minuten” are male. For this analysis only participants recruited by teasers and banners were included since the button in the comment section were unlikely to be seen by

Table 3: Social demographics of user types

News site	NET-Matrix				Survey						
	Male	Female	14-34	35-54	55+	User type*	Male	Female	14-34	35-54	55+
20 Minuten	58%	42%	47%	36%	17%	Article reading	65.3%	34.7%	57.5%	31.8%	10.7%
						Com. reading	65.3%	34.7%	58.3%	31.6%	10.1%
						Com. writing	76.5%	23.5%	53.6%	35.5%	10.9%
Blick	59%	41%	41%	39%	21%	Article reading	69.4%	30.6%	50.8%	34.9%	14.3%
						Com. reading	70.4%	29.6%	50.2%	34.9%	14.9%
						Com. writing	81.5%	8.5%	35.0%	41.5%	23.5%
Newsnet	62%	38%	36%	40%	24%	Article reading	70.5%	29.5%	44.5%	38.8%	16.8%
						Com. reading	71.3%	28.7%	42.3%	40.0%	17.7%
						Com. writing	79.1%	20.9%	32.6%	48.6%	18.8%

* at least once a month; n=3,328

people not reading or writing comments. Nevertheless, these findings need to be interpreted with some caution because a self-selection bias cannot be ruled out. In fact, it looks like there is a certain bias towards more male participants in the survey since their share among the article

readers is higher than in the official statistics. (65% vs. 58% for “20 Minuten”, 69% vs. 59% for “Blick”, and 70% vs. 62% for “Newsnet”).

Comparing the gender and age distribution of those reading articles and those reading comments hardly any

differences can be found. Assuming that the self-selection bias found for article readers is related with reading (and writing) comments the following conclusion can be drawn: If there is a difference between the entire group of news site users and readers of comments it is likely that this difference is towards male persons being more avid comment readers. Furthermore, readers of comments tend to be younger than the average website user. However, due to the self-selection bias the extent of this difference cannot be quantified precisely.

A similar picture can be drawn with respect to those writing comments. Compared to all website users and those reading comments the authors of comments are even more likely to be male. Among the survey participants selected for this analysis the share of males is between 76 and 82 percent. Furthermore, the middle age group (35-54 years) tends to be a bit more active compared to the average news site user. (35% vs. 32% for “20 Minuten”, 42% vs. 35% for “Blick”, and “49% vs. 39% for “Newsnet”). This goes along with precedent findings that people who engage in real-time electronic discussions about politics tend to be younger men (McKenna & Pole, 2008, p. 101; Stromer-Galley, 2002, p. 32).

Table 4: Political orientation of readers and writers

News site	Readers M(SE)	Writers M(SE)	Comparison of means
20 Minuten	3.90 (0.052)	4.06 (0.047)	-2.32 (df=2001); p<.05
Blick	4.13 (0.059)	4.56 (0.076)	-4.44 (df=1164); p<.001
Newsnet	3.03 (0.078)	3.54 (0.053)	-5.37 (df=1288); p<.001

Question: “How would you classify yourself politically?”; Answers: 1 = left to 7 = right

Beside these sociodemographic statistics it is of special interest whether reader and writer differ with respect to their political orientation. t-tests reveal significant differences between reader and writer of comments for all three news sites (see table 4). Those writing comments classify themselves significantly further right than readers. While the difference is comparatively little for 20 Minuten ($m_r=3.90$; $se_r=0.052$; $m_w=4.06$; $se_w=0.047$; $t(2001)=-2.32$; $p<.05$) the two groups dif-

fer substantially for “Blick” ($m_r=4.13$; $se_r=0.059$; $m_w=4.56$; $se_w=0.076$; $t(1164)=-4.44$; $p<.001$) and “Newsnet” ($m_r=3.03$; $se_r=0.078$; $m_w=3.54$; $se_w=0.053$; $t(1288)=-5.37$; $p<.001$). Furthermore, spearman correlations reveal that frequency of comment writing is positively correlated with a rightist political orientation ($r_{20Min}=.08$; $p<.001$; $r_{Blick}=.14$; $p<.001$; $r_{Newsnet}=.19$; $p<.001$).

5.2 Perceived Public Opinion

The difference for gender, age, and political orientation reported in the previous section illustrates that reader and writer of comments on news sites differ significantly with respect to some central attributes. Hence, online reader comments most likely do not represent the opinion of all users nor of the populace in general. However, since only those can be heard who speak up it might be possible that the comments are nevertheless used as a proxy for public opinion. The second research question addresses this issue by asking *whether online reader comments are regarded as indicators for the readership of the respective website or the populace in general (RQ2)*.

Again the results reveal differences between readers and writers as well as between the news sites (see table 5). With exception of one item (Blick news site) writers of comments perceive comments as a better proxy for others opinion than readers. This holds true with respect to the respective news site as well as with respect to the populace. Since nearly all means are above the middle of the scale (>3.0) this indicates that comments tend to be used as a proxy for the opinion of news site users as well as the general populace. The level of agreement to the two items varies between the news sites and so does the gap between the values for news site and populace. In general, comments are perceived as better proxy for the opinion of news site users than for the entire populace. The lowest value is found for Newsnet ($m=2.81$; $se=0.070$); indicating that those comments are not regarded as being representative for the populace. In contrast to this the comments on Blick are regarded as being a pretty good proxy for the opinion of Blick users ($m=4.01$; $se=0.038$).

In sum it can be concluded that online reader comments serve as a proxy for the opinion of the respective news site users. This is more so for the writer of comments compared to those reading comments. Whether the comments also

serve as a proxy for the perceived opinion of the populace depends on the news site. Furthermore, writers of comments are more likely to perceive the comments as an indicator for public opinion.

Table 5: Perceived public opinion

Newspaper	Comments as proxy for	Readers M(SE)	Writers M(SE)	Comparison of means
20 Minuten	News site	3.67 (0.035)	3.78 (0.030)	-2.37 (df=2153); p<.05
	Populace	3.06 (0.040)	3.23 (0.034)	-3.22 (df=2162); p<.01
Blick	News site	4.01 (0.038)	3.91 (0.050)	1.65 (df=1220); n.s.
	Populace	3.09 (0.044)	3.46 (0.057)	-5.09 (df=1228); p<.001
Newsnet	News site	3.33 (0.068)	3.58 (0.038)	-3.28 (df=1302); p<.01
	Populace	2.81 (0.070)	3.17 (0.038)	-4.58 (df=1310); p<.001

Question: "Reading comments provide a good picture of the opinion of the news site users/the populace"; Answers: 1 = disagree to 5 = fully agree

5.3 Acceptance of different regulation possibilities

As seen in the previous sections online reader comments are regarded as proxy for the readership of news sites even though people posting online reader comments differ significantly from the readers and the rest of the news site users. This finding adds relevance to the third research question addressing the possibilities to regulate online reader comments and its acceptance by readers and writers (RQ3). We distinguish four possibilities to regulate comments: a) access to the commenting section, b) selection of comments by editors and readers, c) rating of comments by readers, and d) moderating the discussion by replies from readers and the editors.

Table 6 shows that readers of comments are more in favor of the first three types of regulation (access, selection, rating) than those writing the comments. Whereas readers express the wish that writers have to use their real name to

comment articles ($m_r=3.09$; $se_r=0.037$; $m_w=2.81$; $se_w=0.031$; $t(4505)=5.63$; $p<.001$), writers plead for the possibility to comment without registration ($m_r=3.22$; $se_r=0.038$; $m_w=3.53$; $se_w=0.032$; $t(4572)=-6.30$; $p<.001$). With respect to “selection” the comparison of means illustrate significant differences between readers and writers indicating that readers are in favor of a stricter control compared to writers. Most interestingly both groups prefer a selection/control by other readers ($m_r=3.95$; $se_r=0.031$; $m_w=3.63$; $se_w=0.028$) over a control by the editors ($m_r=3.60$; $se_r=0.032$; $m_w=3.27$; $se_w=0.028$). In contrast to this the writers support the possibil-

Table 6: Possibilities of regulation

Regulation type	Specific regulation	Readers M(SE)	Writers M(SE)	Comparison of means
Access	Use real name	3.09 (0.037)	2.81 (0.031)	5.63 (df=4505); $p<.001$
	Comment without registration	3.22 (0.038)	3.53 (0.032)	-6.30 (df=4572); $p<.001$
Selection	Control comments before publishing (by editors)	3.60 (0.032)	3.27 (0.028)	7.73 (df=4630); $p<.001$
	Report disturbing comments (by readers)	3.95 (0.031)	3.63 (0.028)	7.67 (df=4457); $p<.001$
Rating	Rate comments	3.24 (0.035)	3.60 (0.027)	-7.94 (df=4402); $p<.001$
Moderation	Respond directly to comments (by readers)	3.83 (0.029)	4.28 (0.018)	-12.96 (df=4476); $p<.001$
	Participation of editors in the discussion	2.71 (0.032)	3.02 (0.028)	-7.13 (df=4452); $p<.001$

Answers: 1 = disagree to 5 = fully agree.

ity to rate comments rather than readers ($m_r = 3.24$; $se_r = 0.035$; $m_w = 3.60$; $se_w = 0.027$; $t(4402) = -7.94$; $p < .001$). The fourth possibility to regulate online comments is by responding to the posted comments and thereby “moderating” the discussion. The possibility that readers should be able to respond directly to comments is highly accepted whereas an active participation of editors is less in favor. In contrast to the first three types of regulation the “moderation” seems to be the kind of regulation which is more accepted by writers than readers (response by readers: $m_r = 3.83$; $se_r = 0.029$; $m_w = 4.28$; $se_w = 0.018$; $t(4476) = -12.96$; $p < .001$; response by editors: $m_r = 2.71$; $se_r = 0.032$; $m_w = 3.02$; $se_w = 0.028$; $t(4452) = -7.13$; $p < .001$).

6 Discussion

The emergence of online reader comments has brought up new challenges for research and editors of news sites alike. The results of an online-survey on the websites of eight Swiss newspapers indicate that people writing comments are different from those reading them and the news site users in general. It is found that those writing comments are more likely to be male, of middle age and have a political orientation that is further right than the readers of the comments. Nevertheless, the published opinion in comments is regarded as a valid indicator for the opinion of news site users. Neither readers nor writers of comments are aware of the bias and consider comments as a valid indicator for the opinion of all news site users. In addition to the differences found for those writing the comment it should also be taken into account that not all comments get published. According to the editors of the three platforms there is a considerable amount of comments that does not get published. “Blick.ch” publishes about 30 percent, Newsnet about 50 percent, and 20 Minuten about 60 percent (Büsser, 2013, p. 27). At least for “Blick” this value is pretty close to what the writers of comments estimate. Asking them how many of their comments get published mean values of 28 percent for “Blick”, 59 percent for “Newsnet”, and 43 percent for “20 Minuten” result. Considering this substantial amount of unpublished comments it was additionally tested whether the proportion of published comments is related with political orientation. However, no significant correlation was found. Of course this finding cannot be used as an indicator for a political neutral filtering on the level of specific posts but at least on the level of people writing comments no systematical bias is found.

In sum, there are two findings that demonstrate that the published opinion is unlikely to be representative for all users of a news site. First, those users writing comments tend to be more rightist than the readers. Second, among those who write comments rightists are more active (i.e., are writing more frequently). Nevertheless, comments are regarded as being representative for all users of a news site. Therefore, the perceived opinion of news site users is systematically biased towards political right attitudes. For those writing this effect is stronger which might be encouraging them to write even more comments. In addition, those writing comments are more likely to misattribute the published opinion to the populace. This result is in line with findings from Köcher and Bruttel (2011, p. 47), who have found that members of community platforms are more likely to perceive discussions in social networks as being representative for public opinion.

Since these misperceptions are of relevance for news sites as well as the deliberation process in society it needs to be discussed how to cope with these distorted perceptions of public opinion. In the second section of this article four concepts of lay theory about public opinion were introduced (Herbst, 1993) and it was argued, that it is most likely that the perceived public opinion in online reader comments is a result of an aggregation of multiple comments and/or an interpretation of the rating of these comments (majority concept). Hence, it is of interest how different types of regulation might affect the two possibilities of opinion perception. It can be argued that in both instances the sheer number of posts (with a specific political color) and their rating are likely to be of primary relevance. Hence, regulation of access, selection processes, and the possibility to rate comments would have an impact on the perceived public opinion. Since no correlation was found between political orientation and proportion of published comments the regulation of the three news sites seems to be unbiased with respect to political orientation. In the given setting it was not possible to test for the impact of different registration routines or moderation styles on the level of news sites since the included websites are rather similar in this respect.

At various occasions online reader comments have been found to include an amount of racist, anti-semitic, and xenophobic comments that motivate journalists to address this issue explicitly (e.g. Jakrlin, 2013; Lenke, 2014; Machac, 2013; Wismer, 2013). The findings of this study provide arguments that this phenomenon is partially due to a biased set of persons writing comments on online news sites. Since people who write comments tend to be political further right

than the readers it is likely that their opinions are also reflected in the comments. Even though this link is highly plausible no data are yet available to discuss the impact of political orientation on the comments posted. Hence, further research should have a closer look on how individual opinions are transferred into published comments and how the comments available affect the perceived opinion among news site users and the populace.

We suggest three broad lines of reasoning why political orientation is related with the likelihood of writing comments. First, the tendency of rightist comments can be understood as a kind of counter public giving voice to opinions that might not be equally represented in the editorial part (Karlsson, 2010; Milioni, Vadratsikas, & Papa, 2012). Hence, rightist comments would simply be a reaction to “leftist” media content. Second, the likelihood of writing comments could be correlated with personality traits like extraversion or more specific motivations to share political ideas or use specific communication tools. According to this argument, rightist comments would be a consequence of the personality of website users. Third, the likelihood of writing comments could be a result of different argumentative styles. Considering the limited number of characters it can be hypothesized that polemic arguments and broad statements are more suitable for this type of communication. Hence, rightist comments would be the result of argumentative styles of individual writers.

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