

## Users' Political Motivations in Comment Sections on News Sites

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The Internet has transformed individual political participation. Based on our theoretical framework, we assume that user comments can be regarded as forms of political participation from which conclusions can be drawn about users' political motivations such as identity, emotions, morality, and agency. In a manual quantitative content analysis of 300 user comments of the comment sections of four German news sites, we identified types of user comments on the basis of perceptible political motivations. A subsequent cluster analysis shows that the identified motivations occur in combination. We classify six different clusters of user comments based on these motivations: *moral-friendly*, *objective*, *emotional-moral believing*, *angry-left-liberal*, *angry-conservative*, and *angry-lone-fighter*. Further analyses of motivations and types of user comments by left- and right-leaning news sites reveal clear differences in the occurrence of negative emotions, individual and collective morality, and agency. The *angry-conservative* and *angry-lone-fighter* clearly predominate on right-leaning media, and *emotional-moral believing* and *angry-left-liberal* on left-leaning media.

*Keywords: user comments, political participation, political motivations, digitally networked participation, social identity model of collective action*

Political participation research has always been concerned with political motivations. Scholars assumed different causal links between both concepts depending on their theoretical approach. The idea that political motivations and attitudes cause political participation is held in the social-psychological theory of planned action (Ajzen, 1988; Lilleker & Koc-Michalska, 2017) and the civic voluntarism model (Verba, Scholzman, & Brady, 1995). Other theories, such as the theory of cognitive dissonance (Festinger, 1962), assume conversely that political participation causes political attitudes and motivations. Although there is empirical evidence for both causal directions, political-communication-centered participation (e.g., commenting on news) on the Internet complicates and differentiates this relationship (Quintelier & van Deth, 2014).

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Political groups use the Internet to mobilize and establish narratives for their interests and goals (Quandt, 2018; i.e., they express political motivations in political-communication-centered participation that can influence political-noncommunication-centered participation). User discussions in comment sections on news sites are among the most widely used forms of political communication and differ from other forms of user-generated content by their (potentially) wide reach (Springer & Kümpel, 2018). They change the dynamics of traditional mass communication through motivation-oriented participatory possibilities such as commenting on the news (Springer, Engelmann, & Pfaffinger, 2015). Thus, they can negatively or positively affect journalists, readers, and other commenters (e.g., Domingo, 2011; Hsueh, Yogeewaran, & Malinen, 2015; von Sikorski & Hänel, 2016). For example, the agency in news frames affects the likelihood of becoming politically active (Haenschen & Tedesco, 2020; Smith, Williamson, & Bigman, 2020). More emotional comments increase the number of user contributions in a thread (Chmiel et al., 2011). Such effects can be interpreted as political mobilization effects online or offline (Kalogeropoulos, Negrodo, Picone, & Nielsen, 2017; Theocharis & van Deth, 2015).

This article focuses on analyzing users' political motivations in comment sections on news sites. We applied the social identity model of collective action (SIMCA; van Zomeren, 2016), which encompasses four political motivations—identity, emotions, morality, and agency. According to the SIMCA, expressed political motivations in user comments may explain political actions (online and offline). Our research focus made it possible to conceptualize the potential impact of political-communication-centered participation on political-noncommunication-centered forms of participation (e.g., voting and protesting). Empirical results show that intrinsic (e.g., self-efficacy) and extrinsic (e.g., expecting rewards) political motivations promote political online and offline behaviors (Lilleker & Koc-Michalska, 2017). Previous research has shown that emotionally and morally charged expressions are often associated with high engagement on social media (e.g., Brady, Wills, Jost, Tucker, & Van Bavel, 2017; Chmiel et al., 2011; Ziegele, Weber, Quiring, & Breiner, 2018). In addition, group-related anger and perceived group efficacy predict the intention to engage in effortful collective action such as attending a rally (Shi, Hao, Saeri, & Cui, 2015). Some studies looked at selected political motivations such as political self-efficacy but did not offer a comprehensive perspective on motivations as the SIMCA proposes. Earlier research inquired about the political motivations of single individuals. By examining users' motivations in comment sections on news sites, we were able to adopt a public perspective because publicly expressed political motivations in comment sections can impact the political participation of recipients. We derived the following research questions:

*RQ1: How often are the political motivations identity, emotions, moral beliefs, and agency expressed in user comments on news sites?*

*RQ2: What types of user comments can we identify depending on the cooccurrence of political motivations?*

Furthermore, we assumed that users' expressed political motivations vary among news sites. National news sites, in particular, pursue political lines with which they address specific audiences. According to the concept of political parallelism, national newspapers or news sites are close to political parties (Hallin & Mancini, 2004). Although political parallelism is only moderately pronounced in Germany (van Kempen, 2007), political orientations of media and respective audiences correlate (Ribeiro et al., 2018). Thus, if

expressed political motivations of specific audiences vary among news sites, recipients of these comments might face visibility bias (i.e., more visibility of individual political motivations) or tonality bias (i.e., more positive or negative evaluations of political motivations). The biased perceptions of political motivations in user comments can influence recipients' perceptions and attitudes (Eberl, Boomgaarden, & Wagner, 2017). Still, they can also increase political participation for related political issues (Ho et al., 2011). From these considerations, we derived the third research question:

*RQ3: How do the political motivations of identity, emotion, moral beliefs, and agency differ and their cooccurrence in the comment sections of left- and right-leaning news sites?*

### **Motivations in User Comments as Expressions of Political Participation**

Communication and political science scholars have argued for a broader scope of political participation, which includes online activities such as commenting, sharing, and liking (e.g., Zúñiga, Molyneux, & Zheng, 2014). Drawing on Theocharis' work (2015), we define user comments as political action. Theocharis develops the concept of digitally networked participation (Theocharis & van Deth, 2015), introducing the element of digital communication as a form of mobilization (Theocharis, 2015). Comments, posts, or sharing of information on digital platforms, for example, related to climate change would accordingly constitute a form of political participation, as these actions serve to raise awareness of the problem of climate change. These actions are accompanied by "the frequent embeddedness of self-expressive, identity, and personalized elements as part of the action" (Theocharis, 2015, p. 5). Thus, user comments may contain references to (group) identity (e.g., a political group or party). Against this background, we argue that the concept of digitally networked participation can be applied to comment sections of news sites as one form of political participation.

A large proportion of comment research on news sites indicates politically motivated comments. First, authors of user comments are highly interested in hard news (Kalogeropoulos et al., 2017). Second, journalistic news coverage may lead to politically corrective actions of users (Barnidge & Rojas, 2014) if the perception of the article contradicts one's political motivations (Chung, Munno, & Moritz, 2015; Springer, 2014). Third, from the uses and gratifications perspective, the relevant user motivations for political commenting can be political information seeking, personal identity, integration, and social interaction (Springer et al., 2015). Last, online political expressions can be used to intentionally or strategically influence public debate (Quandt, 2018).

User comments often contain self-promotional, identity-building, and personalized elements. These references can affect journalists, politicians, readers, and other commenters positively or negatively. For journalists, user comments serve as additional sources of information and error correction and indicate what the public wants to read (Domingo, 2011). Therefore, journalists could pick up on the emotions and morality of the commenters. Recipients who receive biased comments about an outgroup write discriminatory comments themselves and have worse perceptions of the outgroup (Hsueh et al., 2015). Furthermore, user comments affect readers' evaluations of the article and a scandalized person (i.e., positive comments positively affect the climate of opinion; von Sikorski & Hänel, 2016). Moreover, social media news use

directly affects offline political participation and indirectly affects offline and online political participation, mediated or moderated by political expressions (Zúñiga et al., 2014).

### **Political Motivations for Commenting on News Sites**

According to the SIMCA, four political motivations explain users' participation via user comments on news sites (van Zomeren, 2016). Motivations are defined "as functional goal-directed processes" (van Zomeren, 2016, p. 88); that is, individuals engage in political participation "to achieve identity, instrumental, emotional, and moral goals" (van Zomeren, 2016, p. 88). We assume that political motivations are reflected in comments since comments contain information about the characteristics of the commenters (Garcia & Sikström, 2014; Kjell, Kjell, Garcia, & Sikström, 2019), for example, cues on emotions and identity (Toepfl & Piwoni, 2015). In linguistics and social psychology, the usage of specific words indicates the thinking processes, emotions, intentions, and motivations of the person speaking or writing (Tausczik & Pennebaker, 2010).

The first political motivation, *identity*, describes the individual's affiliation to a group, which "reflect[s] the basis for the development of social (or group) identities" (van Zomeren, 2013, p. 380). People see themselves as individuals or as members of a group based on the situation and individual factors. They can switch between an individual or collective identity and different identity levels (e.g., political group, community, nation; van Zomeren, 2016). This political motivation influences the group-related interpretation and emotional experiences of individuals' environments and thus their motivations to act collectively (van Zomeren, 2016). From the perspective of social identity theory, strengthening one's own (group) identity is one reason for commenting (Wang & Fesenmaier, 2004). Thus, a commenter could distance him/herself from a political opponent in a political context. This psychological mechanism could explain the expression of identity in comment sections such as party affiliation in *The New York Times* (Muddiman & Stroud, 2017) and on news about the German right-wing party *Alternative für Deutschland* (Toepfl & Piwoni, 2015). These studies conceptualize identity as party affiliation; a more comprehensive content-analytical study of identity is still pending.

The second political motivation *emotion* can be understood as a "dynamic psychological mechanism that guides the efforts of individuals to cope with their environment" (van Zomeren, 2013, p. 381). Empirical studies show that commenters express positive or negative emotions in user comments (e.g., Chmiel et al., 2011; Toepfl & Piwoni, 2015; Ziegele, Quiring, Esau, & Friess, 2020). Disrespectful or impolite expressions can be indicators of negative emotions, which can be provoked by morally laden or controversial political issues or high involvement of the recipient with the topic (e.g., immigration, abortion; Ziegele et al., 2020; Ziegele et al., 2018). The extent to which people express emotions, how they express them, and the emotional valence allow inferences about the perceptions of the commenters (Tausczik & Pennebaker, 2010). Emotions can influence political participation (van Zomeren, 2016). Empirical results highlight the impacts of negative emotions, such as anger and rage, on the likelihood of becoming politically active in a group (e.g., Shi et al., 2015). On the other side, positive emotions can positively affect online discussions (von Sikorski & Hänel, 2016). Whether this is also the case for political participation is still unclear.

A third political motivation is *morality*, defined as "reflecting individuals' motivation to protect or promote core values" (van Zomeren, 2016, p. 96). Accordingly, a perceived violation of the moral standards of an individual or a group can lead to political participation (van Zomeren 2016). The moral foundation theory (MFT) sharpens the concept of moral reasoning (Graham, Haidt, & Nosek, 2009), distinguishing between individual and collective moral dimensions. These dimensions consist of five pairs of moral foundations: care versus harm, fairness versus fraud, loyalty versus betrayal, authority versus subversion, and purity versus degradation (Graham et al., 2009). User comments can contain moral statements (Rezapour, Ferronato, & Diesner, 2019), especially if the author's morality is salient while writing. Morally laden expressions are often associated with high engagement in social media (Ziegele et al., 2018) and beyond (Quintelier & van Deth, 2014).

The fourth political motivation of the SIMCA, *agency*, derives from Bandura's (1999) concept of self-efficacy and defines the belief in being able to achieve a "certain goal through a certain (collective) action" (van Zomeren, 2016, p. 93). It consists of two dimensions: group efficacy and personal outcome expectancy. Group efficacy describes the belief that a group can achieve a particular goal through specific collective action (Bandura, Freeman, & Lightsey, 1999). We assume that a strong identification with a group also leads to a stronger belief in the efficacy of political actions and group goals (van Zomeren, Leach, & Spears, 2010). Personal outcome expectancy reflects the belief that a specific action will lead to a specific outcome (Bandura et al., 1999). Findings show the impact of agency on the likelihood of writing user comments (e.g., Leung, 2009; Macafee, 2013) and on different forms of political participation (Lilleker & Koc-Michalska, 2017; Shi et al., 2015). We assumed that references to agency also appear in user comments. Based on these considerations, we formulated RQ1 in the first section.

### ***Political Motivations and Types of User Comments***

Based on the assumption that user comments contain references to political motivations, we further assumed that these motivations can cooccur depending on the situation. This assumption refers to three theoretical arguments. Smith (1993) posits that individuals often experience emotions based on their membership in a group. This theoretical connection is extended by the motivation, attention, and design model of moral contagion, which shows a relationship between emotional and moral content in posts on social media sites (Brady, Crockett, & Van Bavel, 2020). According to the SIMCA, a politically active person experiences several motivations, which cooccur and result in political-noncommunication-centered participation. The few empirical findings show that a person's cooccurrence of identity, emotion, and morality affects political participation (e.g., Bamberg, Rees, & Seebauer, 2015; Chan, 2017). Moreover, a high proportion and interaction of user comments related to group identity, emotions, and morality leads to more user engagement (e.g., Brady et al., 2017; Muddiman & Stroud, 2017). These considerations led to RQ2.

### ***Types of User Comments and the Political Orientation of the Audience***

The cooccurrence of political motivations in user comments may be related to the political orientation of the news site's audience. The parallelism between news sites' editorial lines and political attitudes of their audience is moderately pronounced in democratic corporatist media systems such as in Germany (Hallin & Mancini, 2004; van Kempen, 2007). Accordingly, liberal news sites should have a more

left-leaning audience; conservative sites a more right-leaning audience. The News Bias Monitor (Ribeiro et al., 2018) backs this assumption showing different political orientations of the audiences of German news sites. According to the German sample of the Reuters Digital News Survey, people with a dedicated left- or right-leaning orientation are significantly more active on news sites in Germany (Hölig, Hasebrink, & Behre, 2020). This applies especially to supporters of parties with extreme political orientation (Hirndorf, 2020). Despite minor differences, user comments on left-leaning news sites more often show references to identity and emotions (Toepfl & Piwoni, 2015).

Based on the fact that politically inclined audiences followed news sites with a corresponding political orientation, we assumed differences among prevailing political motivations in comment sections of these media. As already mentioned, the MFT emphasizes the individual and collective moral dimensions. The foundations of care versus harm and fairness versus reciprocity are more likely to occur in left-leaning individuals. Accordingly, this is called the individual moral dimension, which emphasizes protection and fairness toward the individual (Graham et al., 2009). The other three moral foundations—loyalty versus betrayal, authority versus subversion, and purity versus degradation—are more likely to occur in conservative individuals and are attributed to the collective dimension, which describes a focus on strengthening groups, institutions, and binding individuals to roles and duties (Graham et al., 2009). Accordingly, the distribution of moral dimensions is also reflected in user comments. Because of that, the individual moral dimension should appear in left-leaning news sites and the collective moral dimension more often in right-leaning media. The political group affiliation may explain the assumed differences (Brady et al., 2017). For the other motivations, identity, emotions, and agency, we cannot clarify to what extent they differ between left- and right-leaning media. Accordingly, we formulated RQ3, as mentioned in the first section.

## **Method**

### ***Design***

We applied a manual quantitative content analysis of user comments on news articles of two left- and two right-leaning German news sites. This approach allowed us to focus on actual political participation as evidenced by comments on the news and the assumed identification of political motivations in user comments. A survey would not have served the purpose of this study as it only records intentions to act or self-reports of political participation, which does not correlate well with actually observed political participation (for an overview: Persson & Solevid, 2014). Therefore, querying motivations would not be directly related to expressed motivations in user comments.

Content analysis is a promising approach to capture perceptible motivations in user comments because it can identify information in written user contributions. The way people choose to use their language to express themselves contains information about their psychological characteristics (Viney, 1983). For example, the user's statement "the current climate policy is a disgrace" allows conclusions about the author's negative emotions such as anger. Accordingly, we measured the political motivations identity, morality, emotions, and agency by applying content analysis.

### **Sample and Procedure**

#### *Topic*

We chose climate policy as the topic context. A large part of the German population believes that anthropological climate change exists (Adam, Häussler, Schmid-Petri, & Reber, 2019). Accordingly, the public debate is (almost) not about the existence of climate change itself but about the measures to be taken in response to it, for example, the public debate on the German government's reform of measures against climate change in 2019 and protest actions for and against these measures. Discussed measures directly affect the lives of many citizens and reflect perceptions of morality and identity (e.g., consumption reduction, fairness in the effects of climate change).

#### *Media Sample*

We selected four news sites that represent different editorial lines: center left (TAZ and Zeit Online) and center right (Focus and Welt Online; Euro Topics, 2021). According to the News Bias Monitor, the political leanings of the audiences of the selected media samples range from the left to the right (TAZ:  $-1.142$ ; Zeit Online:  $-0.711$ ; Focus:  $-0.332$ , Welt Online:  $-0.347$ ; scale from  $-2$  to  $2$ ; Ribeiro et al., 2018) (Appendix: Table 1: [https://docs.google.com/document/d/1p3zc6wuO\\_y6NBV7Ja0m\\_BvZpMvGtQ\\_hB/edit#heading=h.gjdgxs](https://docs.google.com/document/d/1p3zc6wuO_y6NBV7Ja0m_BvZpMvGtQ_hB/edit#heading=h.gjdgxs)).

#### *Article Sample*

In all four newspapers, we collected articles from October 6 to Oct 16, 2019. During this time, the government, consisting of a social-democratic (center left) and Christian conservative coalition (center right), discussed the climate package, and climate activists announced protest actions. Each day, the top articles on the climate package on the news sites (five, on average) with the corresponding user comments were selected (22 articles; Appendix: Table 2: [https://docs.google.com/document/d/1p3zc6wuO\\_y6NBV7Ja0m\\_BvZpMvGtQ\\_hB/edit](https://docs.google.com/document/d/1p3zc6wuO_y6NBV7Ja0m_BvZpMvGtQ_hB/edit)).

#### *Comment Sample*

Because of different representations of the comment sections on the news pages, we sorted the comments chronologically and selected 15 user comments per article with a random generator to represent motivations in comments across different topic aspects and thread lengths. Accordingly, the sample contained response and top-level comments. We included a total of 300 user comments in the sample.

#### *Coding*

We developed a codebook based on theoretical assumptions and existing indicators (Appendix: Table 3: [https://docs.google.com/document/d/1p3zc6wuO\\_y6NBV7Ja0m\\_BvZpMvGtQ\\_hB/edit](https://docs.google.com/document/d/1p3zc6wuO_y6NBV7Ja0m_BvZpMvGtQ_hB/edit)). Following this, we coded and discussed the categories in several sessions, applied them to sample comments, and supplemented them with examples.

### **Measures and Indexes**

The theoretical political motivations refer to seven subconstructs with several dichotomous indicators. *Individual identity* encompasses five indicators (goals and gratification, rules and responsibility, feelings or emotions, understanding the world, individual identity in general; Krippendorff's  $\alpha = 0.84$ ; Stone, 1997). The operationalization of *collective identity*<sup>1</sup> (goals and gratification, rules and responsibility, feelings or emotions, understanding the world, physical characteristics, social categories, positions of power, worldview, collective identity in general;  $\alpha = 0.78$ ) was drawn from Neuendorf and Skalski (2009) and Stone (1997). Furthermore, we distinguished *positive emotions*<sup>2</sup> in general and happiness (Esau, 2019; Renaud & Unz, 2006;  $\alpha = 0.85$ ). *Negative emotions*<sup>3</sup> include anger/rage and fury, fear, sadness, and general negative emotions ( $\alpha = 0.87$ ; Esau, 2019; Renaud & Unz, 2006). *Individual morality* contains the indicators: care, harm, fairness, reciprocity, and individual morality in general ( $\alpha = 0.92$ ; Graham et al., 2009; Haidt et al., 2009). *Collective morality* is expressed through loyalty, betrayal, authority, subversion, purity, degradation, and collective morality in general ( $\alpha = 0.79$ ; Graham et al., 2009; Haidt et al., 2009). *Agency* includes group efficacy and personal outcome expectancy ( $\alpha = 1$ ; van Zomeren, 2016). Detailed definitions of all indicators of political motivations and the reliability coefficients of the individual categories are in the online appendix (Appendix: Table 3: [https://docs.google.com/document/d/1p3zc6wuO\\_y6NBV7Ja0m\\_BvZpMvGtQ\\_hB/edit#heading=h.gjdgxs](https://docs.google.com/document/d/1p3zc6wuO_y6NBV7Ja0m_BvZpMvGtQ_hB/edit#heading=h.gjdgxs)). We calculated seven unweighted sum indices from the coded indicators for the political motivations of positive emotions (Krippendorff's  $\alpha = 0.85$ ), negative emotions ( $\alpha = 0.87$ ), individual identity ( $\alpha = 0.84$ ), collective identity ( $\alpha = 0.78$ ), individual morality ( $\alpha = 0.92$ ), collective morality ( $\alpha = 0.79$ ), and agency ( $\alpha = 1$ ). An overview and statistical description of these indices is given in the appendix (Appendix: Table 4: [https://docs.google.com/document/d/1p3zc6wuO\\_y6NBV7Ja0m\\_BvZpMvGtQ\\_hB/edit#heading=h.gjdgxs](https://docs.google.com/document/d/1p3zc6wuO_y6NBV7Ja0m_BvZpMvGtQ_hB/edit#heading=h.gjdgxs)).

### **Data Analysis**

One aim of this study was to cluster user comments by political motivations. Because of the initially unknown number of clusters, we conducted a hierarchical cluster analysis (Backhaus, 2016). As a distance measure, the squared Euclidean distance was used and the Ward method was employed as a cluster algorithm (Backhaus, 2016). With regard to the number of clusters, we relied on the Mojena (1977) test and the Elbow criterion; both tests indicate a six-cluster solution (Appendix: Table 5; Figure 1: [https://docs.google.com/document/d/1p3zc6wuO\\_y6NBV7Ja0m\\_BvZpMvGtQ\\_hB/edit#heading=h.gjdgxs](https://docs.google.com/document/d/1p3zc6wuO_y6NBV7Ja0m_BvZpMvGtQ_hB/edit#heading=h.gjdgxs)). We validated the cluster solution by discriminant analysis (Schendera, 2010), which allowed a correct assignment of 90.7% of the cases, which in turn represented a very good result (Appendix: Table 6: [https://docs.google.com/document/d/1p3zc6wuO\\_y6NBV7Ja0m\\_BvZpMvGtQ\\_hB/edit#heading=h.gjdgxs](https://docs.google.com/document/d/1p3zc6wuO_y6NBV7Ja0m_BvZpMvGtQ_hB/edit#heading=h.gjdgxs)). The calculation of the F-value shows four completely homogeneous clusters (Backhaus, 2016) except for

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<sup>1</sup> For the measurement of collective identity, we adapted the scale developed by Stone (1997) and added items from Neuendorf and Skalski (2009) that were suitable for Germany and climate change.

<sup>2</sup> The emotions were selected based on the literature on basic emotions (e.g., Schmidt-Atzert, Peper, & Stemmler, 2014) and classified into positive and negative emotions according to Esau (2019) and Renaud and Unz (2006).

<sup>3</sup> See footnote 2.



clusters 1 and 3 (Appendix: Table 7: [https://docs.google.com/document/d/1p3zc6wuO\\_y6NBV7Ja0m\\_BvZpMvGtQ\\_hB/edit#heading=h.gjdgxs](https://docs.google.com/document/d/1p3zc6wuO_y6NBV7Ja0m_BvZpMvGtQ_hB/edit#heading=h.gjdgxs)).

## Results

### *Political Motivations in User Comments*

RQ1 aimed to identify political motivations in user comments. The analysis shows that identity appeared in 81% of all user comments. References to individual identity occurred in more than half of the user comments (55%). In total, we most frequently identified references to collective (45%) and individual identity (37%). The political motivation of emotion occurred in almost every user comment, with 75% of all user comments showing negative emotions and 16% showing positive emotions. Agency appeared very rarely (6%) in user comments compared with the other political motivations.

### *Combinations of Political Motivations in User Comments*

RQ2 aimed to identify and describe user comments according to the political motivations. Table 1 describes the six types of user comments identified by the cluster analysis. Examples for each cluster are provided in the appendix (A1).

**Table 1. Types of User Comments Based on Political Motivations—t-Values (Variance).**

Political motivations	Types of user comments						
	Overall (N = 300)	Moral-friendly (n = 44)	Objective (n = 74)	Emotional-moral-believing (n = 17)	Angry-left-liberal (n = 72)	Angry-conservative (n = 52)	Angry-lone-fighter (n = 41)
Positive emotions	0.16 (.13)	<b>1.00</b> (.00)	0.00 (.00)	<b>0.23</b> (.19)	0.00 (.00)	0.00 (.00)	0.00 (.00)
Negative emotions	0.81 (.28)	0.20 (.16)	0.56 (.24)	<b>0.88</b> (.23)	<b>1.05</b> (.13)	<b>1.07</b> (.07)	<b>1.14</b> (.22)
Individual identity	0.75 (.65)	0.70 (.53)	0.55 (.38)	0.58 (.50)	0.69 (.58)	0.42 (.44)	<b>1.75</b> (.53)
Collective identity	1.35 (.83)	1.29 (.81)	0.89 (.61)	1.23 (.94)	<b>1.58</b> (.72)	<b>2.05</b> (.64)	0.97 (.47)
Individual morality	0.44 (.39)	<b>0.56</b> (.43)	0.08 (.07)	<b>0.64</b> (.36)	<b>1.22</b> (.20)	0.00 (.00)	0.09 (.22)
Collective morality	0.56 (.48)	0.29 (.21)	0.09 (.11)	0.35 (.24)	0.27 (.26)	<b>1.28</b> (.28)	<b>1.34</b> (.28)
Agency	0.05 (.05)	0.00 (.00)	0.00 (.00)	<b>1.00</b> (.00)	0.00 (.00)	0.00 (.00)	0.00 (.00)

The values in bold show a positive t-value. This indicates an overrepresentation of a political motivation in this cluster.

The first cluster comprises *moral-friendly type of user comments* (n = 44). This cluster is characterized by an overrepresentation of positive emotions and individual morality. All other motivations are slightly underrepresented. In contrast with the other clusters, this cluster combines (almost) all user comments with positive emotions. Accordingly, this cluster differs mainly in terms of positive emotions.

The second cluster includes mainly *objective user comments* (n = 77). It is the largest and utterly homogeneous group of comments, in which all political motivations are underrepresented. This underrepresentation indicates relatively objective and content-oriented user comments that, for example, refer to a fact or quotes of a journalistic article.

The third cluster, the *emotional-moral-believing user comments*, is relatively tiny (n = 17). This cluster differs from all other clusters about agency. Agency is strongly overrepresented, emotions and individual morality to a smaller extent. This result suggests user comments that support the belief in the effectiveness of the group/action through moral or emotional statements or act as an agitator.

The fourth cluster is the *angry-left-liberal type of user comments* (n = 72). These comments represent motivations of negative emotions, collective identity, and individual morality about care, fairness, and reciprocity. The already mentioned correlation between the individual moral dimension and a social liberal political orientation gave this cluster its name. This cluster differs from other clusters by a high share of negative emotions (i.e., fear and anger) and the occurrence of collective identity.

The fifth cluster—the *angry-conservative type of user comments*—is characterized by negative emotions, collective identity, and collective morality (n = 52). The cluster name derives from the correlation between the collective moral dimension and a conservative political orientation. The fourth and fifth clusters differ in the occurrence of morality. The *angry-conservative* comment type is similar to its counterpart in negative emotions and identity demarcation. The main difference lies in their expressions of collective morality, which refer to betrayal, loyalty, and authority.

In the sixth cluster of *angry-lone-fighter user comments*, negative emotions, the individual identity, and the collective morality are overrepresented. User comments with references to anger, individual identity, and the moral foundations of loyalty, betrayal, and authority fall into this cluster. This cluster differs from the others because it shows an above-average individual identity and a below-average collective identity.

### ***Political Motivations of the Audiences of Left- and Right-Leaning News Sites***

RQ3 focused on differences in political motivations between the audiences of left-leaning and right-leaning news sites. Because of the lack of a normal distribution, we used the nonparametric Mann-Whitney U test to analyze group differences between left- and right-leaning news sites (Table 2).

**Table 2. Distribution of Political Motivations by the Political Leanings of Media Outlets.**

Political motivation index	Left-leaning news sites (N = 150)		Right-leaning news sites (N = 150)		Mann-Whitney U test
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>Asymptotic Significance</i>
Positive emotions	0.19	.39	0.12	.33	.11
Negative emotions	0.73	.53	0.90	.51	.00***
Individual identity	0.74	.77	0.76	.84	.91
Collective identity	1.24	.90	1.46	.90	.05*
Individual morality	0.63	.64	0.26	.54	.00***
Collective morality	0.25	.45	0.86	.75	.00***
Agency	0.08	.28	0.02	.16	.02*

*M* = mean; *SD* = standard deviation.

\* $p < .05$ , \*\*\*  $p < .001$

Left- and right-leaning media differ about user comments with negative emotions, individual and collective morality, and agency. User comments of left-leaning media ( $M = 0.73$ ) have a lower proportion of negative emotions compared with user comments of right-leaning media ( $M = 0.9$ ),  $U = 9610.05$ ,  $p < .00$ ,  $r = -.15$ . User comments of left-leaning media ( $M = 0.63$ ) show a higher occurrence of the individual morality such as care, fairness, harm, and fraud in contrast with user comments of right-leaning media ( $M = 0.26$ ),  $U = 7607.00$ ,  $p < .001$ ,  $r = .33$ . Additionally, user comments of left-leaning media ( $M = 0.08$ ) differ regarding agency from right-leaning media ( $M = 0.02$ ),  $U = 10575.00$ ,  $p < .05$ ,  $r = .13$ . In contrast, user comments of right-leaning media ( $M = 0.86$ ) show a higher proportion of collective morality such as loyalty, authority, and betrayal compared with left-leaning media ( $M = 0.25$ ),  $U = 6130.00$ ,  $p < .001$ ,  $r = -.44$ . User comments of left- and right-leaning news sites do not differ in individual and collective identity and positive emotions.

#### **Clusters of User Comment Types on Left- and Right-Leaning News Sites**

Furthermore, we analyzed differences between left-leaning and right-leaning news sites based on cluster analysis (RQ3; Table 3).

**Table 3. Comment Clusters by Left- and Right-Leaning Media in Absolute Values (Percentages).**

	Types of user comments						Over all (N = 300)
	Moral-friendly (n = 44)	Objective (n = 74)	Emotional-moral-believing (n = 17)	Angry-left-liberal (n = 72)	Angry-conservative (n = 52)	Angry-lone-fighter (n = 41)	
News sites							
Zeit online	12 (27%)	23 (31%)	7 (41%)	20 (28%)	7 (13%)	6 (14%)	75
TAZ online	13 (30%)	20 (27%)	6 (35%)	32 (44%)	2 (4%)	2 (5%)	75
<b>Left-leaning news sites<sup>a</sup></b>	<b>25 (57%)</b>	<b>43 (58%)</b>	<b>13 (76%)</b>	<b>52 (72%)</b>	<b>9 (17%)</b>	<b>8 (19%)</b>	<b>150</b>
Welt online	9 (20%)	19 (26%)	1 (6%)	7 (10%)	24 (46%)	15 (37%)	75
Focus online	10 (23%)	12 (16%)	3 (18%)	13 (18%)	19 (37%)	18 (44%)	75
<b>Right-leaning news sites<sup>b</sup></b>	<b>19 (43%)</b>	<b>31 (42%)</b>	<b>4 (24%)</b>	<b>20 (28%)</b>	<b>43 (83%)</b>	<b>33 (81%)</b>	<b>150</b>

<sup>a</sup> Sum of Zeit online and TAZ online

<sup>b</sup> Sum of Welt online and Focus online

$\chi^2 = 59.22, p < .001, \text{Cramer's } V = .44$

A Chi-square test for independence shows a significant relationship between the distribution of user comments and left- and right-leaning media ( $\chi^2 = 59.22, p < .001, V = .44$ ).

The types of user comments of the *angry-conservative* and *angry-lone fighter* show the most significant difference between left- and right-leaning news sites. Both comment types occur more frequently on right-leaning media, whereas negative emotions and collective morality best describe the difference between the two sites. Both the *angry-conservative* and the *angry-lone fighter* user comment types differ the most between the left- and right-leaning media, with more than 60% and 80% of the comments in right-leaning media.

The *emotional-moral-believing* and the *angry-left-liberal* user comments have a significantly higher ratio in left-leaning media. The percentages between the left and right-leaning media for these comment types differ by 52% and 44%, respectively, best described by the overrepresentation of negative emotions and individual moral aspects.

The *moral-friendly* and *objective* user comments show minor differences between left- and right-leaning news sites. Nevertheless, both types of user comments occur more often in left-leaning media, with a difference of 14%–16% compared with right-leaning media.

### Discussion

The study shows that user comments reflect the political motivations of identity, emotions, and morality to a substantial extent, and agency to a small extent. Based on these motivations, we identified six specific types of user comments: the *moral-friendly*, the *objective*, the *emotional-moral-believing*, the

*angry-left-liberal*, the *angry-conservative*, and the *angry-lone-fighter* types of user comments. The distribution of these types differs between left- and right-leaning news sites. Left-leaning news sites show higher proportions of individual morality and agency, while negative emotions and collective morality characterize right-leaning media. On right-leaning news sites, *angry-conservative* and the *angry-lone-fighter* comment types dominate; the *emotional-moral-believing* and *angry-left-liberal* comment types prevail on left-leaning media. This result reflects the theoretically expected outcome, as individual morality is more likely to occur in left-leaning media and collective morality is more present in right-leaning media.

The political motivations of collective identity, negative emotions, and individual and collective morality can be frequently found in user comments, which other content-analytic studies confirm (Brady et al., 2017; Rathje, Van Bavel, & van der Linden, 2021; Toepfl & Piwoni, 2015). The (intended) use of identity-forming, moral, and emotional expressions can serve various reasons: First, commenters can indicate that they are collectively distancing themselves from their political opponents. Second, commenters may be motivated to classify and frame the journalistic contribution for other readers. Third, commenting allows us to regulate feelings. The political motivation agency seldom occurs in user comments, maybe because policies of comment sections often prohibit calls for political action (Marzinkowski & Engelmann, 2022).

Political motivations in user comments may affect recipients differently (e.g., Alberici & Milesi, 2015; Chan, 2017). The visibility of the political motivations of one's political opponent can lead either to a confrontation with the opponent's point of view or to a separation from the opponent, with a simultaneous strengthening of one's group identity, morality, and emotionality around climate policy. This explanation is consistent with findings that posts on social media mentioning the outgroup generate more engagement and negative emotions (Rathje et al., 2021). The occurrence of political motivations shows their relevance for political communication-centered participation. The results, together with findings from other studies, indicate that political motivations such as emotion (Chmiel et al., 2011), identity (Toepfl & Piwoni, 2015) and morality (Brady et al., 2017) increase political communication-centered participation. This is consistent with findings for political-noncommunication-centered participation (e.g., Bamberg et al., 2015; Chan, 2017; Rathje et al., 2021), which indicates the importance of these political motivations for all forms of political participation. Moreover, observable political motivations such as agency affect political-noncommunication-centered participation (e.g., Haenschen & Tedesco, 2020).

In sum, these results point to a dual nature of user comments: as an outcome of political participation and as a mobilizing factor. A user comment is the product of participatory action and at the same time has a mobilizing effect on recipients' political noncommunication- and communication-centered participation. Since the readers are more likely to comment and express political motivations, one can assume a reinforcing feedback loop between the reception of a user comment, including political motivations, and the increase in user comments.

Users' political motivations on news sites differ primarily in agency and negative emotions expressed. We explain the more frequent occurrence of agency in left-leaning news sites by the climate issue promoted by left-wing politics. This reason also applies to the more frequent negative emotional comments in right-leaning media. Political measures against climate change are likely to contradict conservative commenters' values and life concepts (Adam et al., 2019). This explanation is also valid for

the more frequently occurring collective moral (e.g., *angry-conservative* and *angry-lone-fighter* types of user comments), which might refer to the more right-leaning audiences of these news sites (Ribeiro et al., 2018). Moral beliefs are significant for the climate change debate because the collective morality of users is associated with their affiliation to conservative parties, to which climate skeptics also adhere (Adam et al., 2019). Individual morality is expressed more frequently in *emotional-moral-believing* and *the angry-left-liberal* comment types, which show a clear tendency toward the left-leaning media. User comments of these two types on right-leaning news sites could indicate counterspeech of left-leaning commenters or in the opposite direction for the proportion of right-leaning commenters on left-leaning news sites. In contrast, collective identity does not differ between left- and right-leaning media. This result indicates the relevance of identity aspects for left- and right-leaning commenters. However, there could be a difference between left and right collective identity that our operationalization did not capture, such as party affiliation.

For journalistic news practices, our results have several implications. First, the high occurrence of identity and emotions implies that comment sections are spaces for propagating one's political views rather than a mutual exchange of opinions. If newsrooms aim to build community with their comment sections, they should favor interactive moderation strategies with their users to encourage mutual exchange (Stroud, Scacco, Muddiman, Curry, 2015). Second, we suppose that newsrooms use comment sections to identify their audiences' thematic interests and sentiments (Domingo, 2011). In this case, journalists would deduce from the comments the issues on which they should report more. However, commenters form only a small part of the audience (Springer et al., 2015), with specific characteristics such as high political interest and strong political opinions (Hirndorf, 2020; Kalogeropoulos et al., 2017). Consequently, only commenters would influence the future coverage in a newsroom. The extent to which this phenomenon would be desirable for the public sphere, only content analyses can clarify.

From a normative perspective, public expressions of political motivations are desirable if we base our assessment on the participatory public sphere model (Jandura & Friedrich, 2014). According to this model, expressed emotions and morality could lead to a desirable mobilization of citizens, namely to organize more public attention or even protest for climate protection (Ho et al., 2011). This would put more pressure on politicians to make concrete political decisions for climate protection and to achieve acceptance for climate protection measures among a broad public. Liberal conceptions of democracy and the public sphere show less optimism about citizens' participation. In their view, citizens' participation could jeopardize the stability of the political system, for example, if expressed negative emotions or ideas of group identities dominate across issues and hinder the mutual exchange of societal groups. Such developments could lead to less acceptance of political decisions on climate protection in parts of society. In the long run, these sections of society could also question the political government or the democratic system as a whole (Westle, 2015).

### **Limitations**

The theoretical framework in this study describes users' motivations for commenting on news sites, but has some limitations. First, it is unclear whether we considered all relevant motivations for political participation. Conversely, not all references in user comments have to refer to motivations. Additionally, user comments may reflect only parts of the commenters' political motivations. The research design cannot

prove a direct causal link between the types of comments and the authors' motivations while writing them. Only experimental designs or combinations with surveys can investigate this link. Therefore, scholars should apply these designs to investigate the relationship between motivation and commenting.

Furthermore, the calculation of indices in the analyses represents a loss of information, which may impact group formation using cluster analysis. On the other hand, the calculation ensures the interpretability of the cluster solution. The cluster results could be biased because of the possibility that several comments originate from one author. Moreover, collecting two additional articles from the TAZ was necessary because of too few comments. In sum, we should critically reflect on the generalizability of the data. The results are primarily valid for user comments of four German news sites in the context of climate policy for the period under study. However, they confirm our theoretical considerations and findings of other research contexts. Accordingly, it is likely that these results also occur in other national contexts, which further research could clarify.

### Conclusion

The study contributes to the theoretical argumentation for user comments as political participation. The empirical analysis shows the possibility of deriving political motivations from user comments, which shape types of user comments and differ between left- and right-leaning news sites. In particular, political motivations such as negative emotions, collective identity, and morality are highly relevant to user comments. Further research could focus on the impact of user comments identified on the dynamics of comment sections and public opinion formation. Especially a closer look at the political motivations in user comments regarding climate protection and other controversial political topics could be beneficial. Furthermore, a more detailed analysis of the effects of the identified political motivations on the different forms of political participation and the inclusion of polarization research could be worthwhile.

### References

- Adam, S., Häussler, T., Schmid-Petri, H., & Reber, U. (2019). Coalitions and counter-coalitions in online contestation: An analysis of the German and British climate change debate. *New Media & Society, 21*(11–12), 2671–2690. doi:10.1177/1461444819855966
- Ajzen, I. (1988). *Attitudes, personality, and behavior*. Chicago, IL: Dorsey Press.
- Alberici, A., & Milesi, P. (2015). Online discussion, politicized identity, and collective action. *Group Processes & Intergroup Relations, 19*(1), 43–59. doi:10.1177/1368430215581430
- Backhaus, K. (2016). *Multivariate Analysemethoden: Eine anwendungsorientierte Einführung* [Multivariate analysis methods: An application-oriented introduction]. Berlin, Heidelberg, Germany: Springer.

- Bamberg, S., Rees, J., & Seebauer, S. (2015). Collective climate action: Determinants of participation intention in community-based pro-environmental initiatives. *Journal of Environmental Psychology, 43*, 155–165. doi:10.1016/j.jenvp.2015.06.006
- Bandura, A., Freeman, W., & Lightsey, R. (1999). *Self-efficacy: The exercise of control*. New York, NY: Springer.
- Barnidge, M., & Rojas, H. (2014). Hostile media perceptions, presumed media influence, and political talk: Expanding the corrective action hypothesis. *International Journal of Public Opinion Research, 26*(2), 135–156. doi:10.1093/ijpor/edt032
- Brady, W. J., Crockett, M. J., & Van Bavel, J. J. (2020). The MAD model of moral contagion: The role of motivation, attention, and design in the spread of moralized content online. *Perspectives on Psychological Science, 15*(4), 978–1010. doi:10.1177/1745691620917336
- Brady, W. J., Wills, J. A., Jost, J. T., Tucker, J., & Van Bavel, J. J. (2017). Emotion shapes the diffusion of moralized content in social networks. *Proceedings of the National Academy of Sciences, 114*(28), 7313–7318. doi:10.1073/pnas.1618923114
- Chan, M. (2017). Media use and the social identity model of collective action: Examining the roles of online alternative news and social media news. *Journalism & Mass Communication Quarterly, 94*(3), 663–681. doi:10.1177/1077699016638837
- Chmiel, A., Sobkowicz, P., Sienkiewicz, J., Paltoglou, G., Buckley, K., Thelwall, M., & Hołyst, J. A. (2011). Negative emotions boost user activity at BBC forum. *Physica A: Statistical mechanics and its applications, 390*(16), 2936–2944. doi:10.1016/j.physa.2011.03.040
- Chung, M., Munno, G. J., & Moritz, B. (2015). Triggering participation: Exploring the effects of third-person and hostile media perceptions on online participation. *Computers in Human Behavior, 53*, 452–461. doi:10.1016/j.chb.2015.06.037
- Domingo, D. (2011). Managing audience participation. In J. B. Singer, S. Paulussen, T. Quandt, Z. Reich, & M. Vujnovic (Eds.), *Participatory journalism: Guarding open gates at online newspapers* (pp. 76–95). Oxford, UK: Wiley-Blackwell.
- Eberl, J.-M., Boomgaarden, H. G., & Wagner, M. (2017). One bias fits all? Three types of media bias and their effects on party preferences. *Communication Research, 44*(8), 1125–1148. doi:10.1177/0093650215614364



- Esau, K. (2019). Online-Partizipation jenseits klassischer Deliberation: Eine Analyse zum Verhältnis unterschiedlicher Deliberationskonzepte in Nutzerkommentaren auf Facebook-Nachrichtenseiten und Beteiligungsplattformen [Online participation beyond classical deliberation: An analysis of the relationship between different concepts of deliberation in user comments on Facebook news sites and participation platforms]. In I. Engelmann, M. Legrand, & H. Marzinkowski (Eds.), *Politische Partizipation im Medienwandel* [Political participation in the changing media environment] (pp. 221–245). Berlin, Germany: Böhland & Schremmer Verlag.
- Euro Topics. (2021). Media landscapes for Germany. Retrieved from <https://www.eurotopics.net/en/142186/media>
- Festinger, L. (1962). *A theory of cognitive dissonance* (Vol. 2). Stanford, CA: Stanford University Press.
- Fissner, R. (2019, October 6). *Re: Grüne mit eigenem Klimapaket* [Greens with their own climate policy package] [User comment]. Retrieved from <https://taz.de/Gruene-mit-eigenem-Klimapaket/!5631357/>
- G., J. (2019, October 7). *Re: Bleibt voll wirksam: Regierung widerspricht Bericht über abgeschwächtes Klimapaket* [Remains fully effective: Government contradicts report on weakened climate package] [User comment]. Retrieved from <https://www.welt.de/politik/deutschland/article201496112/Bleibt-voll-wirksam-Regierung-widerspricht-Bericht-ueber-abgeschwaechtes-Klimapaket.html>
- Garcia, D., & Sikström, S. (2014). The dark side of Facebook: Semantic representations of status updates predict the Dark Triad of personality. *Personality and Individual Differences, 67*, 92–96. doi:10.1016/j.paid.2013.10.001
- Graham, J., Haidt, J., & Nosek, B. A. (2009). Liberals and conservatives rely on different sets of moral foundations. *Journal of Personality and Social Psychology, 96*(5), 1029–1046. doi:10.1037/a0015141
- Haenschen, K., & Tedesco, J. C. (2020). Framing the youth-led movement for gun violence prevention: How news coverage impacts efficacy in Generation Z, Millennials, and Gen X. *International Journal of Press/Politics, 25*(4), 653–675. doi:10.1177/1940161220929976
- Haidt, J., Graham, J., & Joseph, C. (2009). Above and below left-right: Ideological narratives and moral foundations. *Psychological Inquiry, 20*(2–3), 110–119. doi:10.1080/10478400903028573
- Hallin, D. C., & Mancini, P. (2004). *Comparing media systems: Three models of media and politics*. Cambridge, UK: Cambridge University Press.

- Hirndorf, D. (2020). *Let's talk about politics*. Berlin, Germany. Konrad Adenauer Stiftung. Retrieved from <https://www.kas.de/de/einzeltitel/-/content/let-s-talk-about-politics>
- Ho, S. S., Binder, A. R., Becker, A. B., Moy, P., Scheufele, D. A., Brossard, D., & Gunther, A. C. (2011). The role of perceptions of media bias in general and issue-specific political participation. *Mass Communication and Society, 14*(3), 343–374. doi:10.1080/15205436.2010.491933
- Hölig, S., Hasebrink, U., & Behre, J. (2020). *Reuters Institute digital news report 2020: Ergebnisse für Deutschland* [Reuters Institute digital news report 2020: Findings for Germany] (Vol. 50). Hamburg, Germany: Hans-Bredow-Institut. doi:10.21241/ssoar.71725
- Hsueh, M., Yogeewaran, K., & Malinen, S. (2015). "Leave your comment below": Can biased online comments influence our own prejudicial attitudes and behaviors? *Human Communication Research, 41*(4), 557–576. doi:10.1111/hcre.12059
- Jandura, O., & Friedrich, K. (2014). Quality of political media coverage. In C. Reinemann (Ed.), *Handbook of communication science: Political communication* (pp. 351–373). Berlin, Germany: De Gruyter Mouton.
- Kalogeropoulos, A., Negredo, S., Picone, I., & Nielsen, R. K. (2017). Who shares and comments on news?: A cross-national comparative analysis of online and social media participation. *Social Media + Society, 3*(4), 1–12. doi:10.1177/2056305117735754
- Kjell, O. N., Kjell, K., Garcia, D., & Sikström, S. (2019). Semantic measures: Using natural language processing to measure, differentiate, and describe psychological constructs. *Psychological Methods, 24*(1), 92–115. doi:10.1037/met0000191
- Leung, L. (2009). User-generated content on the Internet: An examination of gratifications, civic engagement and psychological empowerment. *New Media & Society, 11*(8), 1327–1347. doi:10.1177/1461444809341264
- Lilleker, D. G., & Koc-Michalska, K. (2017). What drives political participation? Motivations and mobilization in a digital age. *Political Communication, 34*(1), 21–43. doi:10.1080/10584609.2016.1225235
- Macafee, T. (2013). Some of these things are not like the others: Examining motivations and political predispositions among political Facebook activity. *Computers in Human Behavior, 29*(6), 2766–2775. doi:10.1016/j.chb.2013.07.019
- Marzinkowski, H., & Engelmann, I. (2022). Rational-critical user discussions: How argument strength and the conditions set by news organizations are linked to (reasoned) disagreement. *Digital Journalism, 10*(3), 433–451. doi:10.1080/21670811.2021.1957968

- Mojena, R. (1977). Hierarchical grouping methods and stopping rules: An evaluation\*. *The Computer Journal*, 20(4), 359–363. doi:10.1093/comjnl/20.4.359
- Muddiman, A., & Stroud, N. J. (2017). News values, cognitive biases, and partisan incivility in comment sections. *Journal of Communication*, 67(4), 586–609. doi:10.1111/jcom.12312
- Neuendorf, K. A., & Skalski, P. D. (2009). Quantitative content analysis and the measurement of collective identity. In R. Abdelal, Y. M. Herrera, A. I. Johnston, & R. McDermott (Eds.), *Measuring identity: A guide for social scientists* (pp. 203–236). Cambridge, UK: Cambridge University Press. doi:10.1017/CBO9780511810909.008
- Persson, M., & Solevid, M. (2014). Measuring political participation—testing social desirability bias in a Web-survey experiment. *International Journal of Public Opinion Research*, 26(1), 98–112. doi:10.1093/ijpor/edt002
- Quandt, T. (2018). Dark participation. *Media and Communication*, 6(4), 36–48. doi:10.17645/mac.v6i4.1519
- Quante, W. (2019, October 6). Re: Kritik am GroKo Klimapaket [Criticism of the coalition's climate package] [User comment]. Retrieved from [https://www.focus.de/politik/deutschland/kritik-am-groko-klimapaket-ende-von-verbrennern-weniger-fleisch-das-sind-die-radikalen-klimaplaene-der-gruenen\\_id\\_11212013.html](https://www.focus.de/politik/deutschland/kritik-am-groko-klimapaket-ende-von-verbrennern-weniger-fleisch-das-sind-die-radikalen-klimaplaene-der-gruenen_id_11212013.html)
- Quintelier, E., & van Deth, J. W. (2014). Supporting democracy: Political participation and political attitudes. Exploring causality using panel data. *Political Studies*, 62(S1), 153–171. doi:10.1111/1467-9248.12097
- Rathje, S., Van Bavel, J. J., & van der Linden, S. (2021). Out-group animosity drives engagement on social media. *Proceedings of the National Academy of Sciences*, 118(26), e2024292118. doi:10.1073/pnas.2024292118
- Renaud, D., & Unz, D. (2006). Die M-DAS-eine modifizierte Version der differentiellen Affekt Skala zur Erfassung von Emotionen bei der Mediennutzung [The M-DAS-a modified version of the differential affect scale for assessing emotions in media use]. *Zeitschrift für Medienpsychologie*, 18(2), 70–75. doi:10.1026/1617-6383.18.2.70
- RERO. (2019, October 6). Re: Grüne mit eigenem Klimapaket [Greens with their own climate policy package] [User comment]. Retrieved from <https://taz.de/Gruene-mit-eigenem-Klimapaket/!5631357/>

- Rezapour, R., Ferronato, P., & Diesner, J. (2019, November). How do moral values differ in tweets on social movements? In E. Gilbert & K. Karahalios (Eds.), *Conference companion publication of the 2019 on computer supported cooperative work and social computing* (pp. 347–351). New York, NY: Association for Computing Machinery. doi:10.1145/3311957.3359496
- Ribeiro, F., Henrique, L., Benevenuto, F., Chakraborty, A., Kulshrestha, J., Babaei, M., & Gummadi, K. (2018). Media bias monitor: Quantifying biases of social media news outlets at large-scale. *Proceedings of the International AAAI Conference on Web and Social Media*, 12(1). Retrieved from <https://ojs.aaai.org/index.php/ICWSM/article/view/15025>
- Schendera, C. F. G. (2010). *Clusteranalyse mit SPSS: Mit Faktorenanalyse* [Cluster analysis with SPSS: With factor analysis.]. München, Germany: Oldenbourg.
- Shi, J., Hao, Z., Saeri, A. K., & Cui, L. (2015). The dual-pathway model of collective action: Impacts of types of collective action and social identity. *Group Processes & Intergroup Relations*, 18(1), 45–65. doi:10.1177/1368430214524288
- Smith, E. (1993). Social identity and social emotions: Toward news conceptualizations of prejudice. In D. Mackie & D. Hamilton (Eds.), *Affect, cognition and stereotyping* (pp. 297–315). New York, NY: Academic Press. doi:10.1016/B978-0-08-088579-7.50017-X
- Smith, M. A., Williamson, L. D., & Bigman, C. A. (2020). Can social media news encourage activism? The impact of discrimination news frames on college students' activism intentions. *Social Media + Society*, 6(2), 1–10. doi:10.1177/2056305120921366
- Springer, N. (2014). *Beschmutzte Öffentlichkeit? Warum Menschen die Kommentarfunktion auf Online-Nachrichtenseiten als öffentliche Toilettenwand benutzen, warum Besucher ihre Hinterlassenschaften trotzdem lesen, und wie die Wände im Anschluss aussehen* [Soiled public? Why people use the comment function on online news sites as a public toilet wall, why visitors still read their leavings, and what the walls look like afterward]. Berlin, Germany: Lit.
- Springer, N., Engelmann, I., & Pfaffinger, C. (2015). User comments: Motives and inhibitors to write and read. *Information Communication & Society*, 18(7), 798–815. doi:10.1080/1369118x.2014.997268
- Springer, N., & Kümpel, A. S. (2018). User-generated (dis)content. In C. Nuernbergk & C. Neuberger (Eds.), *Journalismus im Internet* [Journalism on the Internet] (pp. 241–271). Wiesbaden, Germany: Springer Fachmedien Wiesbaden.
- Stone, P. J. (1997). Thematic text analysis: New agendas for analyzing text content. In C. W. Roberts (Ed.), *Text analysis for the social sciences: Methods for drawing statistical inferences from texts and transcripts* (pp. 35–54). Mahwah, NJ: Lawrence Erlbaum.

- Stroud, N. J., Scacco, J. M., Muddiman, A., & Curry, A. L. (2015). Changing deliberative norms on news organizations' Facebook sites. *Journal of Computer-Mediated Communication, 20*(2), 188–203. doi:10.1111/jcc4.12104
- Tausczik, Y. R., & Pennebaker, J. W. (2010). The psychological meaning of words: LIWC and computerized text analysis methods. *Journal of Language and Social Psychology, 29*(1), 24–54. doi:10.1177/0261927X09351676
- Theocharis, Y. (2015). The conceptualization of digitally networked participation. *Social Media+ Society, 1*(2), 1–14. doi:2056305115610140
- Theocharis, Y., & van Deth, J. W. (2015). The curious case of digitally networked participation: Conceptualizing and measuring digitally enabled political participation. *SSRN*. doi:10.2139/ssrn.2657082
- Toepfl, F., & Piwoni, E. (2015). Public spheres in interaction: Comment sections of news websites as counterpublic spaces. *Journal of Communication, 65*(3), 465–488. doi:10.1111/jcom.12156
- van Kempen, H. (2007). Media-party parallelism and its effects: A cross-national comparative study. *Political Communication, 24*(3), 303–320. doi:10.1080/10584600701471674
- van Zomeren, M. (2013). Four core social-psychological motivations to undertake collective action. *Social and Personality Psychology Compass, 7*(6), 378–388. doi:10.1111/spc3.12031
- van Zomeren, M. (2016). Building a Tower of Babel? Integrating core motivations and features of social structure into the political psychology of political action. *Advances in Political Psychology, 37*(S1), 87–114. doi:10.1111/pops.12322
- van Zomeren, M., Leach, C. W., & Spears, R. (2010). Does group efficacy increase group identification? Resolving their paradoxical relationship. *Journal of Experimental Social Psychology, 46*(6), 1055–1060. doi:10.1016/j.jesp.2010.05.006
- Verba, S., Schlozman, K. L., & Brady, H. E. (1995). *Voice and equality: Civic voluntarism in American politics*. Harvard, MA: Harvard University Press.
- Viney, L. L. (1983). The assessment of psychological states through content analysis of verbal communications. *Psychological Bulletin, 94*(3), 542–563. doi:10.1037/0033-2909.94.3.542
- Voigt, M. (2019, October 9). *Re: Extinction Rebellion—Demo im Newsticker* [Extinction rebellion—Demo in the newsticker] [User comment]. Retrieved from [https://www.focus.de/politik/deutschland/extinction-rebellion-polizei-beginnt-erneut-mit-raeumung-des-potsdamer-platzes\\_id\\_11213684.html](https://www.focus.de/politik/deutschland/extinction-rebellion-polizei-beginnt-erneut-mit-raeumung-des-potsdamer-platzes_id_11213684.html)

- von Sikorski, C., & Hänelt, M. (2016). Scandal 2.0: How valenced reader comments affect recipients' perception of scandalized individuals and the journalistic quality of online news. *Journalism & Mass Communication Quarterly*, 93(3), 551–571. doi:10.1177/1077699016628822
- Wang, Y., & Fesenmaier, D. R. (2004). Towards understanding members' general participation in and active contribution to an online travel community. *Tourism Management*, 25(6), 709–722. doi:10.1016/j.tourman.2003.09.011
- WARUM\_DENKT\_KEINER NACH. (2019, October 6). *Re: Grüne mit eigenem Klimapaket* [Greens with their own climate policy package] [User comment]. Retrieved from <https://taz.de/Gruene-mit-eigenem-Klimapaket/!5631357/>
- Westle, B. (2015). German views of the political System. *German Politics*, 24(3), 317–353. doi:10.1080/09644008.2015.1060962
- Ziegele, M., Quiring, O., Esau, K., & Friess, D. (2020). Linking news value theory with online deliberation: How news factors and illustration factors in news articles affect the deliberative quality of user discussions in SNS' comment sections. *Communication Research*, 47(6), 860–890. doi:10.1177/0093650218797884
- Ziegele, M., Weber, M., Quiring, O., & Breiner, T. (2018). The dynamics of online news discussions: Effects of news articles and reader comments on users' involvement, willingness to participate, and the civility of their contributions. *Information, Communication & Society*, 21(10), 1419–1435. doi:10.1080/1369118X.2017.1324505
- Zúñiga, H. G., Molyneux, L., & Zheng, P. (2014). Social media, political expression, and political participation: Panel analysis of lagged and concurrent relationships. *Journal of Communication*, 64(4), 612–634. doi:10.1111/jcom.12103

## Appendix A

**Table A1. Example User Comments for Each Type of User Comment.**

Type of user comment	User comment in German	User comment in English (translation)
Moral-friendly	"Gute Ideen! Endlich kommt mal eine Partei mit mutigen Ideen raus aus dem zögerlichen Dornröschenschloß." (Fissner, 2019)	"Let's all just protect the climate. And don't question democracy."
Objective	@PRIUS "Und was ist mit Ihren giftigen Batterien, die auch noch regelmäßig erneuert werden müssen?"	@[ACCOUNTNAME] "And what about your toxic batteries that also need to be replaced regularly?"

Emotional-moral-believing	<p>Die werden hoffentlich entsprechend ihrer Umweltschädlichkeit kräftig teurer." (RERO, 2019)</p> <p>@LINKSKONSERVATIV "Nach 15 Jahren nichts tun, wird es Zeit, endlich mal anzufangen.</p> <p>'Das geht nicht!', haben wir lange genug gehört. Diese ganze 'Argumentation' erinnert mich stark an die Vorbehalte gegen die Einführung der Eisenbahn."</p> <p>(WARUM_DENKT_KEINER NACH, 2019)</p>	<p>Hopefully, they will become much more expensive in line with their environmental impact."</p> <p>@[ACCOUNTNAME] "After 15 years of doing nothing, it's time to finally get started.</p> <p>'It can't be done!' we have heard long enough. This whole 'argumentation' reminds me strongly of the reservations against the introduction of the railroad."</p>
Angry-left-liberal	<p>"machen eine Politik gegen Arbeitnehmer und Arbeitsplätze. Die Klimahysterie wird uns hunderttausende Arbeitsplätze kosten. Gerade für die sogenannten kleinen Leute wird alles viel teurer. Wo bleiben SPD und Linke, die sich für soziale Gerechtigkeit und unsere Arbeitsplätze einsetzen? Die Grünen ruinieren Deutschland ohne Rücksicht auf Verluste!" (Quante, 2019)</p>	<p>"Make policies against workers and jobs. The climate hysteria will cost us hundreds of thousands of jobs. Especially for the so-called ordinary people, everything will become much more expensive. Where are the SPD and the Left, who stand up for social justice and our jobs? The Greens are ruining Germany regardless!"</p>
Angry-conservative	<p>"Soll also Greta Thunbergs Klima-Klamauk doch nicht die Grundlinien der deutschen Politik bestimmen???" (G., J., 2019)</p>	<p>"So Greta Thunberg's climate clowning is not supposed to determine the basic lines of German politics after all???"</p>
Angry-lone-fighter	<p>"Es ist doch immer wieder erstaunlich, was diese Chaoten im Namen der Klimarettung alles dürfen in Deutschland! Aber es trifft ja die Richtigen!" (Voigt, 2019)</p>	<p>"It is nevertheless again and again amazing, what these chaotic people are allowed to do in the name of saving the climate in Germany! But it hits the right ones!"</p>

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