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## Internet Users' Reasons and Motives for Online News Commenting

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This article examines users' situational reasons and potential motives for leaving a comment on an online news item. In a 3-phase analysis, users' background factors, such as gender and political standings, were considered. The analysis indicates that there are preferred reasons for commenting. These are connected to 6 identified motives (e.g., societal discussion). Furthermore, 7 related user types were determined and examined. Overall, users and their reasons and motives for commenting vary, and background factors, especially activity and political standings, might explain the differences.

*Keywords: online news, online-news comments, user motives, user comments, online participation*

User comments below online news are an essential and controversial part of our everyday media environment. The reasons and motives for online-news commenting have been the focus of a few user surveys (Springer, Engelmann, & Pfaffinger, 2015; Wu & Atkin, 2016), indicating that users can prefer motives such as disagreement with the news and expressing their opinion (see, e.g., Barnes 2015; Springer et al., 2015), or informing and receiving feedback (Wu & Atkin, 2016). Furthermore, other factors, such as context, personality or user roles and behavioral models, influence individual users (Barnes, 2018; Barnes, Mahar, Cockshaw, & Wong, 2018; Kangaspunta, 2020; Ksiazek, Peer, & Lessard, 2016; Larsson, 2011; Wu & Atkin, 2016; Ziegele, Breiner, & Quiring, 2014).

This study examines users' own perceptions about their commenting behavior in an online media context. Despite the uniqueness of the Finnish media field and the growing role of online news media (Reunanen, 2020), little is known about Finnish users and their understanding of why they comment on news and each other's comments. This article's research material consists of 1,221 responses to an extensive Finnish-language online survey about user behavior and reasons for commenting. The reasons are understood as situational and contextual vernacular explanations for leaving a comment in online media context—for example, "I comment on news if it addresses topics important to me." Asking users about these reasons connects this study to the research on users' participatory motives (e.g., Springer et al., 2015). In

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this study, motives are understood as underlying (psychological) factors behind the different reasons, directing user behavior (Barnes et al., 2018). The article focuses on understanding the connection of situational reasons and potential motives, and furthermore, the similarities and differences of users. Consequently, the study aims to answer the following research objectives:

### **Research Objective 1: Determining the Reasons for Online News Commenting**

*RQ1a: What are the preferred reasons for commenting on online news?*

*RQ1b: Do background factors explain the differences between users in relation to preferred reasons?*

### **Research Objective 2: Determining Reason-Based Motives for Commenting**

*RQ2a: How do different reasons for commenting relate to known motives?*

*RQ2b: Do background factors explain the differences between users in relation to motives?*

### **Research Objective 3: Determining Motive-Related User Types**

*RQ3a: What are the potential motive-related user types?*

*RQ3b: How do these user types relate to each other and to different background factors?*

First, a theoretical framework is described, and relevant research is examined. Then, the survey and research material are introduced. The main focus is the analysis of users' responses. The preliminary quantitative analysis aimed to answer Research Objective 1, the first phase of the main analysis Research Objective 2, and the second phase of the main analysis Research Objective 3. Lastly, conclusion, limitations, and further research are discussed.

## **Theoretical Framework**

Motives have been defined and examined from different perspectives and disciplines. In this article, the focus is on motive-related studies about online participation, especially online news commentary, but it is necessary to briefly describe how reasons and motives are understood.

The majority of research on motives is based on psychology. In general, motives are understood as factors that direct human action and behavior (Bilsky, 2006). Bilsky (2006) quotes Heckhausen (1989) as he argues that "there are as many motives as there are different classes of 'person-environment relations'"; he continues, "these relations can be further distinguished by characteristic goals aspired to" (as cited in Bilsky, 2006, p. 75).

In this article, users' behavior is understood as a complex entity of person-environment relations, characteristic goals, motives, and online media context. Reasons are understood as general or situational

contextual explanations that can be examined in relation to distinguished motives. Each survey question represents a reason that describes an explanation for commenting. These can be connected to the online media context in general level. For example, the statement (survey question), "I comment because I want to be heard in public discussion" (see Supplementary Information 1<sup>2</sup>) refers to the overall participatory possibilities of online news comments and might reflect motives such as participating in democratic processes, recognized by Springer and associates (2015). Correspondingly, the statement, "I comment on other users, if they present incorrect or insufficient information" (Supplementary Information 1) suggests that there is a certain situation in the online media context (e.g., another user commenting incorrect information) creating a reason (e.g., correcting information or pointing out the mistake) for leaving a comment. The distinguished motive behind such reason can be social recognition (i.e., showing ones' knowledge; see, e.g., Bilsky, 2006), or informing, recognized in online news-comment studies (Wu & Atkin, 2016). The study focuses on empirically recognizing and understanding such potential motives. However, these motives should not be understood as strictly media-based or online-based since motives, such as achievement, direct all human behavior (Bilsky, 2006) in all contexts.

### ***Research on the Motives for Online Participation***

Motives directing online participation vary widely, since there are countless online platforms, environments, and communities. Recognized and determined motives range from general-level motives, such as reciprocity (Kollock, 1999), to specific motives in specific contexts, such as uncivil behavior in political online discussions that is motivated by aggression (Kluck & Krämer, 2020). In the Finnish context, research on users' attitudes toward online participation, in general, found several user motives, such as a desire to influence, a desire to participate in media activity, and invisible being (Matikainen & Villi, 2015). Concerning participation in social media, Sirkkunen (2006) divided motives into individual motives, for example, expressing oneself, and communal motives, for example, sharing information and abilities.

### ***Research on the Motives for Online News Comments***

Research that focuses specifically on defining the motives for commenting on online news is limited. In the German context, Springer and colleagues (2015) conducted a user survey that involved 647 answers (via a university student e-mail distribution list and a SoSci panel) and examined four dimensions of what they considered individual motives: "a cognitive dimension, an affective/entertainment dimension, a social-integrative dimension, and a personal identity dimension" (Springer et al., 2015, p. 800). Their further analysis was divided into cognitive motives, user-journalist interactivity, personal identity motives, and user-user interactivity, and the most popular statement was *to bring in my opinion* representing user-journalist interactivity (Springer et al., 2015).

In a study on the Australian alternative journalism website, *New Matilda*, users' affective investment, Barnes (2015) touched on the reasons for leaving a comment. An open online survey on the website rendered 924 answers, showing that users were "submitting voices and opinion, seeking recognition,

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<sup>2</sup> Supplementary Information 1 (the included parts of the online user survey):

[https://www.dropbox.com/s/1yg7ut440ox9k3n/Supplementary\\_information\\_1.docx?dl=0](https://www.dropbox.com/s/1yg7ut440ox9k3n/Supplementary_information_1.docx?dl=0)

challenging institutional authority and expressing emotion" (Barnes, 2015, p. 823). The results of Springer and associates' (2015) and Barnes's (2015) studies are in line with Nagar's (2011) conclusion: "The user comments feature is first and foremost a tool for opinion expression" (p. iv). The others also matter, since "commenters [of *New Matilda*] feel a sense of belonging with other commenters" (Barnes, 2015, p. 822). Interestingly, Ksiazek and colleagues (2016) argue that so-called user-content actions relate to information seeking motives and the user-user actions to social motives.

In relation to different platforms, Wu and Atkin (2016) found that motivations such as informing, receiving feedback, and exhibitionism predict commenting on news websites and that the motive for social connection predicts commenting on social media. They also argued that personality, for example agreeability, or narcissism, has a significant role in posting comments (Wu & Atkin, 2016). Similarly, in their study, Barnes and associates (2018) found that personality traits, such as disagreeability and conscientiousness, influence commenting behavior.

According to Kalogeropoulos, Negredo, Picone, and Nielsen (2017) one significant factor is that "political partisans on both the left and the right are significantly more likely to share and comment on news on social media" (p. 2). Similarly, Nagar (2011) summarized that "online and offline political engagement are strongly related" (p. iv). The meaning of political engagement can also predict overall activity in relation to online news (Chung, 2008), which, according to Springer and colleagues (2015), might further explain that "commenting on online news may be driven by the will to participate in democratic processes" (p. 709).

### ***Setting of This Study***

As a summary, Matikainen (2011) distinguishes five motive groups in the overall research on online participation: identity, sharing, social interaction, benefit and need, as well as society and social order. His compressed motive system has three groups: expressing oneself, being social, and executing an online ideology (Matikainen, 2011).

In this current study, these are interpreted as known main-motive categories for online participation, supplemented with the assumption of various other motives, such as news-related motives. Contrary to previous user motive research, this study is not built on an up-front assumption that certain reasons, such as coping with emotions, are expressions of certain motives, such as entertainment (Springer et al., 2015). The aim is to examine whether different situational and contextual reasons reflect certain known motives directing user behavior.

Additionally, users' participatory practices "are likely to vary for cultural, political, and social reasons" (Kalogeropoulos et al., 2017, p. 1). The overall research focusing on online comments has shown that commenting is affected by individual differences and situational factors, such as individual and social contexts, technical architecture, personality, and so on (see, e.g., Barnes, 2018; Barnes et al., 2018; Kangasputa, 2020). Users' experiences about moderation and technical demands effect the users' engagement and motivation (Løvlie, Ihlebæk, & Larsson, 2018; Springer et al., 2015); there are several reasons for not leaving a comment. Ziegele and colleagues (2014) describe this overall phenomenon as an interaction between users' character and their situational motives. Additionally, users prefer different topics,

have different interests, and relate differently to social norms (Sohn, Chung, & Park, 2018), which affects their actions (see, e.g., Kalogeropoulos et al., 2017). Users can also have different roles, such as the bystander or the critic (Kangaspunta, 2020; Larsson, 2011). In this study, users' differences are examined via background factors, and furthermore, by determining different motive-related user types.

### Research Material

This study's research material consists of users' responses to a Finnish open online survey about commenting on online news, available from April 16, 2020–June 30, 2020. Finnish media were contacted to report on the survey and to reach as diverse a sample as possible. However, there were only three online news articles about the survey: in regional newspapers *Kaleva* (kaleva.fi; April 20, 2020) and *Kainuun Sanomat* (kainuunsanomat.fi; April 22, 2020), and on the website of public broadcasting company *Yleisradio* (yle.fi; May 22, 2020; aka *Yle*). *Yle* has the widest distribution, and most respondents found the survey via *Yle*'s online news. Because the survey was open to anyone, the respondents could be described as self-selected. For this reason, caution in making generalizations is necessary. On the other hand, it can be argued that, in a changing online environment, such self-selection is in itself worthy of study.

There were 1,394 complete responses and 1,333 incomplete responses. Assumingly, the high number of incomplete responses indicates that the 95-question survey was too extensive for some respondents. The survey was directed toward users who comment on online news even occasionally (i.e., *few times per year*) because responding to survey questions required engaging in this participatory action. Nonetheless, some respondents stated that they never comment. Their responses were excluded from the analysis. A total of 1,221 responses were analyzed.

The full survey included several parts, of which this research focused on the reason-related questions (see Supplementary Information 1). In building the survey, previous research on user behavior and user motives was considered. The questions were divided into three groups.

The questions in the first group (questions Q52–Q62) were formed around: "I comment, because . . ." to capture general reasons based on participatory features and possibilities of online media context and on what Springer and associates (2015) call unidirectional communication. The two other groups reflect the situational aspect of reasons and were based on the comment's direction to distinguish the differences between the users' reasons for commenting on the news and each other. Previous research on Finnish online news comments has shown that some users prefer commenting only on news articles, while others prefer commenting on other users' comments (Kangaspunta, 2020). The second group (questions Q63–Q68) included "I comment on news, if it . . ." questions, and the third group (questions Q69–Q75) included "I comment on other users, if they . . ." questions. These reasons can be understood as reactions, based on what Springer and colleagues (2015) call interpersonal communication; users "react to the author of the article or to other users' comments" (p. 709). Additionally, interpersonal communication "may take on two forms: either consensual communication . . . ; or confrontational or discursive communication . . ." (Springer et al., 2015, p. 709). With both groups, this division (consensual–confrontational) was taken into consideration.

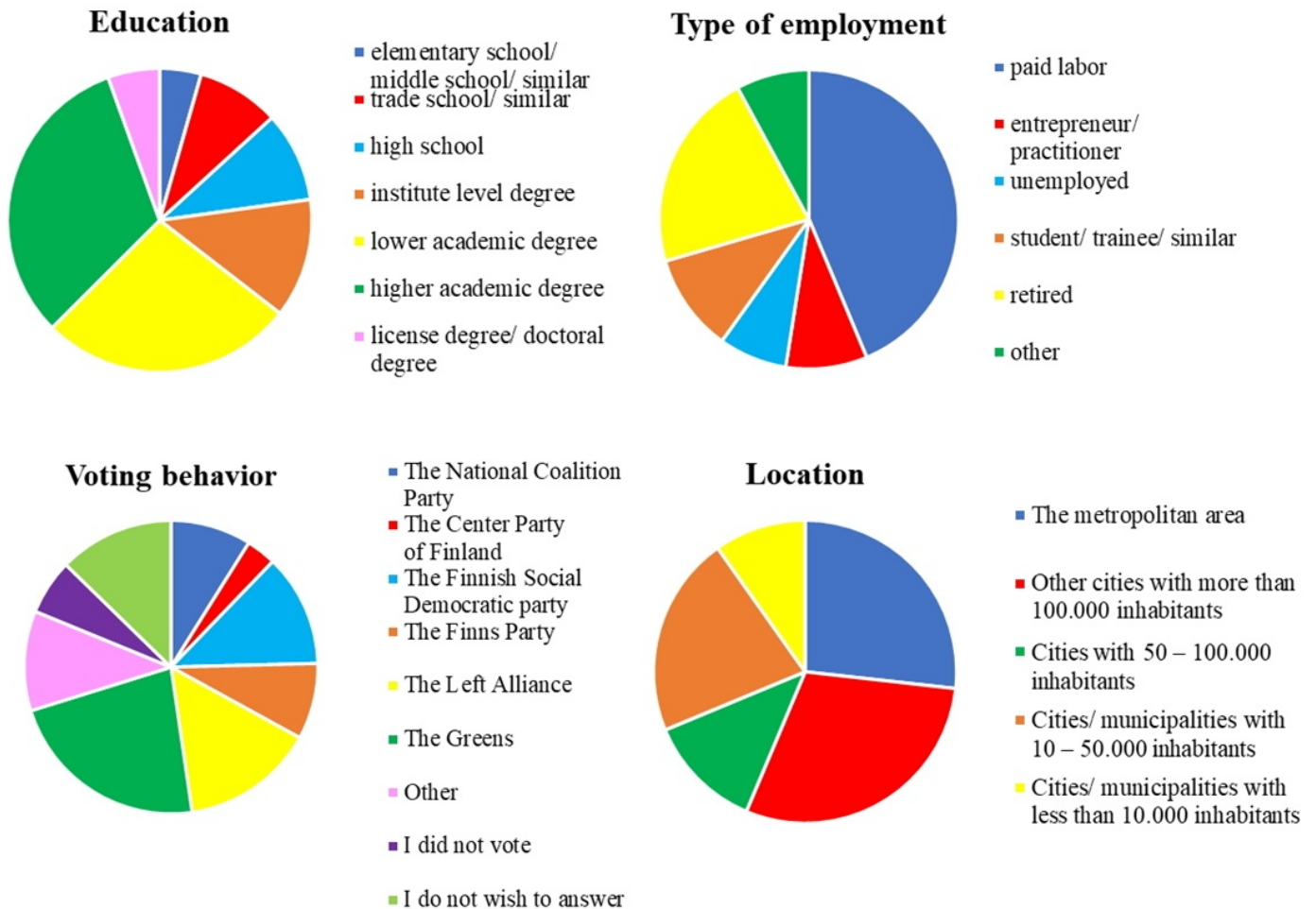
The examined background factors were gender, age, education, type of employment, voting behavior and location (Table 1 and Figure 1). Voting behavior was examined through the following question: "Which party did you vote for in the last parliamentary election [2019]?" The response options included all Finnish main parties, option "other" and also options "I did not vote" and "I do not wish to answer" (see Supplementary Information 1). As such, the background factor refers to both whether people vote or not (behavior) and which party they voted for (political standing) if they voted. The six background factors were chosen to the survey based on previous user research and the Finnish media context. For example, age, gender, and education affect users' commenting activity, even though users are becoming more heterogeneous (Ziegele, Springer, Jost, & Wright, 2017). Additionally, Kalogeropoulos and associates (2017) argue that political partisanship can affect commenting activity. Here, user activity was examined through questions concerning commenting frequency.

The respondents' backgrounds can be described as being diverse and limited (Table 1 and Figure 1). Briefly, 52% of the respondents were women, and 43.4% men. The largest age groups were those 36–45 and 46–55 years (total range between 15–85 years). The most common education levels were lower and higher academic degrees, and the most common type of employment situation was paid labor. The majority of the respondents live in larger cities (more than 100,000 inhabitants) or in the metropolitan area, and the most popular political party among them (in the last elections) was the Greens.

**Table 1. Background Factors Gender and Age.**

Gender	All N = 1.221	Age						Missing value	Total
		15–26	27–35	36–45	46–55	56–65	66–85		
Female	635 52.0%	69 10.9%	115 18.1%	129 20.3%	115 18.1%	122 19.2%	80 12.6%	5 0.8%	635 100% (n = 635)
Male	530 43.4%	43 8.1%	57 10.8%	107 20.2%	132 24.9%	97 18.3%	88 16.6%	6 1.1%	530 100% (n = 530)
Other/ no answer	56 4.6%	6 10.7%	16 28.6%	17 30.4%	6 10.7%	6 10.7%	2 3.6%	3 5.4%	56 100% (n = 56)
All N = 1.221	1,221 100%	118 9.7%	188 15.4%	253 20.7%	253 20.7%	225 18.4%	170 13.9%	14 1.1%	

*Note.* Missing values in background factor age are excluded responses (e.g., 123, 0) to open numeric question.



**Figure 1. Background factors education, type of employment, voting behavior, and location. Voting behavior was examined through the following question: "Which party did you vote for in the last parliamentary election [2019]?" The names of the Finnish political parties are unofficial translations.**

Two remarks should be made. First, these factors do not describe a typical Finnish online-news commenter but rather a typical Yle commenter willing to complete the survey. Also, these factors are not in line with statistics about the overall Finnish population. For example, less than half of the Finnish population 15 years and older have an academic degree (Statistics Finland, 2019b), and in the last parliamentary election, only 11.5% voted for the Greens (Statistics Finland, 2019a). Second, in some cases, the factors are expected to correlate. For example, the Greens are significantly more popular among women, in larger cities and in the metropolitan area, and also among those with higher education (Koivula, Räsänen, & Saarinen, 2015).



Also, since the following analysis highlights the meaning of political standings, the Finnish political spectrum needs short detailing. The Finnish multiparty system is best understood with two axes: the economic left–right and the ideological liberal–conservative (i.e., GAL–TAN: Green-Alternative-Libertarian vs. Traditional-Authoritarian-Nationalist; Isotalo & Järvi, 2020; see also Borg, Kestilä-Kekkonen, & Wass, 2020). The Left Alliance (in the future Left), the Greens, and the Finnish Social Democratic Party (Democratic) are located in the left and liberal sides, and conversely, the Finns Party (Finns), the National Coalition Party (Coalition), and the Center Party of Finland (Center) are located in the right and conservative sides (Borg et al., 2020; Isotalo & Järvi, 2020). In the present political polarization, the Finns and their voters represent the far-right nationalist approach, ideologically opposite to the left-liberal Left and Green parties and their voters (Borg et al., 2020). However, it should be noted that there can be variation inside of parties in relation to the two axes (Isotalo & Järvi, 2020).

The activity variable was formed from questions concerning “which news media do you comment on online, on what platform, and how often?” (see Supplementary Information 1). Respondents commenting “daily/near daily” or “1–3 times a week” on at least one platform (e.g., a news website or social media) were interpreted as active users. Based on this, the respondents were divided into the most active (403 respondents; 33%), and the inactive (818 respondents; 67%). Due to its dichotomous nature, the factor was not included in preliminary analysis.

## Analysis and Results

### Preliminary Analysis

Concerning RQ1a, to examine the preferred reasons for commenting, the significance of each question was first calculated on a scale from 1 (*strongly disagree*) to 5 (*strongly agree*). The midpoint was 3 (*neutral*).

The most preferred reasons ( $M \geq 4$ ) were as follows: “I comment on news if it addresses topics important to me” ( $M = 4.26$ ); “on news if it includes incorrect or insufficient information” ( $M = 4.12$ ); “because I want to state my opinion” ( $M = 4.08$ ). The results are highly like Springer and cohorts’ (2015) survey responses, in which the most popular statements were the following: “To bring in my opinion, To get awareness of new aspects of a topic, and If I don’t agree on an article . . .” (p. 806; see, e.g., Barnes, 2015; Nagar, 2011).

The lowest means ( $< 3$ ) were for: “I comment because I want to provoke other users” ( $M = 1.78$ ); “because it is important to me to maintain my role . . .” ( $M = 2.26$ ); “because it generates a feeling of togetherness with like-minded users” ( $M = 2.67$ ); “on other users if their actions generate negative feelings in me . . .” ( $M = 2.79$ ); “because it is fun and entertaining” ( $M = 2.88$ ); and “because I want to express my emotions . . .” ( $M = 2.96$ ). Similar reasons, when comparable, had low means in Springer and colleagues’ (2015) study.

Concerning RQ1b, to examine the role of background factors in explaining the differences between users, a one-way analysis of variance (ANOVA<sup>3</sup>) was conducted to test the mean differences of background

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<sup>3</sup> The statistical software SPSS Statistics was used in all statistical analyses.

factors (i.e., six independent variables) in relation to each reason (i.e., survey question). In the ANOVA results,<sup>4</sup> for 17 of the 24 questions, the means of responses were divided statistically significantly ( $.001 < p \leq .01$ ) or highly significantly ( $p \leq .001$ ) based on at least one background factor. The most influential factors were voting behavior, gender, age, and education.

To further explicate the found statistically highly significant differences between the compared groups ( $p \leq .001$  in ANOVA results), the post hoc tests, Tukey's test, and a Bonferroni correction,<sup>5</sup> were used. The results are discussed below (for precise results, see Supplementary Information 2<sup>6</sup>). Education variable showed no statistically high significance in the post hoc tests; location variable was excluded from the post hoc tests, since there was no statistically high significance in the preliminary tests of variance. The post hoc test results follow.

#### *Gender*

The mean differences indicate that men are statistically more likely to correct news, provoke others, and criticize other users' actions. Those in group no answer/other are less likely to defend news sources. Women are more likely to express emotions and react based on positive feelings generated by other users' actions.

#### *Age*

Concerning questions about acting based on generated positive feelings (both news and other users), the 27–35 years old group had a mean  $< 3$ , indicating disagreement and separating the group from several age groups ( $M > 3$ ). Overall, older respondents are statistically more likely to engage in provoking, criticizing, and defending news sources and to act based on positive feelings. Correspondingly, younger respondents more likely comment on each other.

#### *Type of Employment*

Retired people are statistically most likely to express their opinion, criticize, defend, and act based on feelings (i.e., age above). People within exceptional types of employment (unemployed or other) are more likely to want to be heard in public discussions. Entrepreneurs/practitioners relate less likely to this aspect of commenting. They are also less likely to express their emotions or comment based on feelings. Lastly, people employed in paid labor are not as likely to express their emotions, participate in defending or criticizing news sources, or act based on negative feelings.

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<sup>4</sup> A nonparametric Kruskal–Wallis H test was also conducted to compare the tests and detect the possible mistakes in the variance analysis. The results were nearly identical.

<sup>5</sup> Tukey's test is typically used with one-way ANOVA and Bonferroni with nonparametric Kruskal–Wallis H test.

<sup>6</sup> Supplementary Information 2 (post hoc test results showing statistical significance):

[https://www.dropbox.com/scl/fi/y50t3c1ad4dfg8a4mzahb/Supplementary\\_information\\_2.docx?dl=0&rlkey=le6olvv2ob4sba0st5okc064z](https://www.dropbox.com/scl/fi/y50t3c1ad4dfg8a4mzahb/Supplementary_information_2.docx?dl=0&rlkey=le6olvv2ob4sba0st5okc064z)

*Voting Behavior*

The Finns' voters are statistically most likely to participate in public discussion, act based on a feeling of togetherness, participate in criticizing news and defending news actors or other users, provoke others and are least likely to act based on maintaining an appropriate commenting culture. Their counterpart, in many cases, are the voters for the Coalition, the Left, and the Greens. However, in relation to the feeling of togetherness and criticizing or defending news actors, the Left's voters also have a higher mean. Since the left-liberal Left and far-right Finns both represent certain extreme ends of the Finnish political spectrum (Borg et al., 2020; Isotalo & Järvi, 2020), this similarity among their voters might explain the meaning of political partisanship (i.e., Kalogeropoulos et al., 2017) engaged in "confrontational or discursive communication" (Springer et al., 2015, p. 709). The Coalition's voters seem to stand out by the lower agreement in relation to several survey questions, such as being heard in public discussion, and the feeling of togetherness.

Overall, the preliminary analysis indicates that several reasons divide the respondents, and the examined background factors might explain these statistical differences.

***First Phase of the Analysis***

Concerning RQ2a, to examine the relationship between reasons and motives, a factor analysis was conducted (Table 2). The analysis detects underlying factors that explain the relationships among observed variables (reasons).

***Table 2. Potential Motives for Commenting.***

	Factors						<i>M</i>	<i>SD</i>
	1	2	3	4	5	6		
I comment . . .								
Social interaction							3.23	
(with other users)								
(Q52) . . . because I want to	.559						3.22	1.193
discuss with others.								
(Q58) . . . because it generates a	.422						2.67	1.175
feeling of togetherness . . . .								
(Q69) . . . on other users if they	.591						3.52	1.087
address topics important to me.								
(Q72) . . . on other users if their	.536	.364			.442		3.41	1.136
actions need to be defended.								
(Q74) . . . on other users if their	.599		.552				3.16	1.155
actions generate positive								
feelings . . . .								
(Q75) . . . on other users if they	.439						3.42	1.137
comment on my comments.								

Correct information and behavior				3.50	
(Q64) . . . on news if it includes incorrect or insufficient information.	.418	.347		4.12	.996
(Q70) . . . on other users if they present incorrect or insufficient information.	.759			3.91	1.090
(Q71) . . . on other users if their actions need to be criticized.	.640	.357		3.16	1.262
(Q73) . . . on other users if their actions generate negative feelings . . . .	.547	.387	.313	2.79	1.206
Reacting to emotions				3.11	
(Q59) . . . because I want to express my emotions.		.562		2.96	1.228
(Q67) . . . on news if it generates negative feelings in me.	.352	.632		3.07	1.178
(Q68) . . . on news if it generates positive feelings in me.	.355	.588		3.29	1.099
Societal discussion				3.85	
(Q53) . . . because I want to be heard in public discussion.		.474		3.47	1.215
(Q54) . . . because I want to state my opinion.		.301	.404	4.08	.947
(Q56) . . . because I want to share my information . . . .		.557		3.94	.909
(Q57) . . . because I want to find solutions to problems.		.524		3.89	1.000
Interaction with news (sources)				3.48	
(Q65) . . . on news if it gives a voice to an actor whose actions I want to criticize.	.332	.592		3.40	1.245
(Q66) . . . on news if it gives a voice to an actor whose actions I want to defend.		.781		3.55	1.113
Provoking and entertainment				2.33	
(Q60) . . . because it is fun and entertaining.	.363		.481	2.88	1.252
(Q61) . . . because I want to provoke other users.			.619	1.78	1.034

Other questions						
(Q55) . . . because it is important to me to maintain my role . . .			.320		2.26	1.221
(Q62) . . . because I want to maintain . . . appropriate discussion culture.	.318		.325	(-.228) <sup>a</sup>	3.84	1.036
(Q63) . . . on news if it addresses topics important to me.			.377		4.26	.821
Eigenvalue	5.930	2.067	1.950	1.588	1.369	1.035
Variance explained	24.708	8.613	8.125	6.618	5.705	4.311

*Note.* Rotated factor solution. (Rotation method: varimax with Kaiser normalization). Coefficients < .3 suppressed. ( $N = 1.221$ ; variance explained: 58.079%). Means of questions (Q52–Q75): 1 = *strongly disagree*; 5 = *strongly agree*.

<sup>a</sup>Negative coefficients < .2 suppressed.

The reasons had connections based on six factors (Table 2) and across the three question groups. The factors were further examined as potential motives. Each question was placed in one motive based on the highest factor value > .4. As an exception, question Q74 was included in motives 1 and 3, since the factor value was high in both. Questions Q55, Q62, and Q63 were left out. However, these questions likely reflect some other underlying motives. For example, maintaining one's role can relate to motives such as achievement or power (Bilsky, 2006). Additionally, the ignored factor values from .3 to .4. (Table 2) indicate that the reasons for commenting can relate to several motives, and additionally, that motives can be connected. The constituted motives follow.

### **Motive 1: Social Interaction (With Other Users) (SI in Tables 3 and 6)**

Discussing with others, the feeling of togetherness, responding to other users about important topics, defending others, and commenting based on positive feelings generated by other users all relate to the main motive of social interaction, or, further, being social (Matikainen, 2011) with other users. Wu and Atkin (2016) call this social connection, and it can be related to the social aspect of online communities (Matikainen & Villi, 2015). Springer and colleagues (2015) referred to the social-integrative dimension further nominated as user–user interactivity. Similarly, Ksiazek and associates (2016) connected user–user actions in online news comments to social motives. However, this motive might not indicate debates between opposite views but rather discussions of like-mindedness, while sharing a sense of belonging (or togetherness) with others (Barnes, 2015).

### **Motive 2: Correct Information and Behavior (CIB)**

Correcting news articles and others, criticizing other users' actions, and reacting based on user-related negative feelings all relate to the need to express criticism and defend correct information and behavior. Springer and colleagues (2015) referred to cognitive motives, such as learning in dialogue with others, while Ksiazek and cohorts (2016) referred to information seeking motives (user–content actions). Here, based on grouped questions, the motive is closer to what Wu and Atkin (2016) call informing, or what Sirkkunen (2006)

understands as communal motives sharing information and communal learning. Criticizing other users' behavior can also be related to social order motive (Matikainen, 2011).

### **Motive 3: Reacting to Emotions (RE)**

Expressing emotions, reacting to both negative and positive news-based feelings, and reacting to user-based positive feelings relate to acting (i.e., commenting) based on acknowledged emotions—users recognize the meaning of their emotions (Barnes, 2015). Springer and associates (2015) referred to an affective/entertainment dimension. Among studied respondents here, their emotional connection to news (e.g., Gray, 2007) seems to be connected to positive user-related feelings. It can be argued that the emotional connection to news differs from the emotional user-user connection. Additionally, it can be speculated how much this relates to fan-like user behavior about news websites (Barnes, 2015), as well as to the overall motive for expressing oneself online (Matikainen, 2011).

### **Motive 4: Societal Discussion (SoD)**

The need to be heard in public, state one's opinion, share one's information, and solve problems all relate to the main motive of society (Matikainen, 2011): the desire to influence (Matikainen & Villi, 2015) and what Springer and cohorts (2015) referred to as the will to participate in democratic processes (see, e.g., Nagar, 2011). They can also be connected to communal motives for online participation, such as sharing information and communal learning (Sirkkunen, 2006).

### **Motive 5: Interaction With News (Sources) (IN)**

The questions about criticizing and defending actors in the news describe precise actions directed solely about the news. For this reason, the motive represents user-content actions (Ksiazek et al., 2016) and is close to what Matikainen and Villi (2015) call the desire to participate in media activity. It can also be connected to a specific user type: those who prefer only to comment on news articles (Kangaspunta, 2020), although criticizing and defending other users have some factor load with this motive (Table 2). Springer and colleagues (2015) saw disagreeing with the news article as being user-journalist interactivity. However, research on Finnish news comments shows that news-related comments are usually directed at actors in the news and not at journalists and often represent challenging of institutional authorities (Kangaspunta, 2020; see, e.g., Barnes, 2015).

### **Motive 6: Provoking and Entertainment (PE)**

The results suggest that provoking can be related to the main motive of entertainment (Ksiazek et al., 2016; Springer et al., 2015); users feel that "it is entertaining to dispute" or that they are testing "how others react on opinions" (Springer et al., 2015, p. 806). However, provoking can also aim to insult others or trigger negative responses (Kluck & Krämer, 2020; Stroud, Muddiman, & Scacco, 2016).

These were transformed into motive variables representing the mean of users' responses. For example, the variable social interaction was recoded as follows:  $(Q52 + Q58 + Q69 + Q72 + Q74 + Q75) / 6$ . The most

preferred motive was societal discussion ( $M = 3.85$ ) and least preferred motive was provoking and entertainment ( $M = 2.33$ ).

Concerning RQ2b, to examine the relationship of potential motives and users' backgrounds, multiple regression was run to predict Motives 1–6 regarding factors gender, age, political standing, and activity.<sup>7</sup> The original age variable (in years) and dichotomous gender variable were used. To examine the meaning of political standings, the six parties of voting behavior variable were transformed into two ordinal variables describing the two axes of Finnish multiparty system. Based on the study by Isotalo and Järvi (2020),<sup>8</sup> the responses (parties voted for) were organized ordinally from the political right to left (value 1–6) to create the economic political standing variable; and from conservative to liberal (value 1–6) to create the ideological political standing variable (Table 3.)

**Table 3. Factors Influencing the Motives for Commenting.**

	Motives					
	SI	CIB	RE	SoD	IN	PE
Mean <sup>a</sup>	3.23	3.50	3.11	3.85	3.48	2.33
Predictors						
Gender (male = 1; female = 0)	-.098 <sup>#</sup>	.158**	-.129*	-.051	-.023	.272***
Age	-.001	.001	.007***	-.002	.008***	.005*
Activity (most active = 1; nonactive = 0)	.413***	.424***	.311***	.305***	.373***	.375***
Economic political standing (Coalition = 1; Finns = 2; Centre = 3; Greens = 4; Democratic = 5; Left = 6)	.053**	.038 <sup>#</sup>	.060**	.017	.087***	-.034
Ideological political standing (Finns = 1; Centre = 2; Coalition = 3; Democratic = 4; Left = 5; Greens = 6)	.029	-.030	-.039 <sup>#</sup>	-.025	-.091***	-.057*
$R^2$	.087	.075	.065	.046	.075	.118
Adjusted $R^2$	.082	.069	.059	.040	.070	.112
$F$	15.589***	13.225***	11.387***	7.883***	13.325***	21.824***

Note. OLS regression analyses; methods: enter and test.

<sup>a</sup> 1 = *strongly disagree*; 5 = *strongly agree*.

<sup>#</sup>  $p \leq .10$ , \* $p \leq .05$ , \*\* $p \leq .01$ , \*\*\* $p \leq .001$ .

SI: Social interaction; CIB: Correct information and behavior; RE: Reacting to emotions; SoD: Societal discussion; IN: Interaction with news; PE: Provoking and entertainment.

<sup>7</sup> In the assumption tests, there was multicollinearity regarding the voters for the Greens, higher academic degree and paid labor, reaching the minimum tolerance level (.000). Due to the assumed significance of political standing, the background factors education and type of employment were excluded from the regression analysis. The tolerance value of remaining variables was between .611 and .916, and VIF value between 1.091 and 1.637, indicating no multicollinearity. The factor location was also excluded since it showed very little significance in the preliminary analysis (Laerd Statistics, 2015).

<sup>8</sup> Isotalo and Järvi (2020) examined the answers of individual candidates regarding voting advice applications in the 2019 parliamentary elections.

The independent variables were examined as a combined Model. As a result, the multiple regression model statistically significantly predicted all motives, involving  $p \leq .001$  in all cases. However, the model fit varied between an adjusted  $R^2$  of 11.2% to 4%, indicating that the models had very little predictive effect (Table 3).

Even though the models had a relatively insignificant predictive effect, it can be assumed that background factors relate differently (increasing or decreasing the assumed value) to each motive. Variable activity had the highest predictive effect on all motives (see, e.g., Springer et al., 2015).

### ***The Second Phase of the Analysis***

Concerning RQ3a, potential user types were examined. Respondents with value  $\geq 4$  on each motive variable were interpreted as preferring such motive, and further, representing a potential motive-related user type. Based on this, user type variables were recoded. For example, respondents with value  $\geq 4$  on motive variable social interaction were included in user type social interactionist. The factor analysis marked question Q62, "I comment because I want to maintain, strengthen, and develop an appropriate online discussion culture," as a counterpart of provoking and entertainment. To examine the polarity between these aspects, the seventh (reason-based) user type was also created based on the individual question Q62. This user type represents those who comment to develop online discussion culture, which can be understood as rather unique and unexamined reason (or motive) for participation (e.g., Springer et al., 2015), also connected to social norms (Sohn et al., 2018). Due to the high number (39.2%) of value-4 responses (i.e., *agree*) to Q62, only respondents with a response value of 5 (i.e., *strongly agree*; 29.2%) were included. The types were as follows:

1. Social interactionist (SoIn in Tables 4 and 7)
2. Critic (Crit)
3. Emotionalist (Emot)
4. Societal conversationalist (SoCo)
5. News interactionist (NeIn)
6. Provoker-entertaineer (ProEn)
7. Developer (Dev)

Table 4 shows that the most typical motive-related user types were societal conversationalist (53%) and news interactionist (47.3%), and the least typical was provoker-entertaineer (8.8%). Since activity had the highest predictive effect in the regression analysis, the activity variable was included to the first comparisons of user types.



**Table 4. Frequencies of Different User Types.**

	SoIn (Column percent)	Crit (CP)	Emot (CP)	SoCo (CP)	NeIn (CP)	ProEn (CP)	Dev (CP)
All respondents ( <i>N</i> = 1.221)	18	36.4	21.0	53.0	47.3	8.8	29.2
Inactive ( <i>n</i> = 818)	13.0 (48.2)	31.1 (57.2)	17.4 (55.5)	47.6 (60.1)	39.9 (56.4)	7.0% (53.3)	27.8 (63.8)
Most active ( <i>n</i> = 403)	28.3 (51.8)	47.1 (42.8)	28.3 (44.5)	64.0 (39.9)	62.5 (43.6)	12.4 (46.7)	32.0 (36.2)

Note. Respondents were included to User Types 1–6, based on the comparable motive variable value  $\geq 4$ . Respondent were included to User Type 7, based on the value 5 (*strongly agree*) on question Q62.

The user types are not exclusive, and the overlapping of multiple user types was also calculated (see Table 5). Since the first comparisons (see Table 4) indicate that all user types occur more often among the most active users (i.e., they tended to agree with the questions more often than the inactive), the overlapping of user types was examined in relation to activity variable (RQ3b). Interestingly, only 21.6% of the respondents did not fit any of the user types, and most of these respondents were the inactive. Almost one quarter (23.8%) of the respondents were of one user type; 20.4% were of two types, and 16.6 % were of three types. Altogether 260 users fit into four or more user types, forming 21.3% of all users. In this group, 51.5 % were the most active users.

**Table 5. Overlapping of User Types.**

	All respondents (%) ( <i>N</i> = 1.221)	Inactive (%) ( <i>n</i> = 818) (Column percentage)	Most active (%) ( <i>n</i> = 403) (CP)
No user type	17.9	21.8 (81.3)	10.2 (18.7)
1	23.8	27.4 (77.2)	22.8 (16.4)
2	20.4	20.5 (67.5)	20.1 (32.5)
3	16.6	14.9 (60.1)	20.1 (39.9)
4	10.9	8.7 (53.4)	15.4 (46.6)
5	7.0	4.8 (45.3)	11.7 (54.7)
6	3.1	2.0 (42.1)	5.5 (57.9)
All user types	0.2	0.0 (0.0)	0.7 (100.0)

Since the frequency of user types varies, their interrelationship cannot be calculated directly by comparing the user types themselves. For example, since the societal conversationalist was most typical (53.0%), only 25.4% of the respondents with some user types were not societal conversationalists. For this reason, correlations were calculated from the user types in relation to original motive variables and question Q62, and therefore, the correlations measure whether representing a user type (value of 1) correlates with high mean in motive variables or agreement with question Q62. Consequently, the correlations of comparable user types and motives (e.g., social interactionist and social interaction) cannot result in value of 1 since the correlations were calculated based on the exclusive dichotomous user type variables (value 1 or 0) and the

original motive variable having the value between 4 to 5 in each user type and value 5 in question Q62 (see the constituting of user types above).

The results in Table 6 confirm the idea of overlapping user types and the connection of certain motives (and reasons; see Table 3). Focusing on the most significant correlations per user type, the social interactionist also prefers emotional motive, the critic emotional and news interaction motives, the emotionalist social interaction motive, and the news interactionist criticism and emotional motives. The most typical user type, societal conversationalist, seemed to correlate equally with most user types. The only negative correlations were between the provoker-entertaineer and the Q62, and between the developer and provoking. All in all, it can be argued that the user types and motives (and reasons) are not connected or overlapping randomly. The strongest connection can be expected to form between the social interactionist and the emotionalist (or between motives social interaction and reacting to emotions) and between the critic and the news interactionist (or between motives correct information and interaction with news).

**Table 6. The Correlations Between User Types and Motives 1–6 and Q62.**

User types	Motives						Q62
	SI	CIB	RE	SoD	IN	PE	
Social interactionist	.598**	.244**	.401**	.217**	.239**	.203**	.169**
Critic	.290**	.743**	.313**	.246**	.369**	.213**	.046
Emotionalist	.415**	.279**	.659**	.218**	.310**	.191**	.076**
Societal conversationalist	.233**	.242**	.232**	.780**	.266**	.096**	.180**
News interactionist	.252**	.375**	.324**	.264**	.792**	.146**	.064*
Provoker-entertaineer	.065*	.163**	.095**	.043	.124**	.601**	-.114**
Developer	.135**	.092**	.012	.214**	.076**	-.086**	.718**

Note. \* $p < .05$  (two-tailed); \*\* $p < .01$  (two-tailed); Pearson correlation coefficients ( $N = 1.221$ ).

SI: Social interaction; CIB: Correct information and behavior; RE: Reacting to emotions; SoD: Societal discussion; IN: Interaction with news; PE: Provoking and entertainment.

Lastly, concerning RQ3b, the user types were examined in relation to background factors (other than activity). The examination revealed the meaning of voting behavior and education and, more precisely, the meaning of the lowest and highest education levels and political standings—the differences between voters for the far-right Finns, and the left-liberal Left and Greens (see Table 7). Unsurprisingly, education and voting behavior are connected since, for example, a typical Greens' voter has a higher education degree (Koivula et al., 2015).

**Table 7. User Types in Relation to Voting Behavior and Education.**

Background factor	User types						
	SoIn (%)	Crit (%)	Emot (%)	SoCo (%)	NeIn (%)	ProEn (%)	Dev (%)
Education							
Elementary	24.1	44.4	35.2	61.1	50.0	9.3	11.1
Trade school	17.8	30.8	24.3	56.1	54.2	4.7	29.0
High school	15.4	45.3	17.9	59.0	44.4	15.4	34.2
Institute level	21.3	37.4	27.7	51.0	54.8	11.6	28.4
Lower academic	16.4	37.9	17.6	51.5	44.8	8.8	26.1
Higher academic	18.7	34.0	20.7	51.2	46.3	7.4	31.5
License/doctoral	14.9	26.9	11.9	53.7	40.3	4.5	38.8
Voting behavior							
Coalition	13.8	35.8	16.5	42.2	43.1	15.6	24.8
Center	20.0	40.0	20.0	65.0	55.0	7.5	27.5
Democratic	15.9	35.8	17.2	52.3	49.0	7.3	27.2
Finns	16.7	50.0	31.4	73.5	60.8	18.6	22.5
Left	28.9	40.6	23.3	51.1	59.4	6.1	31.1
Greens	21.8	34.9	21.1	57.5	42.9	3.3	39.6
Other	14.9	38.1	21.6	50.7	43.3	9.7	24.6
Did not vote	16.0	33.3	24.0	50.7	46.7	12.0	21.3
No answer	7.7	25.2	16.1	41.9	35.5	9.7	25.8

*Note.* Percentages are row percentages indicating that, for example, 50% of users that voted for the Finns are Critics.

The Finns' voters seemed to form an exception in types critic (50%), emotionalist (31.4%), societal conversationalist (73.5%), news interactionist (60.8%), and provoker-entertaineer (18.6%). Conversely, the Left's voters have the highest percentage (28.1%) in social interactionist group and the Greens' voters (39.6%) in the developer group. It can be argued that political standings are connected to specific motives. Additionally, it can be speculated whether the voters of the Finns, representing the far-right nationalist approach, and, for some parts, the voters of the Left and Greens, representing the opposite left-liberal approach, represent typical political partisan behavior, which can also relate to higher user activity (e.g., Chung, 2008). Closer examination reveals that 50 % of the voters for the Finns are the most active users (the percentage in other voting behavior groups; 25.8%–36.7%).

### Conclusions and Discussion

The preliminary analysis showed that the most preferred reasons for commenting (i.e., survey questions) were related to important topics, correcting news information, and stating one's opinion. There were also several reasons that majority of the respondent did not agree with. The preferred and less preferred reasons are like Springer and associates' (2015) and partly like Nagar's (2011) findings. It can be argued that the reasons for (or not) leaving a comment can be, to some extent, universal, with variances

for “cultural, political, and social reasons” (Kalogeropoulos et al., 2017, p. 1). Some of these variances can be explained by background factors, such as political standings.

The first phase of the main analysis showed that most of the survey questions related to one (or several) known user motive. This suggests that user motives play role in certain situations or in relation to certain features of the online media context and result in leaving a comment. Six motives were recognized and determined in relation to previous motive-related online participation research: (1) social interaction with other users; (2) correcting information and behavior; (3) reacting to emotions; (4) societal discussion; (5) interaction with the news (sources); and (6) provoking and entertainment. The most preferred motive was societal discussion ( $M = 3.85$ ), and the least preferred motive was provoking and entertainment ( $M = 2.33$ ).

These motives were examined through a regression analysis of five background factors. The factors had a statistically significant effect, but when combined, they did not effectively predict the motive values. It can be argued that the weight of a single background factor varies case by case. The most predictive factor was user activity.

The second phase of the main analysis focused on six motive-related user types: (1) social interactionist; (2) critic; (3) emotionalist; (4) societal conversationalist; (5) news interactionist; and (6) provoker-entertaineer. The seventh user type, developer, was also formulated. As expected, the societal conversationalist was the most typical type, and the provoker-entertaineer was the least typical. These types also overlapped, and the user types and their other preferred motives correlated.

All user types were more common among the most active users, but were occurring differently between other background groups. Most visible was the comparably high percentage of certain user types among far-right Finns' voters, also opposite to typical user types of left-liberal Left's and Greens' voters.

Overall, the role of political standings was emphasized, indicating that the gap between the different reasons, motives, and user types was connected to the political gap of far-right and left-liberal (Borg et al., 2020). Additionally, contrary to other voting behavior groups, 50% of the Finns' voters were the most active users, which suggests that the political partisanship increasing user activity (Chung, 2008; Nagar, 2011) most likely represents far-right approach.

The study results also indicate that user comments, in the Finnish context, are often motivated by societal reasons (Matikainen, 2011; Matikainen & Villi, 2015; Nagar, 2011; Springer et al., 2015), which highlights the meaning of public participation as an action. Public discussions in the public sphere are usually seen as conflicts of opinions (Dahlberg, 2005), but here, the societal motive was not connected to criticizing or defending news sources or other users. The analysis also showed that expressing one's opinion related to public participation and solving problems rather than user-journalist interactivity (Springer et al., 2015).

All in all, the determined motives and user types, connecting different reasons, provide an interesting but limited setting for research on online news commentary. The analysis led to the conclusion that most situational and contextual reasons for commenting reflect underlying motives. The reason-based

formations of the motives, for some parts, challenged previous research on user motives, indicating that research in diverse online media context should avoid upfront setting of motives.

### Limitations and Further Research

Despite the sufficient number of responses, this survey reached limited group of self-selected respondents. Due to the limitation of a single research article, the survey data were studied only from a limited perspective using limited methods.

Additionally, it can be speculated motives are, to some extent, subconscious, and that users do not always recognize the core of their actions. Users comprehend survey questions differently and can respond to surveys according to what they assume to be expected, for example, based on the norms of political discussion (Freelon, 2015), in which emotions have traditionally been considered secondary. More research is needed on how users understand the meaning of their emotions, and on the differences of emotional attachment with news and with other users. Further research should also exploit mixing methods, such as observational research and interviews with users, and consider the meaning of user personality traits (Barnes et al., 2018).

Regarding societal and public discussion, further research might benefit from an intensive approach to defining the distinction between individual and societal reasons and motives—when a user is individually or societally motivated (Sirkkunen, 2006; Springer et al., 2015). Is the line between public and private crossed when users act based on societal motives? And furthermore, how users experience their role in public? What is the meaning of political standings in these experiences? This setting provides an interesting theoretical and empirical starting point for further research on user motives and public participation.

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