Negativity Wins at Last: How Presentation Order and Valence of User Comments Affect Perceptions of Journalistic Quality

Anna Sophie Kümpel & Julian Unkel

LMU Munich

POST-PRINT

2019-03-20

Author Note

Anna Sophie Kümpel and Julian Unkel, Department of Media and Communication, LMU Munich.

Correspondence concerning this article should be addressed to Anna Sophie Kümpel: Department of Media and Communication, LMU Munich, Oettingenstr. 67, 80538 Munich, Germany. E-mail: kuempel@ifkw.lmu.de

Abstract

A number of studies show that user comments on news websites can affect news-related judgments and perceptions. However, with news organizations increasingly shifting their comment sections to social network sites (SNS), questions arise about whether this alters previously observed effects. Instead of encountering comments 'below the line', SNS provoke a reversed direction of exposure, suggesting that comments might be read before the news article. Addressing the implications of this shift in direction of exposure, we conducted a preregistered experiment with German participants ($N = 630$), in which we varied *comment presentation order* (before vs. after the article) and *comment valence* (positive vs. negative) and assessed how these factors influence how individuals perceive the journalistic quality of commented news articles. The data provide evidence for a negativity bias and presentation order effects, with negative comments showing distinct effects on quality perceptions, particularly when presented after the article.

Keywords: online news, user comments, journalistic quality, presentation order, negativity bias

Negativity Wins at Last: How Presentation Order and Valence of User Comments Affect Perceptions of Journalistic Quality

Comment sections are one of the most common interactive features on news organizations' websites. In late 2013, nine out of 10 websites of US news organizations provided a comment section for their users, allowing them to comment directly on their sites (Stroud, Scacco, & Curry, 2016). Research has repeatedly shown that user comments can affect the perceptions or judgments of those exposed to comments (for an overview see Ksiazek & Springer, 2018; Springer & Kümpel, 2018). Previous studies have, for example, identified an influence of comments on individuals' third-person perceptions (e.g., Chen & Ng, 2016), perceptions of public opinion (e.g., Peter, Rossmann, & Keyling, 2014; Zerback & Fawzi, 2017), or journalistic quality (e.g., Dohle, 2018; Kümpel & Springer, 2016; Prochazka, Weber, & Schweiger, 2018). In short: Comments seem to influence both how individuals perceive the topics/issues covered in media content as well as how the content *itself* is evaluated.

In recent years, many news organizations—including *NPR* (United States), *Reuters* (United Kingdom), *Dagbladet* (Norway) and *Sueddeutsche Zeitung* (Germany)—have closed the comment sections on their websites and shifted the discussion to social network sites (SNS) such as Facebook and Twitter (Kim, Lewis, & Watson, 2018). The reasons for this are manifold: Hopes for more civil discussions, lowering the burden of maintaining own commenting features, or simply acknowledging the increasingly important role of SNS for accessing and discussing news (e.g., Kim et al., 2018; Rowe, 2015). This shift, however, likely changes the way in which comments are processed by exposed individuals. While comments on news websites are usually placed below the article and thus most likely read *afterwards*, the SNS information environment provokes a reversed direction of exposure. On Facebook, the SNS most widely used for "finding,

reading, watching, sharing or discussing news" (Newman, Fletcher, Kalogeropoulos, Levy, & Nielsen, 2018, p. 11), individuals are more likely to read the comments *beforehand* as they are accessible right in the news feed while the article needs to be clicked on. So far, however, there has been little discussion about whether comment presentation order influences the effects of user comments on individuals' perceptions. Such an investigation is not only important in order to find out whether earlier findings can be transferred to the usage situation on SNS—it is also crucial for news organizations, whose content might be processed and judged differently depending on *when* readers were exposed to others' comments.

The main aim of the present study has therefore been to investigate whether *comment presentation order* (before the article / after the article) has an effect on individuals' perceptions. More specifically, like a number of previous studies (Dohle, 2018; Kümpel & Springer, 2016; Prochazka et al., 2018; Weber, Prochazka, & Schweiger, 2019), we focus on individuals' perceptions of *journalistic quality* as these perceptions might have profound implications for whether journalism is trusted and recognized as a credible source of information. Informed by research on the differential effects of positive and negative comments (Dohle, 2018; Waddell, 2018; Waddell & Sundar, 2017; Winter, Brückner, & Krämer, 2015), we also varied the *valence of comments*, that is, whether they praise or criticize the quality of the article.

User Comments and Perceptions of Journalistic Quality

Prior to discussing the influence of comment presentation order and valence, we turn to the question of why comments should influence individuals' perceptions *at all*. Primarily, the effects of user comments are explained with people's use of cognitive heuristics that "constitute information processing strategies that ignore information to make decisions more quickly and with less effort" (Metzger & Flanagin, 2013, p. 214). One of these cognitive heuristics is the so-

called *availability heuristic* (Tversky & Kahneman, 1973), which is frequently referenced by researchers who have analyzed the effects of comments in the light of exemplification theory (e.g., Lee & Jang, 2010; Peter et al., 2014; Zerback & Fawzi, 2017). In line with conceptualizing comments as illustrative individual cases (i.e., exemplars), they are claimed to be influential due to being readily available and easy to be recalled when judgments have to be made. Extending on this general assumption of availability, others have posited that comments affect perceptions through activation of the so-called *bandwagon heuristic* (Sundar, 2008; see also von Sikorski, 2016; Waddell & Sundar, 2017). This heuristic is based on the generalized assumption that "if others think that this is a good story, then I should think so too" (Sundar, 2008, p. 83). It is especially likely to be activated when comments are consistent in their evaluation of the content, that is, predominantly positive or negative. However, it is also conceivable that both heuristics work in unison, with available exemplars triggering processes of generalization (i.e., opinions expressed in a small number of user comments are perceived to be held by many) and the bandwagon heuristic prompting the adoption of the perceived others' opinions.

In the context of quality perceptions, we have good reason to believe that people have a pronounced tendency to rely on heuristic cues in the form of user comments (see Weber et al., 2019). Although research has found that online users are at least somewhat able to judge the journalistic quality of news content and can tell good from bad quality (e.g., Dohle, 2018; Urban & Schweiger, 2014; Voigt, 2016), they are unlikely to be particularly concerned with making quality judgments (see also Prochazka et al., 2018; Weber et al., 2019). Hence, when asked for a judgment, people might rely on the evaluations of others as these are more salient than the actual quality which cannot be inferred directly. Whether a news article is, for example, impartial, accurate, or diverse, is not always easily discernible. Relying on comments thus reduces

cognitive load during judgment processes, helping individuals to minimize the resources necessary to come to an evaluation.

The Role of Presentation Order

User comments can affect how individuals process, perceive, and evaluate news content. Yet, several theoretical approaches and empirical results suggest that these effects might be particularly pronounced when user comments—or more generally: feedback or evaluations from others—are presented prior to own experiences. By highlighting certain elements of the news, comments might guide subsequent cognitive processes and bias individuals' evaluations in line with the expressed (positive or negative) sentiment (see Lee, Kim, & Cho, 2017; Lee & Tandoc, 2017; Waddell & Sundar, 2017). As such, user comments can be conceptualized as primes (Lee et al., 2017) that activate particular constructs in individuals' minds, heighten their salience, and thereby increase their influence on subsequent information processing and judgments. In general, "[p]riming refers to the effect of some preceding stimulus or event on how we react, broadly defined, to some subsequent stimulus" (Roskos-Ewoldsen, Roskos-Ewoldsen, & Dillman Carpentier, 2009, p. 74). Transferring this to user comments, a news article might be judged differently when people were exposed to others' opinions before reading the article themselves, as the comments might suggest a specific focus of attention. The information environment on Facebook elicits such priming effects as individuals are more likely to read the comments first: Comments are available directly in the news feed, thus acting as proximate environmental cues that tend to get processed simultaneous to the news teaser (see also Buchanan, 2015). The actual article, on the other hand, can only be accessed when following the provided link. This constitutes a crucial difference to news websites, where comments are more likely to be viewed after the article.[1] Consequently, if individuals are exposed to comments that address the quality

of a news article *first*, they presumably pay more attention to aspects of journalistic quality when reading it themselves. But even if individuals only grasp the valence of comments (and not the arguments contained therein), this could have effects on further processing. Research has repeatedly shown that (media-induced) affective states can influence the subsequent formation of attitudes (*affect induction*, see Blanchette & Richards, 2010; Kühne, 2012). Hence, obtrusive negative features of user comments, such as vulgarity or incivility, could induce a negative mood in individuals that, in turn, facilitates affect-congruent (i.e., more negative) judgments (see Weber et al., 2019). Likewise, obtrusive positive features of comments might lead to the induction of positive affective states and thus more favorable judgments. This line of research thus highlights the assimilative effects of affect on individuals' judgments, thereby stressing that evaluations (of journalistic quality) might not solely be based on deliberative cognitive processes.

The role of presentation order for judgment processes has been extensively studied in the context of marketing communication (e.g., Haugtvedt & Wegener, 1994; Hoch & Ha, 1986; Hogarth & Einhorn, 1992; Wooten & Reed, 1998). A study by Hoch and Ha (1986), for example, examined whether the order in which direct product experience and advertising are considered might affect the impact of the advertised message. Their results show that individuals who were exposed to positive, quality-centered advertisements *before* they experienced the advertised product, evaluated the product more favorably than those who were exposed to the advertising *after* own experiences with the product. Likewise, Wooten and Reed (1998, p. 96) found that "[i]nput from others is most influential when it is considered before consumers have an opportunity to reflect on their own experiences." The authors interpret this as evidence for yet another cognitive heuristic—namely, the *anchoring-and-adjustment heuristic* (Tversky &

Kahneman, 1974; see also Epley & Gilovich, 2006)—that is used to explain why judgments tend to be strongly influenced by initial impressions, perspectives, or values. Although originally proposed for numerical values, evaluative statements (e.g., "What a [terrible/great] article!") might act as anchors in tasks of qualitative estimations as well.

Overall, the evidence presented in this section suggests that user comments should exert the most influence before engagement with the news article ensues. Accordingly, we propose:

H1: User comments presented before a news article have a stronger effect on quality perceptions than user comments presented after a news article.

The Role of Valence

In addition to presentation order, the valence of user comments might influence the strength of comments' effects on perceptions of journalistic quality. Previous work has repeatedly shown that the effects of negative information outweigh those of positive information: "Bad is stronger than good" (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001) seems to be a principle that holds true for a plethora of psychological phenomena, not least for processes of judgment and evaluation (see also Rozin & Royzman, 2001; Ito, Larsen, Smith, & Cacioppo, 1998). Common explanations for this *negativity bias* include anthropological theories, stating that negative information is more important from an evolutionary perspective, thus receives more attention, and is weighted more heavily than positive information. Furthermore, expectancy-contrast theories suggest that humans usually have positive expectations (e.g., the average media user expects credible information from journalism), resulting in negative information to stand out more than positive (Skowronski & Carlston, 1989; Smith et al., 2006). Research also found that individuals consider negatively framed statements to be more truthful than positive ones,

suggesting that information is "deemed more valid whenever it is more negative" (Hilbig, 2009, p. 985).

Applied to user comments, negativity bias should lead to negative comments being more heavily weighted than positive comments when individuals are asked to make a quality judgment. Consistent with this assumption, previous research has shown that negative comments indeed have a stronger effect on individuals' perceptions than positive ones (Waddell & Sundar, 2017; Winter et al., 2015). In addition to the explanations outlined above, individuals might also be more familiar with encountering negativity in comments as they frequently feature incivility or impoliteness (e.g., Coe, Kenski, & Rains, 2014; Rowe, 2015; Su et al., 2018). Considering research on the "truth effect" (Dechêne, Stahl, Hansen, & Wänke, 2010), this familiarity with negativity in comments— induced through repeated exposure—might also lead to higher truth ratings and therefore amplify the persuasive effect of negative comments even more. Thus, the following is predicted:

> *H2:* Negative user comments have a stronger effect on quality perceptions than positive user comments.

When looking at the interaction between comment presentation order and valence, an interplay of the previously discussed psychological mechanisms suggests that the proposed effect of presentation order should be more pronounced in the presence of negatively valenced comments. As we assume that user comments act as primes that activate and heighten the salience of particular constructs in individuals' minds, comments that are presented before the article and criticize the journalistic quality are likely to direct individuals' attention to (negative) aspects of quality. Further, considering that 'bad is stronger than good' and that negativity in

comments might induce negative affective states that facilitate affect-congruent judgments, we assume:

H3: The effect of presentation order is stronger for negative user comments than for positive user comments.

The Role of Personal Characteristics and Perceptions

Previous studies have identified additional factors that might influence users' perceptions of journalistic quality—both on their own and in interaction with comments. Most prominently, research has shown that quality perceptions of individual articles are influenced by users' evaluations of the associated news organization (e.g., Urban & Schweiger, 2014; Voigt, 2016), with more favorable general evaluations (i.e., brand images) positively influencing the evaluation of single news items. Additionally, users' perceived prior knowledge regarding the topic of the article (e.g., Dohle, 2018; Kümpel & Springer, 2016) and their need for cognition (NfC) might influence journalistic quality perceptions, with users low in NfC being "more persuaded by cues that require minimal effort to process such as the audience's response" (See, Petty, & Evans, 2009, p. 880; see also Lee & Jang, 2010). To account for possible effects of these variables, the present study controls for evaluation of the news organization, prior knowledge, and NfC.

Method

To test the hypothesized effects of comment presentation order and valence on journalistic quality perceptions, an online experiment with German online users was conducted in October 2018. Participants ($N = 630$) were randomly distributed to one of two issues (see section "Stimuli") and further to one of five groups. Comment presentation order (before the article / after the article) and valence (positive / negative) were varied in a 2 × 2 between-subjects design; a fifth group was only exposed to the article, thus serving as the control group.

Participants first reported their prior knowledge about the respective issue and their evaluation of the news organization that the subsequently presented article originated from. They were then asked to read the article, with a Facebook teaser of said article containing two user comments (both either *positively* or *negatively* addressing journalistic quality) displayed either *before* or *after* the article (or not at all in the control group). After that, participants were asked to evaluate the article's journalistic quality and to answer some more questions about themselves and their perception of the article/comments.

Participants

Prospective participants were randomly drawn from a pool of about 70,000 people living in Germany that signed up for a non-commercial online access panel (*SoSci Panel*). 3,371 invitations to take part in the study were sent out, with 642 people completing the survey, resulting in an effective response rate of 19.0 %. The questionnaire was accessible for two weeks from October 8, 2018 until October 21, 2018. As an incentive for participation, three 25 € vouchers for a shopping website were raffled among all participants who completed the questionnaire.

To ensure at least a certain level of engagement with the stimuli, we excluded all participants who had spent less than 5 seconds viewing the Facebook teaser/comments and/or less than 10 seconds reading the article, leading to a final sample size of $N = 630$. Sample demographics included gender (51.3 % female, 47.4 % male, 1.3 % non-binary or preferred not to answer), age ($M = 43.01$, $SD = 15.56$), and education, with 83.5 % having received a high formal education (qualified for admission into university or obtained a university degree).

Stimuli

Participants were asked to read and evaluate an article that was allegedly published by the regional news website *Stuttgarter-Zeitung.de.* The article focused on one of two current issues in German politics in September 2018: the introduction of a new copyright directive by the European Union that effectively prohibits news aggregators and search engines from using snippets of press publications without licensing (henceforth: *copyright directive* or *CD*), and government advisors arguing for the discontinuation of social housing in Germany (henceforth: *social housing* or *SH*). We selected a regional news organization to use a real outlet (with a name presumably known by most participants) while at the same time minimizing direct experience with said outlet. Both articles were of comparable length (~420 words), structure (short headline, ~15 word lead, each two paragraphs about current developments, arguments for/against the issue), and layout (in the style of *Stuttgarter-Zeitung.de*). The articles did not differ between the four experimental groups and the control group per issue condition.

Table 1 about here

In the four experimental groups, a Facebook teaser for the article containing two comments was displayed either before or after the article on a separate questionnaire page. In the negative valence condition, these comments criticized the article's writing style, quality of research, and impartiality, while the same aspects were positively highlighted in the positive valence condition. All four comments were of similar length (24 words) and tone, based on existing comments found on Facebook pages of news organizations, and allegedly written by the same two users in all conditions (see Table 1). As no comment explicitly mentioned the article's topic, the exact same wording was used for both issues. The Facebook teaser furthermore

consisted of the article's headline, lead, and teaser image. No further social cues (likes, shares, etc.) were present apart from the two comments.

Measures

Journalistic quality perceptions. To assess journalistic quality perceptions, participants were asked to rate the quality of the news article on a 7-item scale ranging from 1 (*does not apply at all*) to 7 (*does fully apply*). The items focused on various aspects of journalistic quality (e.g., impartiality, comprehensiveness, comprehensibility) and were adopted from Jungnickel (2011). Overall journalistic quality perceptions were then calculated with a mean index of all seven items across the two issues (M = 5.17; SD = 1.01, ω_h = .84 [.82; .86]; M_{CD} = 5.06; SD_{CD} = 1.05; M_{SH} = 5.28; SD_{SH} = 0.96).

Prior knowledge. Participants' prior knowledge about the respective issue of the article was assessed using a 4-item scale ranging from 1 (*does not apply at all*) to 7 (*does fully apply*) that was adopted from Unkel and Haas (2017). Again, a mean index of all four items across the two issues was calculated (M = 2.83; SD = 1.65, ω_h = .94 [.93; .95]; M_{CD} = 2.16; SD_{CD} = 1.46; M_{SH} = 3.51; SD_{SH} = 1.55).

Need for cognition (NfC). NfC was measured using a 7-item short scale ranging from 1 (*does not apply at all*) to 7 (*does fully apply*), adopted from Müller and colleagues (2016). This scale uses seven items of Cacioppo and Petty's (1982) original scale, with all items worded negatively. All items were then reverse-coded to provide for easier interpretation (i.e., higher values indicating higher levels of NfC) and combined into a mean index (M = 5.52; SD = 1.04, ω_h = .83 [.81; .86]).

Evaluation of news organization. Participants' prior attitude towards *Stuttgarter-Zeitung.de* was measured using a 4-item semantic differential ranging from -3 to +3. Semantic

pairs included “not trustworthy – trustworthy”, “incompetent – competent”, “unreliable – reliable” and “biased – impartial”. A fallback option (“Can’t tell”) was provided for participants who did not feel confident to rate the respective dimension. 70 % of participants used this fallback option. For analytical purposes, this fallback option was coded into the value of 0, indicating a neutral assessment. Then, a mean index of all four items was calculated ($M = 0.43$; $SD = 0.81$, $\omega_h = .89$ [.84; .93]).

Treatment checks. Several treatment checks were used to assess how the participants engaged with the article and the comments. Participants first reported how intensely they have read the article ($M = 3.80$; $SD = 0.84$) and the comments ($M = 2.80$; $SD = 1.67$) on a scale ranging from 1 (*not intense at all*) to 5 (*very intense*). Participants then assessed two statements about the content of the comments on a scale from 1 (*does not apply at all*) to 5 (*does fully apply*). As intended, participants reported that the comments addressed the article’s quality ($M = 3.94$; $SD = 1.10$). Additionally, participants in the positive valence condition ($M = 4.27$; $SD = 0.90$) agreed significantly more to the statement “The user comments evaluated the article positively” than participants in the negative valence condition ($M = 1.33$; $SD = 0.69$, $t(503) = 41.43$, $p < .001$, $d = 3.70$).

Preregistration and Open Data

All hypotheses, procedures, stimulus materials, and the complete data analysis plan for this study were preregistered before data collection started based on a template for experimental study designs (van ’t Veer & Giner-Sorolla, 2016). The frozen preregistration (registered on October 6, 2018) can be obtained from the study’s OSF repository: https://bit.ly/2UlGOx6. The data and reproducible *R* analysis scripts are openly accessible at the associated OSF repository as well: https://bit.ly/2CGrRQG.

Results

Interaction effects in 2 × 2 + 1 (control group) designs cannot be modelled directly when the control group is included, as no factorial values (in our case: comments) are present for the control group. Thus, we treat the mean of journalistic quality perceptions in the control group as the baseline perception for both issues. This mean is then subtracted from the individual journalistic quality perceptions of each participant in the experimental groups. The resulting value represents the individual differences in journalistic quality perceptions as compared to the average perceived journalistic quality of the news article when no user comments are present. Only participants in the experimental groups are included in the analyses.

Confirmatory Analyses

Table 2 about here

To test the main effects of comment presentation order and valence as proposed in H1 and H2, we computed block-wise linear regression models for the *absolute* value of the journalistic quality perception differences.[2] While using the absolute value ignores the direction of effects, it allows to directly compare effect sizes of positive versus negative valence, and reading comments before versus after the article. We first included sociodemographic (block 1) and control variables (block 2); last, main effects for both presentation order and valence were added (see Table 2).[3] No discernible effect of comment presentation order was found (b = -0.08, p = .185), thus contradicting H1. Positive comment valence was associated with smaller absolute differences in journalistic quality perceptions than negative comment valence (b = -0.25, p < .001), providing evidence for a negativity bias and thus supporting H2. Additionally, more favorable evaluations of the news organization were associated with lower absolute differences in journalistic quality perceptions (b = -0.10, p = .005). This suggests that individuals who

perceive *Stuttgarter-Zeitung.de* more positively were less influenced by comments when rating the article's quality.

Table 3 & Figure 1 about here

To test the interaction effect of comment presentation order and valence proposed in H3, as well as the direction of the main effects, we computed linear regression models for the *real* value of the journalistic quality perception differences.[4] Similar to the first model, sociodemographic and control variables were entered prior to the interaction effect (see Table 3).[5] The interaction effect was significant (b = -0.44, p = .013) and is graphically displayed in Figure 1. As expected, negative comment valence was associated with lower levels of journalistic quality perceptions. However, while the effect of presentation order was indeed stronger for negative than for positive user comments, we observed the opposite of what we hypothesized in H3: Negative comments showed the largest effect on quality perceptions when they were presented *after* the article. Positive comments did not affect quality perceptions, regardless of whether they were placed before or after the article. Thus, H3 had to be rejected. Besides, as with the absolute value of differences in quality perceptions, the real value was also predicted by the evaluation of the news organization: More favorable evaluations of *Stuttgarter-Zeitung.de* were associated with more positive quality perceptions (b = 0.33, p < .001).

Supplementary Analyses

To analyze the stability of the effects, we computed both regression models with all control variables excluded. In the absolute differences model, positive valence was still associated with smaller absolute quality perception differences than negative valence (b = -0.25, p < .001), while no effect of comment presentation order could be found (b = -0.08, p = .185). In the real differences model, the interaction effect also remained consistent (b = -0.42, p = .018).

Discussion

Contrary to our expectations, user comments presented before a news article did not have a stronger effect on quality perceptions than comments presented afterwards. In fact, comment presentation order on its own showed no significant association with journalistic quality perceptions. This finding differs from research in the context of marketing communication (e.g. Hoch & Ha, 1986; Wooten & Reed, 1998) and challenges the conceptualization of user comments as primes (in the proper meaning of the word). Comment valence, on the other hand, showed an association with journalistic quality perceptions in the expected direction. As suggested by research on negativity bias (e.g., Baumeister et al., 2001; Rozin & Royzman, 2001) and findings on the effects of negativity in user comments (e.g., Dohle, 2018; Waddell, 2018; Waddell & Sundar, 2017; Winter et al., 2015), we found that negatively valenced comments had clear detrimental effects on individuals' quality perceptions. Last, focusing on the interplay between comment presentation order and valence, a significant interaction effect emerged. As predicted, the effect of comment presentation order was more pronounced for negative user comments than for positive ones. However, while we expected that negative comments show the largest effect on journalistic quality perceptions when they are presented prior to the article, the data indicated the opposite: Negative comments had a stronger impact on perceptions when presented *afterwards*. By contrast, positive comments had no discernible effect on quality perceptions—irrespective of when they were presented. Complementing previous findings (e.g., Urban & Schweiger, 2014; Voigt, 2016), we also found that the quality of the article was rated more positively, the more favorably individuals evaluate the news organization it allegedly originated from.

Overall, our study adds to the already vast body of research showing that user comments can affect the perceptions and judgments of those that are exposed to comments (see Ksiazek & Springer, 2018; Springer & Kümpel, 2018). However, these effects seem to hinge both on the valence of comments as well as the time of exposure: Readers of user comments appear to adjust their evaluations of a journalistic article according to the opinion of others, but only when comments criticize the article and more so when they are reading the comments after the article. A possible explanation for the observed recency effect might be that the appearance of negative comments at the end of a news usage episode constitutes a "peak moment" (Garnefeld & Steinhoff, 2013, p. 69) that cannot be compensated by further experiences. In other words: Negative comments might have had a stronger effect when they appeared afterwards, because this last encounter could not be made up for by the—supposedly neutral or even positive—experience with the news article. However, another possible explanation for the results might be that participants were simply not motivated to elaborate on the content of the news article, and, consequently, to make accurate quality judgments. Building on assumptions of the Elaboration Likelihood Model (Petty & Cacioppo, 1986), Haugtvedt and Wegener (1994) found that primacy effects only occurred when participants were motivated to elaborate on the content, while they found recency effects for unmotivated participants. In situations of low motivation, individuals are more likely to rely on heuristic cues such as user comments for their evaluations, particularly when encounters with these cues are 'fresh' and therefore easier to recall (ibid., see also Weber et al., 2019). But why do we suspect participants to be little involved? First, as stated above, we have reason to assume that online news users are generally unlikely to be particularly concerned with making quality judgments as they are, for the most, not of high personal relevance to them. Second, this might be due to our specific sample. Relying on an online access panel and thus on

participants experienced with social-scientific research and questionnaires, the whole procedure might be less involving for them. In fact, research has shown that experienced respondents seem to be more prone to satisficing strategies than inexperienced ones and tend to take shortcuts when answering surveys (Toepoel, Das, & Van Soest, 2008). Accordingly, they might have been more susceptible to base their judgments on the most recent available cues.

Practical and Scholarly Implications

Albeit preliminary, the results have several implications for news organizations that promote their articles on SNS. First, negative user comments are something they should worry about as the evaluation of their products is influenced by cues that oftentimes have nothing to do with the journalistic content itself (e.g., unnecessarily mean or critical comments). However, shifting comment sections to SNS might have been a smart move as the information environment there does not seem to 'make it worse'—at least if we assume an ideal-typical usage situation in which comments are read first and the article second. Yet, this might not always be the case. Research in the context of Twitter shows that a large proportion of links shared on the platform have never been clicked on (Gabielkov, Ramachandran, Chaintreau, & Legout, 2016), suggesting that social media engagement (e.g., sharing, liking, writing/reading comments) and actual engagement with the linked article cannot be equated. Hence, if we assume that SNS users *only* read the comments, the observed negative effects might be even more pronounced. Second, considering the detrimental effects of user comments, news organizations are advised to mentally and monetarily invest in community management and moderation. Recent research suggests that a factual, interactive moderation style (i.e., a moderator criticizing inappropriate comments directly and politely) increases perceived discussion atmosphere (e.g., Ziegele & Jost, 2016), which might reduce the prevalence of negative comments and thus limit possible adverse effects.

Third, despite the sobering findings, news organizations should acknowledge that comments are certainly not the only factor influencing quality perceptions. In this study, quality perceptions were also predicted by individuals' evaluation of the news organization, implying that a strong brand image might help to protect news organizations from the negative effects of comments.

In addition to these practical implications, our results have implications for user comment research and the transferability of earlier findings. While negative comments showed an impact on quality perceptions regardless of presentation order, the effects were more pronounced for comments presented after the article. Thus, when comparing effect sizes or referencing results, one has to consider the respective study design: Were participants exposed to comments prior to, simultaneously with, or after the main (i.e., commented) stimulus? Besides, many studies on the effects of comment valence do not feature a true control condition with no comments, thus preventing assessment of differential effect sizes. The approach presented here—treating the mean of perceptions in the control group as a baseline—might thus act as a useful template for future research designs.

Limitations and Future Research

As with all research, this study has several limitations. First, to increase external validity, the comments were designed according to the recent Facebook UI, which might have influenced the observed effects. Moving forward, it will be important to test the influence of comment presentation order with stimuli not confined to the layout of specific news websites and/or SNS. Second, the comments we used in our stimuli were either entirely positive or negative in valence. Accordingly, we are unable to account for the effects of 'mixed' comments, that is, the simultaneous display of positive and negative statements about the article's quality. Future research could examine whether this changes the observed effects—for example, whether

presenting favorable and critical comments at the same time diminishes the observed negativity bias. Third, although we used two different topics (copyright directive; social housing) to account for possible issue effects, both were related to current German politics and, additionally, topics that participants were not quite knowledgeable about. Thus, it would be valuable for future research to repeat the study with different topics that relate to different news sections (e.g., health, education) and vary in terms of how well-known and involving they are. Moreover, one might consider to actually vary the quality of the news article (for such an approach see Dohle, 2018). Because the journalistic quality of both articles was evaluated quite positively, the potential of positive comments to influence individuals' perceptions was naturally reduced. Finally, although we controlled for a number of variables previous research has identified as relevant for journalistic quality perceptions (e.g., prior knowledge, NfC, evaluation of the news organization), explicit measures (or even manipulation) of, for example, participants' situational involvement might help to further our understanding of contextual factors involved in the effectiveness of user comments.

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Footnotes

[1]Despite the proposed direction of exposure on news websites and SNS, we do not want to imply that users can only act in the described way. Some SNS users might click on the link to the full article without even glancing at the comments, while some users of news websites might scroll directly to the comment section and read the article afterwards. However, our argument is that the specific information environments and affordances of news websites and SNS make one flow of exposure more likely than the other.

[2]As outlined in the preregistration form, we first computed block-wise multilevel regression models, treating the issue of the news article as a random factor. However, as the intraclass correlation coefficient (*ICC*) of the random intercept only model is very close to zero ($ICC < .001$), there seems to be no statistically relevant difference in the magnitude of journalistic quality perception differences by issue of the news article. Therefore, we opted for linear regression models instead.

[3]Model assumptions are met ($DWT = 2.13$, $p = .136$; mean $VIF = 1.05$, max $VIF = 1.11$). A quantile-quantile plot shows approximate normal distribution (available at the study's OSF repository).

[4]We opted for linear regression models as, once again, a multilevel model with random intercepts for the issue of the news articles offered no statistical advantages ($ICC < .001$).

[5]Again, model assumptions are met ($DWT = 1.85$, $p = .072$; mean $VIF = 1.51$, max $VIF = 3.11$). A quantile-quantile plot shows approximate normal distribution (available at the study's OSF repository).

Tables and Figures

Table 1

Wording of comments in the stimuli

#	Positive valence condition	Negative valence condition
1	As someone who is familiar with the subject: very well researched and written! I'm glad that we still have decent journalism in the region.	As someone who is familiar with the subject: very poorly researched and written! What a pity that we no longer have decent journalism in the region.
2	I appreciate that you quote people from both sides. Very pleasing to receive a neutral and unprejudiced look at the issue.	I got a feeling that you're just quoting people that fit the slant of the story. Very poor to provide such a biased and partisan look at the issue.

Note. All comments translated from German. The original stimuli can be obtained from the study's OSF repository.

Table 2

*Predictors of quality perceptions (**absolute** differences from control group mean)*

	Quality perceptions (absolute differences from control group mean)					
	Model 1		*Model 2*		*Model 3*	
Predictors	ΔR^2	*b*	ΔR^2	*b*	ΔR^2	*b*
Sociodemographic variables	.00					
Gender: female[a]		0.01		0.00		-0.01
Age		0.00		0.00		0.00
Education: high		-0.03		-0.02		-0.04
Control variables			.01			
Prior knowledge				-0.02		-0.02
Need for cognition				0.02		0.03
Evaluation of news org.				-0.11**		-0.10**
Experimental manipulations					.04	
Order: comments before						-0.08
Valence: positive						-0.25***
Intercept		0.87		0.87		1.04
Total $R^2_{adj.}$	.00		.01		.05	
F-value	0.07		1.72		3.98	

Note. $n = 505$, Hierarchical OLS regression models. $df_{Model1} = 3, 501$; $df_{Model2} = 6, 498$; $df_{Model3} = 8, 496$
[a] "male" and "non-binary" recoded into reference category "not female"
All metric predictors are grand mean centered.

* $p < .05$; ** $p < .01$; *** $p < .001$

Table 3

*Predictors of quality perceptions (**real** differences from control group mean)*

	Quality perceptions (real differences from control group mean)					
	Model 1		*Model 2*		*Model 3*	
Predictors	ΔR^2	*B*	ΔR^2	*b*	ΔR^2	*b*
Sociodemographic variables	.00					
Gender: female[a]		-0.08		-0.10		-0.08
Age		0.00		0.00		0.00
Education: high		-0.10		-0.13		-0.11
Control variables			.06			
Prior knowledge				0.02		0.02
Need for cognition				0.01		0.01
Evaluation of news org.				0.34***		0.33**
Experimental manipulations					.06	
Order: comments before						0.40***
Valence: positive						0.66***
Order × valence						-0.44*
Intercept		-0.13		-0.09		-0.54
Total $R^2_{adj.}$	.00		.06		.12	
F-value	0.91		6.31		8.59	

Note. n = 505, Hierarchical OLS regression models. df_{Model1} = 3, 501; df_{Model2} = 6, 498; df_{Model3} = 8, 495
[a] "male" and "non-binary" recoded into reference category "not female"
All metric predictors are grand mean centered.

* $p < .05$; ** $p < .01$; *** $p < .001$

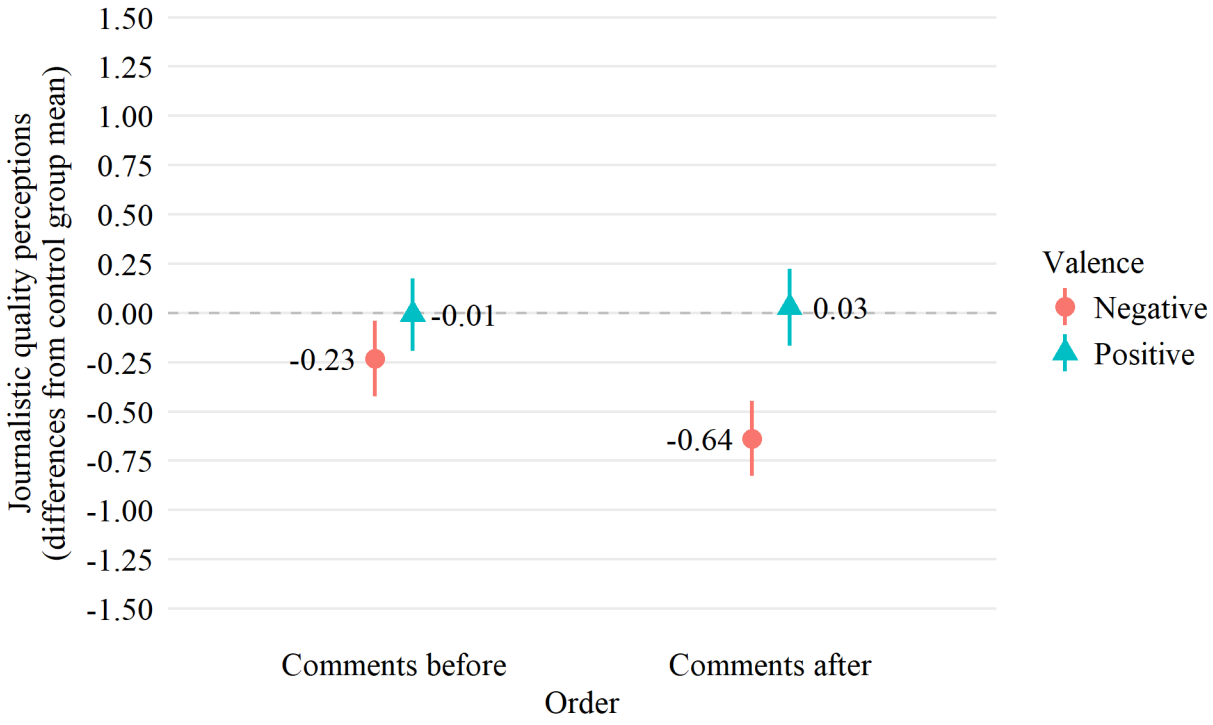

Figure 1. Journalistic quality perceptions (differences from control group mean) by comment presentation order and valence. Vertical bars represent 95% confidence intervals.