


# “We Rewrote This Title”: How News Headlines Are Remediated on Facebook and How This Affects Engagement

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## Abstract

Social media have become a very important news platform, both for the presentation and consumption of news by social media users. News is therefore eagerly shared by news media on platforms such as Facebook, Instagram, and Twitter in the hope of reaching as many news consumers as possible. In this highly competitive media landscape, news media aim to attract consumer attention to these news stories by incorporating the social media logic into their reporting. In this study, we focus specifically on the conversion and accompanying adaptations of news originating from online news sites to the Facebook page of a news medium, with a focus on the (re)formulation of the headline that functions as an important element in both online news articles and Facebook posts. Based on computational analysis, we compare the headlines of news items on the news outlet's website to the headlines published on Facebook and link these with the user engagement metrics ( $N = 10,579$ ). The findings revealed that the routine of rewriting or adapting headlines on Facebook in contemporary journalism is rather common and that this rewriting is done with an eye toward injecting elements that better align with the social media logic, consequently magnifying its impact on engagement.

## Keywords

Facebook, headlines, social media, journalism, news

## Introduction

As social media are an important news source for news all over the world (Newman et al., 2021), news media are accordingly deploying their efforts to disseminate news through these platforms. In addition to monitoring and interacting with the audience, social media serve to give news articles additional exposure and generate additional reach to the homepage. Since social media editors, as a relatively new journalistic profession, decide on which online news stories are posted on social media accounts and in doing so, partly behave like marketers, they redefine the notion of classical gatekeeping (Tandoc & Vos, 2016), and can even be seen as new gatekeepers (Welbers & Opgenhaffen, 2018). Whereas the success of a print newspaper can be measured based on sales figures, and radio and television news are about listening and viewing figures, news through social media is not only about clicks that generate traffic to the website, but also about the users' engagement in terms of likes, shares, and comments (Kalsnes & Larsson, 2018; Larsson, 2018). The more engagement with a message, the greater the chance that this message will be offered extra prominence by the platforms' algorithms. In a highly competitive news landscape in which there is competition on timelines not

only from other news media but also from posts by friends, family and all sorts of groups and pages, newsmakers must take the preferences of the public and the algorithm into account and incorporate this so-called social media logic (Lischka, 2021; Van Dijck & Poell, 2013) in the selection and shaping of the news posts when transferring them from the online news site to the social media accounts.

While a great deal of research has been conducted into the difference in topics and news values between traditional and social media news outlets, there is much less insight into the formal and textual adaptations that are made during this transfer from news site to social media. In this study, we focus specifically on the conversion and accompanying

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adaptations of news originating from online news sites to the Facebook page of a news medium, with a focus on the (re) formulation of the headline that functions as an important element in both online news articles and Facebook posts. In other words, is the headline of the news article—that is selected by the social media editor to be published on the Facebook page—adjusted to be in line with the Facebook logic, and if so, in what way? And do these adaptations lead to more users' engagement? To this end, we analyze online news headlines and their corresponding Facebook headlines originating from five Flemish news media that were posted between 13 January and 14 February 2020. Based on computational analysis, we map the characteristics and modifications of these headlines and link these with the user engagement metrics. These results are important to understand how social media logic affects the remediations of online news to Facebook news and to get a grip on the daily work and trade-offs of social media editors who perform this kind of remediating work daily.

## Theoretical Framework

### *Platformization and Social Media Logic*

One characteristic of today's news ecosystem is the plethora of platforms through which news is delivered. News items no longer appear only in newspapers and magazines or on radio and television but also on digital platforms such as online news websites, newsletters, podcasts and on social media such as Facebook, Twitter, Snapchat, Instagram, and even TikTok. Often, different platforms are used within the same news organization to deliver a given news story to consumers, what Hanusch (2017) describes as platform-parting. However, using different platforms to spread news requires a specific approach, as each of these platforms has its own opportunities and limitations, and news organizations should consider the interplay between platforms, audiences and practices (Hermida, 2020). If we consider the transfer of, for example, a newspaper article to a television item, or of a television item to a radio item, then we can easily imagine something about the fact that these messages differ from each other in terms of content (e.g., the nuance that can or cannot be put into the piece) and form (e.g., length and the use of images, sound and text). It is somewhat less clear when it comes to the transfer of digital messages within digital platforms, such as an online news article that is transferred to the Facebook page of that same medium.

To better understand the influence of digital platforms on journalism practice, we can draw on the insights around platformization and the accompanying social media logic. The general premise of platformization is that digital platforms not only facilitate the publication of and interaction with cultural products (including news), but also organize and steer these processes (Nieborg & Poell, 2018). Digital platforms allow news producers to present their items to the news

consumers, and the latter can easily engage with these posts in the form of a like, a comment, or a share. Research shows that these platforms play an important role in the (digital) circulation of news, so we can consider them as new gatekeepers (Welbers & Opgenhaffen, 2018). News media are, in this way at least, partially dependent on a technological platform that they themselves do not control. And just because they are guests on a platform that they do not control, they must adapt to the preferences and affordances of these platforms to get the most out of them in terms of clicks, engagement, and interaction. This platform dependency not only leads to growing frustrations among news organizations (Whitehead, 2019), to a so-called "frenemy" relationship between publishers and platforms (Sehl et al., 2021), but, more importantly, causes news producers to become "platform complementors" (Nieborg & Poell, 2018, p. 4282) who align their practices and productions with the prevailing business, political-economic and technological logics of the digital platforms.

To better understand this logic, we draw insights from the work of Van Dijck and Poell (2013) who launched the specific concept of social media logic. They see the following four dimensions as distinctive of social media logic: (1) Programmability, or the fact that the platforms can steer the production and consumption of news, but that also the public's behavior triggers a number of pre-programmed steps through which certain items receive more or less attention; (2) popularity, or the mechanism that boosts certain items, people, or ideas on those platforms; (3) connectivity, the fact that an algorithmic and automatic connection is established between users, accounts, posts, and advertisers; and (4) datafication, or the ability to map and even predict users' preferences and behavior in real time, determining the selection and design of posts. These principles are also reflected in the social media logic of virality (e.g., Berger & Milkman, 2010; Klinger, 2013; Trilling et al., 2017) that refers to the principle that news items generate additional reach as they elicit engagement from the public. The more likes, shares, and comments a post receives, the more attention the platforms' algorithm will give this post on the timeline, and therefore the more clicks this article will generate on the news site, indicating the decisive impact of the platforms on the news distribution process (see, for example, Diakopoulos, 2019). Consequently, news organizations have every interest in ensuring that their posts will be shared a lot, and hopefully even go viral, then they will achieve an extra-large reach that extends far beyond their loyal followers and thus potentially generate new readers (Kalsnes & Larsson, 2018). The platforms and the users who engage with the news on these platforms can therefore be seen as post-publication gatekeepers (Hermida, 2020). As a result, news organizations may respond to the public's news preferences and making the news as eye-catching as possible for the scrolling user who might not be looking for news. News organizations can rely on the engagement metrics offered by the platforms and can

also use tools (e.g., CrowdTangle) to map the reach and virality of their own posts and those of the competitors to know what scores well on the platforms (Lamot & Paulussen, 2019). In addition, news organizations should also consider the so-called social media affordances, the technical, organizational, and professional possibilities and limitations which determine that what works on one platform may not work on another (dos Santos et al., 2019). For example, social media platforms differ in their maximum length of a video and in the size of photos. And similarly, certain journalistic routines are more accepted with social media news than on more traditional platforms, like the use of filters and stickers in news presented on TikTok (Vázquez-Herrero et al., 2020) or the use of emoji in Facebook news (Hågvær, 2019; Opgenhaffen, 2021). These affordances therefore result in having platform-specific preferences, opportunities, and limitations in addition to a general social media logic.

Publishers have created new job profiles in recent years with, for example, social media editors and engagement editors (e.g., Lischka, 2021; Opgenhaffen, 2021) to best align with the social media logic when publishing news on the social media platforms. These editors not only select the news suitable for publication on social media platforms (Lamot, 2022; Lischka, 2021; Trilling et al., 2017), but also shape these messages, using, for example, specific rhetorical strategies to capture readers' attention and make them more engaged with the news (Hågvær, 2019; Welbers & Opgenhaffen, 2019). An important insight in this context is that news is not only prepared directly with a view to publication on social media (such as, for example, an original TikTok video or a stand-alone photo on Instagram), but is also often transferred from other, more traditional platforms, such as the newspaper or the news site, while being adapted to align with the (platform-specific) social media logic. Nieborg and Poell (2018) see this routine of adjustments as a logical consequence of social media logic and use the term "contingency" to indicate that news is adapting to the new logic all the time. The fact that news organizations can see in real time how audiences behave on digital platforms and that they are able to test out different versions of stories with A/B testing, ensures, according to the authors, that "news content is increasingly modularized, revised, and recirculated, transforming it into a contingent cultural commodity" (p. 4287), with a routine of content undoubling in addition, in which news organizations are increasingly committed to a customized "platformed distribution of individual stories, which are contingent in their structure and content" (p. 4287).

### *Social Media Logic and (Re)Packaging of News*

Thus, within a multi-platform environment, it is not only the decision that is made as to which topics will or will not be transferred from one platform to another, but also whether to adapt the form and to repack these news stories. This adaptation is rather evident when transferring an item from

television to an item in the radio news or in the newspaper, or vice versa. But also, in the case of digital news items, the form or packaging can be adapted to fit in as best as possible with the logic of the specific platform. Erdal (2009) uses adaptation, translation, and remediation as terms to describe the transfer of news in which the design of the message changes. It is a "platformization of news" (Van Dijck et al., 2018) where there is not only an unbundling (Nieborg & Poell, 2018) of news from its previous forms, but also a "rebundling" into a form that best suits the new platform, which is in line with the concepts of repurposing, recombining, and recreating as proposed by Boczkowski (2005). The previously mentioned term remediation is coined by Bolter and Grusin (1999) to refer to the representation of one medium in another medium, while the term bricolage (Deuze, 2006) rather focuses on the mixing, borrowing, and adapting of content to create something new, as for example with people's personal internet pages (Deuze, 2006, p. 70), something that also happens when a journalist or (social media) editor bricolage elements from different platforms into a new post on, for example, Facebook, Instagram, or TikTok. From a more translation studies perspective, reference is made to the "translation" of news from one platform to another, so that it fits within the language and context of the new platform (Valdeón, 2017). The journalist then acts as a so-called "journalator" (Van Doorslaer, 2013).

### *Repackaging of News Via the News Headline*

Not much research has been done yet regarding the reshaping of repackaging of online news to social media news, at least much less than research on news values or topic selection. The few studies examining formal adaptations mainly focus on the news headline. This is not unjustified as the headline can be seen as the link between the professional news piece and the rapidly scrolling social media user (Dor, 2003; Kronrod & Engel, 2001; Kuiken et al., 2017).

The few studies that specifically focus on news headlines on social media offer us the first insights into how these headlines are used to align the news post with the social media logic. What makes social media headlines so interesting is that on those timelines, they should not only aim to attract attention and attract clicks, but also to provoke engagement in the form of likes, comments, and shares (see, for example, Hermida et al., 2012; Larsson, 2018). News media want their posts to be liked, responded to, and shared so that they appear in the timeline of other social media users, thus generating a wider reach, and who knows, even go viral. In short, news headlines on social media are not just about attracting attention and generating a click, but also about generating shareworthiness (see, for example, Trilling et al., 2017). Some recent studies provide mixed insights regarding the influence of format of headlines on users' engagement. Janét et al. (2022) showed that different headline formats (such as question-based and forward-referencing headlines) make little difference in terms of engagement, and mainly affect

the perception of the headline. The computational study by Park et al. (2020) of news headlines on Twitter showed that adjustments to the headlines for some news accounts boosted engagement in terms of likes, retweets, and replies, but caused a drop in engagement for other news media. What was also clear from this study is that it is easier to give a like than a retweet or reply on Twitter, which is similar to the behavior of Facebook and Instagram users, for example, who are much more likely to give a like than share the post or post a reply (Alhabash et al., 2019).

Some studies focus on a new type of headline on social media, namely the status message found on top of a Facebook post, for example. These statuses are added by the social media editor and contain more subjectivity and polarity compared to the more conventional headline that appears in the post, and this in both quality and popular newspapers (Welbers & Opgenhaffen, 2019). The authors point out that this status message can be seen as an additional headline, as a kind of ribbon around the Facebook post that acts to attract the attention of the audience and make them engage with the post and uses rhetorical tricks that are not seen in more conventional headlines. This is confirmed by a study by Opgenhaffen (2021) in which social media editors were asked about the how and why of status messages. They indicated that they add these to attract attention and that they use more subjective wording to make the posts more engaging, to get noticed more by the audience but also to provoke more interaction and engagement. Hågvar (2019) also conducted research on status messages on Facebook. Although the text in the status messages is not always unique (and thus is often copied [in part] from the article), the study concluded that a few different strategies could be seen that indicate a specific social media news routine when writing these new headlines, such as using emoji, asking questions, or making an appeal to the audience, expressing emotions, and showing a subjective perspective. Consequently, status messages hold more question and exclamation marks than the headline of the same news message (Haim et al., 2021).

When news articles are transferred from the news site to, for example, the Facebook page, the news post is thus repackaged through the status message, which differs in tone, layout, and use of emoji from the more classic headline that accompanies the social media post. However, what has not yet been researched is how social media editors may or may not adjust the headline itself when transferring the news from online to Facebook (but see Hågvar, 2019). After all, there are reasons to believe that this happens: since the headline is a very important vehicle to draw people's attention to news articles, it does not seem illogical that social media editors, when transposing the headline from the news site to the social media timeline, adapt, rewrite, translate, or remediate this headline so that it is even more in line with the specific social media logic that focuses on pleasing the algorithm, grabbing the attention of the scanning news consumer on a timeline that is full of posts from other professional and non-professional news media, and on eliciting users' engagement

in the form of likes, comments, and shares. And it is technically possible to adjust the headline at the time of transposition. With this study, we therefore want to map out whether, in addition to adding an extra headline as status message, the actual headline itself is also modified by the social media editors, and if so, in what way, and how these adaptations impact the users' engagement. In this study, we focus again on Facebook because this is still the social media platform par excellence where news is produced and consumed (Newman et al., 2021). We therefore formulate the following research questions:

**RQ1.** Which headlines are selected on Facebook?

**RQ2.** How are headlines rewritten on Facebook?

**RQ3.** To what extent do headline rewrites have an impact on subsequent engagement with headlines?

Based on the literature review, we formulated expectations regarding different stylistic features. However, we also take a more inductive approach to finding relevant features to study potential other effects. We specifically measure when headlines reference persons, organizations, or locations, use numbers and personal pronouns. Since we do not hold expectations one way or the other with regard to these features, we withhold from formulating them as part of the hypotheses. This leads us to the following hypotheses:

**H1.** Headlines on Facebook are more likely to be selected if they are complying with social media logic, operationalized as the use of (1) more questions/question marks, (2) negative sentiment score, (3) more emotive words.

**H2.** Headline rewrites on Facebook differ from their original counterparts on the news outlets' websites regarding social media logic, operationalized as the use of (1) more questions/question marks, (2) negative sentiment score, (3) more emotive words.

**H3.** Headlines that exhibit these features mentioned earlier, for example, (1) more numbers, (2) more questions/question marks, (3) negative sentiment score, (4) more emotive words will elicit more Facebook interactions.

## Method

### Data Collection

Our analysis revolves around the comparison of online news articles of news outlets with how they have been remediated to Facebook. To investigate the differences in presentation, we compare the headlines of news items on the news outlet's website to the headlines published on Facebook. The data originate from the websites and the respective Facebook pages of the five biggest news outlets in the Dutch speaking part of Belgium. The headlines are obtained from the website's Really

Simple Syndication (RSS) feeds. We also retrieve the URL, the publication time and date of the article from these feeds. For this study, regional coverage, sports results, traffic reports, daily weather forecasts, and concert/movie reviews were discarded from further analysis. This results in 1,431 articles from *VRT*, 1,140 from *De Standaard*, 1,126 from *De Morgen*, 3,145 from *Het Nieuwsblad*, and 3,737 from *Het Laatste Nieuws*; the dataset comprised 10,579 articles in total.

## Measures

**Dependent Variables: Facebook Presence and Facebook Interactions.** We automatically flagged which articles were posted on the official Facebook pages of the news organizations by cross-referencing our dataset with data from CrowdTangle, which is a public insights tool owned and operated by Facebook. A news article was given code one if it was redistributed to Facebook, while it received code 0 when the article did not appear on Facebook. In addition, CrowdTangle monitors how much interactions (e.g., likes, reactions, comments, and shares) those posts received. To be precise, the Facebook interactions for each news item URL were monitored for 7 days after publication.

**(In)dependent Variables: Stylistic Features in Headlines.** We examine whether headline changes are used as remediation between website headlines and social media headlines. We selected headline features based on an extensive literature review. A list of stylistic and sentiment features was synthesized primarily from Kuiken et al. (2017) and Welbers and Opgenhaffen (2019). The stylistics very coarsely capture changes in writing style from one setting to the other. An example of this is measuring the average word length of website headlines and social media headlines. A change between the measurements could signal a difference in writing complexity. Sentiment features instead make use of an external language resource that relates words to positive or negative sentiments, and more fine-grained emotion categories. The synthesized list was further supplemented with variables that capture mention of a person, an organization or a place. We use spaCy, a toolkit in Python for Natural Language Processing (NLP) to automatically extract most of the stylistic features from the text. An overall sentiment score and the presence of emotional words were measured by transforming words to their base forms (lemma) and looking them up in the LiLaH emotion lexicon for Dutch (Ljubešić et al., 2020). The absolute scores derived from the lexicon and assigned to a headline are non-trivial to interpret but have shown to be useful when comparing between different categories of text. For instance, Markov et al. (2021) used the emotion scores to distinguish hate speech from other social media texts. We similarly focus on describing general differences between original and rewritten headlines when it comes to emotional language use, without going into absolute scores and specific emotion categories as these may be

hard to interpret and error prone. To count the occurrences of numbers or quotes in a headline, we had to design custom Python scripts since the tools described earlier did not contain a prefabricated solution. An overview and description of the different features can be found in the Appendix. The presence or prominence of a certain feature in headlines of relatively popular articles highlights it as a potential remediation in the editorial context.

**Control Variables: Paywall, News Outlets, and News Style.** User engagement may be explained by other factors than solely writing style. We control for whether an article is paid or free by recording the presence of a paywall (0 = free, 1 = paywall). Some news outlets are generally more popular than others, so we record the article source to control for its effect. We also expect that there may be an inherent difference between *hard* and *soft* news with regard to engagement, so we capture news style in a final control variable.

## Results

The findings below give insight into how remediation is implemented in headline rewrites. The dataset consisted of 10,579 news headlines published on the websites of the five outlets in our sample. Of these items, 3,163 were subsequently repurposed on Facebook. In the following section, we will first ascertain which headlines are most likely to be selected on Facebook. In doing so, we intend to assess manifestations of a so-called social media logic. Of the 3,163 headlines distributed to Facebook, almost half of them were rewritten (46.2%), which supports the conceptual premise that social media editors adjust the headlines when transferring content to social media as well. In a second step, we therefore sought to assess similarities and differences between original and rewritten headlines on Facebook, for which paired samples *t*-tests were employed. The final part of the “Results” section is concerned with the question to which extent headline rewrites subsequently pay off in terms of interactions on Facebook.

### Selection of Headlines on Facebook

The analysis first considers whether certain headline features are favored for transfer to Facebook (RQ1). Due to the dichotomous nature of the dependent variable, we conducted a binary logistic regression which estimates the odds of a headline appearing on the Facebook page based on the independent factors. The results of the analyses do suggest that certain stylistic features corresponding to social media logic tend to occur more on Facebook. As can be seen in Table 1, controlling for other factors such as news style, news outlets, and paywall, stylistic features such as *containing emotion words*, *containing question words*, and *containing question marks* all displayed a positive association with the dependent variable, thus news outlets show a slight favor for these headlines on Facebook. Headlines containing more emotion

**Table 1.** Logistic Regression of the Different Stylistic Techniques on Facebook Presence.

DV: Facebook	B	Odds ratio
Number of characters	0.008*	1.008
Number of words	0.03	1.040
Average word length	-0.098*	0.906
Sentiment score	-0.438*	0.645
Number of emotion words	0.055**	1.057
Containing question words	0.347**	1.415
Containing question marks	0.168*	1.183
Containing exclamation	0.32	1.380
Containing quote	0.045	1.046
Containing number	0.016	1.016
Containing pronoun	0.008	1.008
Containing person	-0.123*	0.884
Containing organization	-0.375***	0.687
Containing location	-0.249***	0.780
Paywall	-0.45***	0.637
News style (REF = soft)	0.059	1.061
Het Laatste Nieuws	-1.542***	0.214
Het Nieuwsblad	-1.031***	0.356
De Standaard	0.639***	1.894
De Morgen	-0.686***	0.504
Constant	-0.60*	0.549
N	10,579	
-2log likelihood	-5,751.7523	
Pseudo R <sup>2</sup>	0.1087	
Chi square (df)	1,402.98(20)	

DV = Dependent Variable.

\* $p < .05$ . \*\* $p < .005$ . \*\*\* $p < .001$ .

words were 2% more likely to be posted on Facebook ( $p < .005$ ), whereas the percentages for headlines containing questions marks or question words counted up to 4% and 9% ( $p < .05$ ). Also apparent is that stylistic features such as *containing a reference to a person, organization, or location* were negatively associated with the dependent variable, meaning that they are less likely to be published on Facebook. The likelihood of a headline containing a reference to persons appearing on Facebook decreased with 3% ( $p < .05$ ), while the percentages for headlines with a reference to locations and organizations were down to 5% and 8% ( $p < .001$ ). In addition, the more negative the sentiment score of the headline, the more likely the headlines are to be used on Facebook ( $p < .05$ ). Taken together, these findings illustrate that social media editors tend to select headlines that already have some established social media features. Thus, our findings at least partially affirmed H1, stating that headlines containing emotive words, question words/marks and negative sentiment score are more likely to be selected on Facebook.

### Rewriting Headlines on Facebook

To further assess the degree to which headlines on the news website differ from headlines on Facebook, a series of paired

samples *t*-tests were conducted. These analyses reveal that there are statistically significant differences between original headlines and rewritten headlines (RQ2). First of all, the length of the rewritten headlines decreased significantly on Facebook, with headline rewrites on Facebook having a lower number of characters ( $M = 67.45$ ,  $SD = 26.55$ ), a lower number of words ( $M = 11.60$ ,  $SD = 5.005$ ), and a lower average word length ( $M = 5.14$ ,  $SD = 1.21$ ) than their original counterparts on the news website had in terms of characters ( $M = 87.79$ ,  $SD = 24.79$ ), words ( $M = 15.19$ ,  $SD = 5.398$ ) and word length ( $M = 5.21$ ,  $SD = 1.13$ );  $t(1461) = 24.316$ ,  $t(1461) = 22.492$ , and  $t(1461) = 2.833$ ,  $p < .005$ . Furthermore, headline rewrites on Facebook bore a slightly more negative sentiment ( $M = -0.55$ ,  $SD = 0.13$ ) than the original headline ( $M = -0.047$ ,  $SD = 0.12$ ),  $t(1461) = 2.813$ ,  $p < .001$ . This negative sentiment may subsequently be reinforced by the presence of exclamation marks, which is higher for Facebook rewrites ( $M = 0.3$ ,  $SD = 0.159$ ) than for the headlines on the news website ( $M = 0.1$ ,  $SD = 0.113$ );  $t(1461) = -3.425$ ,  $p < .001$ . However, it is not reflected in the number of emotive words featured in the headline. Headline rewrites on Facebook contained less emotive words on average ( $M = 1.69$ ,  $SD = 1.405$ ) as compared to their original version on the news outlets' websites ( $M = 2.22$ ,  $SD = 1.489$ );  $t(1461) = 15.556$ ,  $p < .001$ .

Interestingly, some of the headline rewrites went in the opposite direction than we had expected. Two such dependent variables were question marks and numbers. Results of the paired samples *t*-test found that the use of question marks slightly dropped in headline rewrites ( $M = 0.09$ ,  $SD = 0.280$ ), while they were significantly more present in the original headlines ( $M = 0.12$ ,  $SD = 0.329$ ),  $t(1461) = 5.906$ ,  $p < .001$ . Likewise, numbers were often left out in the headline rewrites on Facebook ( $M = 0.24$ ,  $SD = 0.426$ ), as compared to the original headlines ( $M = 0.29$ ,  $SD = 0.456$ ),  $t(1461) = 6.434$ ,  $p < .001$ . Finally, with regard to other stylistic features, we had no specific expectations corroborated by the literature. Intuitively, however, we would expect Facebook headlines to incorporate more persons and pronouns with regard to affordances on Facebook such as sociability. Yet, headline rewrites on Facebook featured significantly less pronouns ( $M = 0.33$ ,  $SD = 0.471$ ), than these same headlines without alterations on the news websites ( $M = 0.44$ ,  $SD = 0.497$ );  $t(1461) = 10.041$ ,  $p < .001$ . Similarly, persons were implemented less in headline rewrites on Facebook ( $M = 0.31$ ,  $SD = 0.462$ ) than on the website ( $M = 0.36$ ,  $SD = 0.481$ );  $t(1461) = 6.513$ ,  $p < .001$ . As far as quotes are concerned, headline rewrites on Facebook contained less ( $M = 0.09$ ,  $SD = 0.281$ ) than news website headlines ( $M = 0.11$ ,  $SD = 0.313$ );  $t(1461) = 2.537$ ,  $p < .01$ . See Table 2 for all results of paired samples *t* test and effect sizes for the dependent variables of interest. Returning to the second hypothesis H2 posed in this study, it is now possible to state that headline rewrites on Facebook do not differ that much from their original online news headlines regarding social media logic.

**Table 2.** Paired-Samples *t* Tests With Cohen's *d*.

	<i>t</i>	<i>df</i>	Cohen's <i>d</i>
Number of characters	24.316***	1,461	.636
Number of words	22.492***	1,461	.588
Average word length	2.833**	1,461	.074
Sentiment score	2.813**	1,461	.074
Number of emotion words	15.556***	1,461	.407
Containing question words	.714	1,461	.019
Containing question marks	5.906***	1,461	.154
Containing exclamation marks	-3.425***	1,461	-.090
Containing quote	2.537**	1,461	.066
Containing number	6.434***	1,461	.168
Containing pronoun	10.041***	1,461	.263
Containing person	6.513***	1,461	.170
Containing organization	1.038	1,461	.027
Containing location	7.454***	1,461	.195

Note. A positive *t*-value implies that the mean is higher for the headlines on the news website. A negative *t*-value means that the mean of the Facebook headlines is higher.

\* $p < .05$ . \*\* $p < .005$ . \*\*\* $p < .001$ .

### Engagement With Headlines

In a final set of analyses, we examined how these headline rewrites might subsequently impact headline performance (RQ3). Given the skewed nature of the variable under analysis, negative binomial regression analysis was used to predict which features in headlines are more likely to generate interactions on Facebook. The results of these analyses are set out in Table 3. From Model I, we can extract that rewriting has a significant positive impact on the performance of a headlines in terms of overall interactions (likes, shares, comments). The performance of headlines that were rewritten is on average 52 percentage points higher than headlines that were posted to Facebook in their original form without any alteration. The following features seem to have a positive significant impact on the Facebook interactions that a headline is likely to generate: *containing emotive words*, *containing numbers*, and *containing exclamation marks*. The engagement with headlines that contain one of those features is on average 5–53 percentage points higher than headlines without the feature. However, other features had a negative repercussion for the engagement with the headline. The presence of question words, question marks, and presence of organizations in the headline led to a decrease in Facebook interactions ranging between 25 and 38 percentage points.

At the bivariate level, H3 proved partially correct, as headlines that exhibit more emotive words and numbers were more likely to generate Facebook interactions. Upon further examination, however, it was apparent that the effect of specific stylistic features was due to the rewriting of the headline. As can be seen from the interaction model (Model II), implementing emotive words, exclamation marks, or references to organizations or locations in headline rewrites magnifies the engagement with the headline. Emotion-induced headline

rewrites are expected to have 1.09 times more Facebook interactions, whereas making references to organizations or locations magnifies the engagement with the rewritten headline up to 1.83 times. The effect is even larger for exclamation marks, which account for 2.91 times as much Facebook interactions with the headline rewrite. For this reason, we can affirmatively answer RQ3, stating that rewriting headlines greatly enhances engagement with the headline.

### Discussion

The most important finding according to us was that headlines on Facebook are a matter of both selection and rewriting. Our findings suggest that there is a difference between headlines on the websites and those selected for Facebook, in the sense that the latter bear some stylistic features that comply with social media logic already. Social media editors generally seem to prefer negative and question-based headlines over positive and ones without a question (mark). Furthermore, they were more likely to select headlines from the news website that contained more emotive words. Features such as these are often regarded as attention-seeking strategies, aimed at inducing curiosity and to encourage readers to click on a given news article (see also Blom & Hansen, 2015; Kuiken et al., 2017; Lai & Farbroth, 2013; Tenenboim & Cohen, 2013). Thus, social media editors seem to favor headlines and news articles to be placed on Facebook that align with social media logic already.

A little less than half the headlines were adapted on Facebook (46.2%). A closer inspection to these headlines is telling in several ways. The tables reveal that rewritten headlines differ significantly from their original counterparts, but that the changes are mostly subtle and trivial. Headlines on Facebook are simplified, containing a lower number of characters and words, a lower average word length, but contain more exclamation marks. For example, the headline “Belgian short film with Veerle Baetens nominated for an Oscar” was cut down to “Belgian short film with Veerle Baetens nominated for Oscar.” According to these data, we can infer that stylistic remediation does not necessarily involve creating a different tone of voice on social media but could conceivably be a matter of mostly design and surface elements.

A second observation to emerge from the data comparison was that headlines on the news website contained more persons, more pronouns, and more emotive words than the Facebook headlines. This somewhat contradicts assumptions of a more personalized and emotionalized social media environment. We expected that headlines that contain personal pronouns and sentimental words would be preferred by social media logic over headlines that do not. Therefore, it is difficult to explain this result, but it may be that essential headline content is often moved to the status messages on Facebook, which are not part our current analysis, but have been shown to serve as seductive and engaging supplements to headlines (Opgehaffen, 2021). Anecdotal evidence in our dataset seems to at least point in this direction. A news story

**Table 3.** Negative Binomial Regression Analyses With Facebook Interactions as Dependent Variable.

	Facebook interactions			
	Model I: main effects		Model II: interactions	
	IRR	SD	IRR	SD
Facebook_rewrite	1.521***	0.072	0.429	0.223
Stylistic techniques				
Number of characters	1.002	0.005	1.001	0.006
Number of words	1.009	0.028	0.982	0.037
Average word length	1.040	0.051	0.959	0.063
Number of emotion words	1.049*	0.020	0.996	0.025
Sentiment score	1.315	0.237	0.662 <sup>†</sup>	0.368
Containing question words	0.624***	0.077	0.498***	0.080
Containing question marks	0.734***	0.064	0.724**	0.082
Containing exclamation	1.353 <sup>†</sup>	0.242	0.611	0.191
Containing quote	0.877	0.082	0.981	0.136
Containing person	1.050	0.056	1.022	0.074
Containing pronoun	1.118 <sup>†</sup>	0.064	1.129	0.090
Containing number	1.525***	0.084	1.428***	0.106
Containing organization	0.753***	0.049	0.584***	0.052
Containing location	1.014	0.058	0.735***	0.055
Controls				
Paywall	0.470***	0.031	0.467***	0.031
News style (ref = soft)	1.691***	0.090	1.672***	0.089
Interactions				
No_Characters × rewrite	–	–	1.008	0.010
No_Words × rewrite	–	–	1.013	0.055
Avg_Wordlength × rewrite	–	–	1.031	0.098
No_Emotion × rewrite	–	–	1.090*	0.043
Sentiment × rewrite	–	–	0.662	0.241
Question_Words × rewrite	–	–	1.50	0.080
Question_Mark × rewrite	–	–	1.082	0.190
Exclamation × rewrite	–	–	2.918**	1.108
Quote × rewrite	–	–	0.853	0.136
Person × rewrite	–	–	0.934	0.100
Pronoun × rewrite	–	–	0.949	0.109
Number × rewrite	–	–	1.069	0.119
Organization × rewrite	–	–	1.625***	0.210
Location × rewrite	–	–	1.839***	0.214
Intercept	293.541***	79.63	834.502***	326.087
N (total)	3,163		3,163	

IRR: incidence-rate ratio; SD: standard deviation.

Note. Cell entries are incidence-rate ratios.

<sup>†</sup> $p < .1$ . \* $p < .05$ . \*\* $p < .005$ . \*\*\* $p < .001$ .

about the death of an Instagram model serves as an example in which the conventional headline on Facebook read “Instagram model makes fatal fall from cliff while taking selfie” and the status message “Rest in peace, Madalyn.” was added, thus including the person’s name. Tying in with this discussion, it is likely that certain topics will also be more suited for Facebook distribution than others. For example, one of the authors has shown in a previous study that the Facebook news supply features less political, foreign, and economic news. Consequently, some topics may also be

more adjusted to social media logic than others. Hågvar (2019), for instance, showed that the less controversial the news story was, the more the status message was adapted to social media logic. It could be that the same applies for news headlines. The use of more the use of more frivolous stylistic techniques such as questions and exclamations may be linked to “softer” topics or genres, whereas the rewrites for “harder” topics or genres may be more subtle. Beyond that justification, another possibility is that the adaptation to social media logic is a process that already unfolds on the news outlet’s



website. The small differences between both rewritten and original headlines suggest that there may already be converging trends on the websites, as sub-editors might be writing headlines for the story both suitable for the website and social media. This ties in with what Van Dijck and Poell (2013) argue about the social media logic having an impact beyond the boundaries of social media platforms and also influencing the more traditional (mass) media logic.

In the light of the role of headlines as gateway to the news website, we also investigated whether remediated headlines would reward the social media editors in terms of engagement. The findings do suggest that the inclusion of numbers, emotive words, and exclamation marks are all characteristics contributing heavily to the popularity of a headline, whereas implementing of question words/marks does not. These findings are emblematic that headlines on Facebook include more social media features and illustrate that the social media editors are deliberately changing the way they write headlines by using techniques that are known to perform well in terms of engagement. However, the precise mechanism of headline optimization remains to be elucidated.

## Conclusion

Social media have become an important news source for both news producers and users alike (Newman et al., 2019). On social media, news products compete with many other types of content for the attention of the news consumer that seems to be scanning and picking their way across an abundance of news outlets, making it increasingly difficult to grasp their attention. This study has been one of the first attempts to systematically examine whether and how headlines themselves are *remediated* on Facebook. The content analysis revealed that the routine of rewriting or adapting headlines on Facebook in contemporary journalism is rather common and that this rewriting is done with an eye toward injecting elements that better align with the social media logic, consequently magnifying its impact on engagement.

Looked at from a broader perspective, the widespread presence of headline rewriting might be considered as conclusive evidence that headlines are vehicles used to evoke curiosity and trigger engagement with news content. The potential profit that arises from minor modifications in headlines, may be indispensable in the pursuit of reader attention. However, despite the usefulness of headline rewrites in the process of luring reader, one should wonder whether these modifications do not impinge upon the quality of journalistic content, thereby undermining journalism's crucial information function. Remembering the lessons learned from clickbait headlines, we should ask ourselves whether a thorough alignment of headlines to a specific platform logic is a good thing in the long run. After all, what works well today is not necessarily a successful strategy in a few months' time. Not only might audiences become frustrated like in the case of clickbait headlines and end up giving less credence (and consequently less clicks

and likes) to them, but also the platforms themselves adapt their policies, procedures, or technical affordances to a new reality on an almost continuous basis. Thus, the remediation of Facebook headlines should be done with the utmost care and the impact on the user should be studied on an ongoing basis.

Naturally, this study is constrained by certain limitations. One source of weakness in this study was that we limited ourselves to the study of headlines. Notwithstanding the fact that headlines are a crucial element in news reporting, studies exploring a broader range of collateral techniques, using for example status messages or photos that accompany headlines in social media postings, could shed more light into how news is remediated to Facebook. Second, the study was limited by the absence of other social media platforms in the analysis. While we do think Facebook is an important case study, especially since gatekeeping on, for example, Twitter is largely done automatically, our study is nonetheless of a singular platform. Therefore, it remains unclear how one can generalize about "social media logic," or that one should rather speak of a Facebook logic. Furthermore, the study is limited by the lack of information on part of social media editors in our sample. Without the benefits of direct observations or interviews with these news makers, we can only make limited claims about the editorial perspective. Qualitative research should be carried out to establish *why* certain headlines are selected and remediated to increase our understanding of the editorial strategy behind them. In addition, qualitative, interpretative analyses could help overcome the general limitations posed by the decontextualized, quantitative text analyses we have adopted. Although automated textual analysis has allowed us to analyze a large body of headlines in a straightforward and consistent way, it lacks the capability to grasp the complexities behind the text of a particular headline. Therefore, our analysis sometimes remains to the descriptive level, disregarding the background against which social media editors make decisions.

Another natural progression of this work would be to analyze interaction effects between different headline features. This study addressed the impact of individual features but examining the interplay of different stylistic features could provide more definitive evidence in how these features affect engagement with a news item. Finally, a fruitful area for further work would be to adopt a more user-centered approach and investigate how certain stylistic techniques in headlines influence news users' perceptions and their intention to read a news article in an online news context characterized by abundance by means of for example eye-tracking analysis.

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## Supplemental Material

Supplemental material for this article is available online.

## References

- Alhabash, S., Almutairi, N., Lou, C., & Kim, W. (2019). Pathways to virality: Psychophysiological responses preceding likes, shares, comments, and status updates on Facebook. *Media Psychology, 22*(2), 196–216.
- Berger, J., & Milkman, K. (2010). Social transmission, emotion, and the virality of online content. *Wharton Research Paper, 106*, 1–52.
- Blom, J. N., & Hansen, K. R. (2015). Click bait: Forward-reference as lure in online news headlines. *Journal of Pragmatics, 76*, 87–100. <https://doi.org/10.1016/j.pragma.2014.11.010>
- Boczkowski, P. J. (2005). *Digitizing the news: Innovation in online newspapers*. MIT Press.
- Bolter, J. D., & Grusin, R. (1999). *Remediation: Understanding new media*. MIT Press.
- Deuze, M. (2006). Participation, remediation, bricolage: Considering principal components of a digital culture. *The Information Society, 22*(2), 63–75. <https://doi.org/10.1080/01972240600567170>
- Diakopoulos, N. (2019). *Automating the news*. Harvard University Press.
- Dor, D. (2003). On newspaper headlines as relevance optimizers. *Journal of Pragmatics, 35*(5), 695–721. [https://doi.org/10.1016/s0378-2166\(02\)00134-0](https://doi.org/10.1016/s0378-2166(02)00134-0)
- dos Santos, M. A., Lycarião, D., & de Aquino, J. A. (2019). The virtuous cycle of news sharing on Facebook: Effects of platform affordances and journalistic routines on news sharing. *New Media & Society, 21*(2), 398–418.
- Erdal, I. J. (2009). Repurposing of content in multi-platform news production: Towards a typology of cross-media journalism. *Journalism Practice, 3*(2), 178–195.
- Hågvar, Y. B. (2019). News media's rhetoric on Facebook. *Journalism Practice, 13*(7), 853–872. <https://doi.org/10.1080/17512786.2019.1577163>
- Haim, M., Karlsson, M., Ferrer-Conill, R., Kammer, A., Elgesem, D., & Sjøvaag, H. (2021). You should read this study! It investigates Scandinavian social media logics. *Digital Journalism, 9*(4), 406–426. <https://doi.org/10.1080/21670811.2021.1886861>
- Hanusch, F. (2017). Web analytics and the functional differentiation of journalism cultures: Individual, organizational and platform-specific influences on newswork. *Information, Communication & Society, 20*(10), 1571–1586.
- Hermida, A. (2020). Post-publication gatekeeping: The interplay of publics, platforms, paraphernalia, and practices in the circulation of news. *Journalism & Mass Communication Quarterly, 97*(2), 469–491.
- Hermida, A., Fletcher, F., Korell, D., & Logan, D. (2012). Share, like, recommend. *Journalism Studies, 13*(5–6), 815–824. <https://doi.org/10.1080/1461670x.2012.664430>
- Janét, K., Richards, O., & Landrum, A. R. (2022). Headline format influences evaluation of, but not engagement with, environmental news. *Journalism Practice, 16*, 35–55.
- Kalsnes, B., & Larsson, A. O. (2018). Understanding news sharing across social media: Detailing distribution on Facebook and Twitter. *Journalism Studies, 19*(11), 1669–1688.
- Klinger, U. (2013). Mastering the art of social media: Swiss parties, the 2011 national election and digital challenges. *Information, Communication & Society, 16*(5), 717–736.
- Kronrod, A., & Engel, O. (2001). Accessibility theory and referring expressions in newspaper headlines. *Journal of Pragmatics, 33*(5), 683–699. [https://doi.org/10.1016/s0378-2166\(00\)00013-8](https://doi.org/10.1016/s0378-2166(00)00013-8)
- Kuiken, J., Schuth, A., Spitters, M., & Marx, M. (2017). Effective headlines of newspaper articles in a digital environment. *Digital Journalism, 5*(10), 1300–1314. <https://doi.org/10.1080/21670811.2017.1279978>
- Lai, L., & Farbot, A. (2013). What makes you click? The effect of question headlines on readership in computer-mediated communication. *Social Influence, 9*(4), 289–299. <https://doi.org/10.1080/15534510.2013.847859>
- Lamot, K. (2022). What the metrics say: The softening of news on the Facebook pages of mainstream media outlets. *Digital Journalism, 10*, 517–536. <https://doi.org/10.1080/21670811.2021.1974917>
- Lamot, K., & Paulussen, S. (2019). Six uses of analytics: Digital Editors' perceptions of audience analytics in the newsroom. *Journalism Practice, 14*(3), 358–373. <https://doi.org/10.1080/17512786.2019.1617043>
- Larsson, A. O. (2018). Diversifying likes: Relating reactions to commenting and sharing on newspaper Facebook pages. *Journalism Practice, 12*(3), 326–343.
- Lischka, J. A. (2021). Logics in social media news making: How social media editors marry the Facebook logic with journalistic standards. *Journalism, 22*(2), 430–447.
- Ljubešić, N., Markov, I., Fišer, D., & Daelemans, W. (2020). *The LiLaH emotion lexicon of Croatian, Dutch and Slovene* [Paper presentation]. Proceedings of the Third Workshop on Computational Modeling of People's Opinions, Personality, and Emotion's in Social Media, Barcelona, Spain (online).
- Markov, I., Ljubešić, N., Fišer, D., & Daelemans, W. (2021). *Exploring stylometric and emotion-based features for multilingual cross-domain hate speech detection*. Proceedings of the Eleventh Workshop on Computational Approaches to Subjectivity, Sentiment and Social Media Analysis (Online).
- Newman, N., Fletcher, R., Kalogeropoulos, A., & Nielsen, R. (2019). *Reuters Institute digital news report 2019* (Vol. 2019). Reuters Institute for the Study of Journalism.
- Newman, N., Fletcher, R., Schulz, A., Andi, S., Robertson, C. T., & Nielsen, R. K. (2021). *Reuters Institute digital news report 2021*. Reuters Institute for the study of Journalism.
- Nieborg, D. B., & Poell, T. (2018). The platformization of cultural production: Theorizing the contingent cultural commodity. *New Media & Society, 20*(11), 4275–4292. <https://doi.org/10.1177/1461444818769694>
- Opgenhaffen, M. (2021). Facebook status messages as seductive and engaging headlines: Interviews with social media news editors. In M. Temmerman & J. Mast (Eds.), *News values from an audience perspective* (pp. 121–138). Springer.
- Park, K., Kwak, H., An, J., & Chawla, S. (2020). *How-to present news on social media: A causal analysis of editing news headlines for boosting user engagement*. arXiv preprint arXiv: 2009.08100.

- Schl, A., Cornia, A., & Nielsen, R. K. (2021). How do funding models and organizational legacy shape news organizations' social media strategies? A comparison of public service and private sector news media in six countries. *Digital Journalism*. Advance online publication. <https://doi.org/10.1080/21670811.2021.1968920>
- Tandoc, E. C., & Vos, T. P. (2016). The journalist is marketing the news: Social media in the gatekeeping process. *Journalism Practice*, 10(8), 950–966.
- Tenenboim, O., & Cohen, A. A. (2013). What prompts users to click and comment: A longitudinal study of online news. *Journalism*, 16(2), 198–217. <https://doi.org/10.1177/1464884913513996>
- Trilling, D., Tolochko, P., & Burscher, B. (2017). From newsworthiness to shareworthiness: How to predict news sharing based on article characteristics. *Journalism & Mass Communication Quarterly*, 94(1), 38–60.
- Valdeón, R. A. (2017). On the use of the term “translation” in journalism studies. *Journalism*, 19(2), 252–269. <https://doi.org/10.1177/1464884917715945>
- Van Dijck, J., & Poell, T. (2013). Understanding social media logic. *Media and Communication*, 1(1), 2–14.
- Van Dijck, J., Poell, T., & De Waal, M. (2018). *The platform society: Public values in a connective world*. Oxford University Press.
- Van Doorslaer, L. (2013). Translating, narrating and constructing images in journalism with a test case on representation in Flemish TV News. *Meta*, 57(4), 1046–1059. <https://doi.org/10.7202/1021232ar>
- Vázquez-Herrero, J., Negreira-Rey, M.-C., & López-García, X. (2020). Let's dance the news! How the news media are adapting to the logic of TikTok. *Journalism*. Advance online publication. <https://doi.org/10.1177/1464884920969092>
- Welbers, K., & Opgenhaffen, M. (2018). Social media gatekeeping: An analysis of the gatekeeping influence of newspapers' public Facebook pages. *New Media & Society*, 20(12), 4728–4747.
- Welbers, K., & Opgenhaffen, M. (2019). Presenting news on social media: Media logic in the communication style of newspapers on Facebook. *Digital Journalism*, 7(1), 45–62.
- Whitehead, R. (2019). *How to decode the platform-publisher relationship*. International News Media Association. <https://www.inma.org/report/how-to-decode-the-publisher-platformrelationship>

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