

Subjectivity in news on social media: A comparison of news status messages produced by quality and popular news sources

Laura Lisa Onckels
S1052703
Bachelor's Thesis
International Business Communication
07-06-2023

Radboud University



Table of contents

Abstract	3
Theoretical framework	4
Social Media as News Source	4
The Balance Between the General Media and Social Media Logic.....	4
The Definition of Subjectivity.....	6
Subjectivity Differences Between Status Messages and Articles On The Website	7
Subjectivity Differences Between Quality and Popular News Articles on the News Websites	8
Research Question.....	9
Method.....	10
Materials.....	10
Procedure.....	11
Statistical treatment	13
Results	13
Difference in presence of emoticons between type of newspaper	13
Difference in presence of intensifiers between type of newspaper	13
Difference in subjectivity ratings between popular and quality newspapers of the human- based rating.....	14
Conclusion.....	15
Discussion	15
References	20

Abstract

With the rapid growth of social media, an increasing number of people use this platform to keep themselves up to date with the news. News on social media is written using less formal writing norms compared to those used for offline news or items on the website. An example of this is a higher level of subjectivity. As subjective language has been shown to be frequently used for fake news or misinformation, it is important to investigate where on the internet subjectivity in news is most present; in items by popular or quality news organizations? In this way, readers can be warned about the possibility of reading fake news or misinformation. There is no existing research yet in which these two types of newspapers were compared with regard to their level of subjectivity when the topics were controlled for. Therefore, this current corpus research studies the difference in subjectivity level between quality and popular news on social media. This is measured by looking at the difference in the presence of intensifiers and emoticons in status messages from two quality and two popular news organizations on Facebook. A higher presence of emoticons and intensifiers was found in popular news status messages than in those of quality news organizations. In addition, results show that also when human readers rated the status messages on subjectivity, popular news status messages scored significantly higher than those from quality newspapers. This is in line with the general finding of this paper that, at least when looking at just two indicators of subjectivity, popular status messages contain a higher level of subjectivity than quality news status messages. The paper concludes with a call for further research into additional indicators of subjectivity.

Theoretical framework

Social Media as News Source

On March 1 2023, while scrolling through Facebook, a post by Daily Mail appeared on my front page. It featured a news article which had just been posted with the headline ‘Twitter has completely stopped working’. In addition, a status message, the Facebook feature that allows users to discuss their thoughts about what they are sharing was added to the Facebook post. It said, ‘Disaster for Elon Musk!’ with two emojis showing red sirens added to it.

It is not unusual these days to reach a news article via social media instead of the news organization’s website. Nowadays, news companies do not simply post items on their website anymore and leave it there for readers to visit their website and read the article. Instead, in order to attract a greater public, the news post is often also featured on social media, such as via Instagram, through tweets on the news organization’s Twitter account or on their Facebook page.

To focus specifically on Facebook, it is known that it has decreased in popularity as social media channel. However, there is still an increase to be seen in the number of users of Facebook which utilize the website as their main form of news input (Gottfried & Shearer, 2016). To be precise, 47 per cent of all Facebook visitors in 2014 used the website mainly for news consumption while this number has increased to 64 per cent of the users in 2015. Another study (Walker & Matsa, 2021) also found that about a third of all U.S. adults mainly get their news from Facebook. This number is higher than for other social media platforms such as Twitter with 13% or Instagram with 11%. In addition, among the percentage of Facebook users, 50% of them regularly gets news from this platform, while among YouTube users this percentage is less than one-third and for Instagram even one-fourth. Therefore, it can be noted that Facebook is still a main form of news consumption among social media networks.

The Balance Between the General Media and Social Media Logic

To refer back to the example named previously about the Facebook post by Daily Mail, we can use this example to compare the headline of a news article with the status message added when the news link of the same article is posted on Facebook. It can be noted that in the real news article, exclamation marks are used to a lesser extent and no emoticons are present as this is not in accordance with the professional news norms (Welbers & Opgenhaffen, 2019). On the contrary, in the status message added in the Facebook post, emoticons and an exclamation mark are present. To clarify, a status message on Facebook can be defined as a

personal message to explain to your followers why you share certain content or as a way to share your opinion on the content you are sharing.

This difference in language use can be explained as follows. For a long time, objectivity was the most important norm in professional journalism (Schudson, 2001). This means that a professional journalist should spread the truth and should write this in a balanced way. On the other hand, the existing literature shows that subjective elements like emotions, opinions et cetera, are needed to create user engagement and involvement. The general media logic can be described as “the news values and the storytelling techniques the media make use of to take advantage of their own medium and its format, and to be competitive in the ongoing struggle to capture people’s attention” (Strömbäck, 2008, p. 233). This means that specific news values and storytelling techniques exist which are overall more successful in one format or on one media platform than on another. For example, news on the television covering politics suits better with a more personal reporting style as there is a real person on screen talking.

Since social media has come to rise in popularity, concepts such as virality and user engagement have also become more important compared to previous decades (Trilling et al., 2016). A study by Welbers and Opgenhaffen (2019), has found that a shift is taking place from the general media logic to the social media logic. The usage of more subjective language is one way through which this shift can be seen. This increase in subjectivity is caused by the fact that, as compared to the general media logic, the logic of social media is built on the logic of virality. This logic of virality is defined as “the process which gives any information item the maximum exposure, relative to the potential audience, over a short duration, distributed by many users” (Nahon et al., 2011). Whether a news item spreads fast on social media does thus not only depend on the direct users of the news organization’s Facebook page, however also on the likelihood that the news organization’s followers will share the news on their own page. It was found that for the virality of online news specifically, personal and subjective news tends to be more likely to be shared than factual and objective news on social media. This is caused by the finding that users get overwhelmed by the extra layer this subjectivity adds on top of the news (Al-Rawi, 2017; Marchi, 2012). In these specific examples, the focus was on overwhelmingly positive and extremely sad news, which are examples of subjectivity. However, the overall finding which is important for this current study is that more subjectivity leads to higher shareability in news on social media.

Altogether, the increasing popularity of social media as a way for people to consume their news has created both a new opportunity and a challenge for news organizations. On the

one hand, it offers new possibilities for reader engagement, but on the other hand, balance needs to be found between the subjective and interpersonal way of communication of social media and professional news norms. Therefore, formulating status messages is a difficult task, considering the competitiveness of social media and the importance of it nowadays (Ruigrok et al., 2016). In this paper there will be a focus on how the quality news organizations deal with this compared to popular news organizations.

The Definition of Subjectivity

However, first it is important to understand what subjectivity in news really is. In short, it can be defined as “the influence of personal beliefs or feelings, rather than facts” (Cambridge Dictionary, 2023). In research, the definition of subjectivity is for example “when something is subjective it is marked by the consciousness of an individual” (Steensen, 2017, p.27) or as “the expression of the speaker’s attitudes, beliefs, opinions, emotions and evaluations” (Vis et al., 2012, p.96).

Often news is referred to as a type of reporting that needs to be objective. If this is not the case, journalists risk the loss of their credibility. However, objectivity also has its limitations. Although objectivity leads to fair and neutral reporting, this also means that other aspects of the story are left out, as was found by Callison and Young (2020). It is said that when journalists use impersonal language and only report facts, a distance from the source is maintained. For news to be representative and really display the whole picture, it was found that journalists should engage with the source and explore different angles of an issue. “News has multiple truths, and biases enable us to navigate across those various languages” (Callison & Young, 2020, p.43). In addition, research also found that using emotional instead of factual reporting can actually enhance the journalistic goals of reader engagement and the communication of the message (Chong, 2017). Thus, objectivity and subjectivity in news are not incompatible, in fact they can complement each other.

Subjectivity can be expressed in news items in several ways. In the paper by Welbers and Opgenhaffen (2019), the level of subjectivity in status messages on news organization’s Facebook is measured by looking at the presence of a private state. A private state relates to the presence of someone’s opinion, emotion or view. For example, “ten people were killed in a plane crash” does not have any private state (Quirk et al., 1985). The sentence is objective, as the opinion of the journalist is not included. On the contrary, the phrase “ten people were killed in a terrible plane crash” does contain a subjective element, namely the adjective “terrible”. This is an example of subjective language. To operationalize what is a subjective

element in a sentence and what is not, during the study by Welbers and Opgenhaffen (2019) a subjectivity lexicon by De Smedt and Daelemans (2012) was used to identify subjectivity in headlines, leads and status messages. The lexicon was based on 6,600 adjectives that were given a subjectivity score between zero and one. Examples of what was included in the lexicon are intensifiers such as ‘very’ in ‘very good’, the adjective ‘good’ and punctuation marks such as an exclamation mark. In addition, emoticons were also added to the lexicon. Another study by Tang and Hew (2019) also tested the relation between emojis and subjectivity through a systematic review of 51 research articles about the use of the emoticon in the fields of communication, linguistics and psychology. Similarly to the previously mentioned researches, it was found that emoticons are a way to express subjectivity. Thus, subjectivity can be measured by looking closely at the use of intensifiers and emojis, among other things. These two elements will also be used for the operationalization of subjectivity in this current study.

Subjectivity Differences Between Status Messages and Articles On The Website

As was mentioned before, this research paper will focus on the difference in the level of subjectivity between popular and quality news organizations on Facebook. However, first it is important to look at the literature available about the difference in subjectivity between news on social media and on the website of the news organization. To start with, a study by Haim et al. (2021) examined the language used in Scandinavian news outlets’ Facebook posts and compared it to the headlines of the corresponding articles on the news organizations’ websites. The use of punctuation, pronouns, hashtags and emojis were specifically focused on. It was found that news on Facebook includes less punctuation such as commas and full stops and a higher number of question and punctuation marks compared to the writing style used for the articles on the news outlets’ websites.

A study by Welbers and Opgenhaffen (2019) will be treated more extensively as this current research is built on its research gap. This research examined 167,581 Facebook posts published by news organizations. Only posts containing a link to the news item on the newspapers’ website were included. The status message on Facebook was then compared to the headline and leads on the website to find if there is a difference in the subjectivity level between the post on Facebook and the post on the website. As mentioned before, the subjectivity lexicon and emojis were used to do so. It was found that, firstly, emoticons occur more in status messages than in headlines or leads. This means that emojis are seen as an

element which can be used in status messages, but not in a journalistic news item on the website. A similar difference was found for the use of exclamation and question marks. Status messages can contain multiple of the same punctuation marks while this is inappropriate in news articles. This was explained by the researchers as a sign of subjectivity, as it offers a way for the journalist to express that he thinks something should be exclaimed or questioned even more. For the use of intensifiers, it was also found that this element is encountered more often in status messages than in headlines or leads. In general, a significant difference was found in the subjectivity score between status messages and headlines in Facebook posts of newspaper articles. This research thus shows that the style of communication in journalistic Facebook status messages is more subjective and directed at the audience as opposed to the more detached style of communication used in the actual news items. The paper by Welbers & Opgenhaffen explains this by stating that the journalists that manage the news organizations' Facebook pages adapt the messages to the subjective elements that communication on social media is characterized by. This is done in order to make sure the message suits the social media environment and to enable an increase in the reach of their news publications.

Subjectivity Differences Between Quality and Popular News Articles on the News Websites

The sharing of news articles on social media and especially Facebook is not something which has been taking place for a long time, also because the social media platform only became popular in 2008. Before that time news articles were only posted on the news website. Therefore, in order to be read, users had to visit the news website and read it there. Roughly said, there are two types of newspapers. On the hand, there are quality newspapers and on the other hand, there are popular news organizations (Narloch, 2006). Quality newspapers are generally characterized by academic language use with no eloquent words. Articles usually include sources and facts and topics that are often written about are politics, finance, economy, national, and international affairs. Examples are BBC News and Sky News. On the other hand, popular news usually deals with the less serious themes, such as sports, celebrity news or crime stories. Examples are Daily Mail and Metro news.

It was found that when looking at headlines of both the popular and the quality newspapers, those of popular news tend to be more emotive and personal while quality headlines are factual (Narloch, 2006). In addition, a study by Mutsaerts (2012) compared Dutch and American quality and popular newspapers on their reporting of an internationally reported crime case. In this paper it was found that popular newspapers in both countries tend

to report more subjectively compared to the quality newspapers. Subjectivity in this case was measured through framing, in which the journalist could choose between the victim frame, the suspect frame, the human-interest frame or the media-hype frame.

Research Question

The research by Welbers and Opgenhaffen (2019) has already looked at the difference in subjectivity level between popular and quality newspapers on Facebook. They found that subjectivity scores for the popular newspapers were slightly higher compared to the scores of quality newspapers. This difference was most obvious when looking at status messages as opposed to when the focus was on the headlines and leads. However, this is where a research gap exists. The researchers admit that a limitation of their study is that there was no control for topics. Therefore, it was to be expected that popular sources would score higher on subjectivity than quality sources, only for the reason that most of the popular news focuses on soft news and entertainment while the majority of quality news items deals with serious topics. Therefore, Welbers and Opgenhaffen (2019) state that while their observation is striking, they cannot conclude anything from it yet. For this reason, to conclude if popular newspapers' status messages really contain a higher degree of subjectivity than those of the quality newspapers, it is important that further research is carried out on this while controlling the topics. For this reason, this current research will only be focusing on status messages of quality and popular news organizations concerning the themes of crime and COVID-19. These topics were chosen for this paper as they are covered in both popular and quality newspapers. This would not have been the case with several other topics such as political news which would likely only be given attention to in quality news and not in popular news, and for example news concerning popstars which would only be covered in popular news.

For this reason, the following research question will be studied in this paper: How do quality and popular news on social media differ in their level of subjectivity when the topics are controlled for? This will be done by looking at sub-questions. Firstly, is there a difference in the presence of emoticons in popular compared to quality news? Secondly, is there a difference in the presence of different types of intensifiers in popular and quality news status messages? Lastly, is there a relation between these theory-based indicators of subjectivity compared to how subjectivity is perceived by human readers (human-based subjectivity rating)?

Based on the existing theory, the hypothesis for the first sub-question is that there will be a higher presence of emoticons in the popular news status messages than in those of the quality newspapers. Additionally, the hypothesis for the second sub-question is that the presence of intensifiers in popular status messages will also be higher than in quality news. Lastly, the hypothesis for the third sub-question is that there will be a relation between the theory-based rating of subjectivity as studied in this paper and the way in which human readers actually perceive subjectivity. Regarding the main hypothesis, this means that popular news is expected to be found more subjective than quality news. In case this hypothesis is confirmed, to move on to the societal relevance, it should be further investigated where subjectivity is encountered on social media and the ways in which it is reflected. This is important because of the growing importance of this platform and its relation with fake news. Specifically, as was found in previous research, there is a relation between the occurrence of fake news and misinformation and the usage of subjective language (Vieira et al., 2020; Rashkin, H., 2017). Findings show that subjective language is a form of language that can evoke misinformation and is often used to write items containing fake news. Social media channels continue developing rapidly, while it is also important to know what the effects of this growth are. If an increasing number of people gather their news intake on social media, we do have to find out where that subjective news is located online: is it more often found in popular or quality news on Facebook? In this way, the people who come across this kind of news most often can be precisely targeted and informed about the possibility of reading misinformation or fake news.

Method

Materials

The aim of this study was to test whether there is a difference in the level of subjectivity between popular and quality news on social media. To do so, the present study made use of the existing corpus of English news articles and social media posts (Savinova & Moscoso del Prado Martin, in prep.). This corpus contains Facebook posts and some of the corresponding online articles produced by two major quality UK news sources (BBC, Sky news) and two popular news sources (Daily Mail, Metro). The corpus only included news on the topics of crime and Covid-19 to ensure comparability between the texts of different sources. All the news items in the corpus were split by sentence with the total size of the corpus reaching 7751 sentence entries, including titles. The articles and Facebook posts subparts are roughly matched in the number of words. According to Savinova and Moscoso del Prado Martin (in prep.), for 400 sentences

quasi-randomly selected from the corpus (controlled for equal distribution of topics, sources and media channels), annotations of subjectivity from 20 native speakers of English were collected via Prolific, in such a way that every speaker received 100 sentences for labelling and every sentence was labelled by 5 different speakers. The participants of the Prolific experiment were asked to rate subjectivity of the sentences on a 7-point scale, where “subjective” was broadly defined as expressing personal opinions, emotions, feelings and tastes, hopes and wishes, self-made conclusions, whereas “objective” was defined as reporting facts, events, conclusions supported by data. Subsequently, RoBERTa-base transformer model (Liu et al., 2019) was fine-tuned on the unlabeled part of the corpus and then trained on the subset of experimentally labelled sentences to classify them for subjectivity on the converted scale from 0 to 1. Model evaluation on the test set consisting of 50 human-labelled sentences showed that the model highly correlated with the average human ratings ($r = 0.79$). The model was then used to annotate the whole corpus for subjectivity. Thus, each sentence in the corpus is assigned a subjectivity score approximating the judgement that an average English speaker would make about the subjectivity of that sentence.

In order to analyze the corpus, a sample was selected. This was done using the stratified random sampling method. First the corpus was filtered in such a way to show only sentences taken from Facebook, which means the sentences taken from the news websites were left out. This was done as this investigation only looks at news on social media. It does not compare it to the news posted on the organization’s website. Next, 250 sentences from each of the quality news organizations BBC and Sky News were selected and 250 sentences each from the popular news sources Daily Mail and Metro News of which half consisted of news about crime and half about news concerning COVID. Altogether, only the 1000 most subjective sentences were focused on as these most subjective sentences were more likely to contain the indicators of subjectivity, namely smileys and intensifiers, than the less subjective phrases.

Procedure

To investigate the subjectivity level difference between quality and popular news on social media, the sentences were annotated based on the factors ‘intensifier’ and ‘emoticon’. As is shown in the theoretical framework, these two concepts are proven to be two ways to express subjectivity in a sentence. The coding was done by students from the Radboud University carrying out their bachelor’s Thesis using partial overlap coding. This means that, firstly, a second coder and the author of this study both coded 20% of the data of this research paper. After this, inter-rater reliability was tested using a Cohen’s Kappa test. Firstly, the inter-rater

reliability of the variable ‘emoticon’ was high: $\kappa = .942, p < .001$. Secondly, the inter-rater reliability for the variable ‘intensifier’ was also high: $\kappa = .930, p < .001$. As the inter-rater reliability turned out to be good, the author coded the rest 80% of the data while considering the coding scheme that was tested using Cohen’s Kappa.

The corpus contained various variables such as the news source, the news type, the sentence itself, whether the sentence comes from an article or from a Facebook post and the subjectivity label representing how human readers perceived subjectivity with 0 being the lowest and 1 being the highest. Furthermore, it is important to note that in the corpus of this current study, headlines were excluded. In addition, two variables were added. Firstly, ‘emoticon’ with the levels ‘present’ and ‘not present’ and secondly, ‘type of intensifier’ with the options ‘no intensifier’, ‘deleted element’, ‘replaced element’, ‘more than one word element’ and ‘special cases’. The options were all mutually exclusive. For the emoticons, coding was done relatively easy as it could be seen by the human eye whether an emoticon was included in the sentence or not. However, for the intensifiers the coding scheme had to be defined more extensively. To firstly identify an intensifier, the definition by Mulken and Schellens (2012) was used. According to this definition, an intensifier is a linguistic element which could be removed from the sentence or replaced by another word, after which the phrase would remain grammatically correct. In addition, the sentence should stay relevant in the context in which it appears and removing the intensifier should make the sentence less strong. After the intensifier was identified, it was allocated to one of the intensifier groups based on a coding scheme, which was developed by Van Mulken and Schellens (2012). An intensifier was added to the category ‘deleted element’ when the element could be removed and would still leave behind a good sentence. An example would be the word ‘very’ in ‘30 people died in a very frightening accident’. Without ‘very’ the sentence is still correct. The second category is called ‘replaced element’ to which an intensifier was added when it could be substituted by a less intense element. For example, ‘massive’ in ‘the hail was like massive tennis balls’ which could be replaced by ‘big’ which is less intense. Next, an intensifier was added to the category ‘more than one word’ when the element contained more than one word and could be replaced by a less intense element such as ‘very wonderfully done’ which contains ‘very’ and ‘wonderfully’. Lastly, there was the category of ‘special cases’ which could be added to when an element contained three or more punctuation marks or was written entirely in capital letters. Examples would be ‘!!!’ or ‘GOVERNMENT’.

Statistical treatment

Firstly, a chi-square was used to test if there is a relation between the presence of smileys and type of newspaper. Secondly, another chi-square tested whether there is a difference between the presence of intensifiers per category in the popular versus the quality newspapers. Lastly, a t-test was used to compare the subjectivity ratings of quality versus popular newspapers to see whether popular or quality newspapers are rated as more subjective. This subjectivity rating of how human readers perceive subjectivity which is already in the corpus will then be compared to the theory-based rating of subjectivity using the two indicators of this current research.

Results

In order to answer the different sub-questions and finally the main research question, several statistical tests were carried out.

Difference in presence of emoticons between type of newspaper

To start with, in order to test whether there is a relation between the presence of smileys and type of newspaper, a chi-square analysis was conducted. The chi-square analysis showed that there was a significant relation between the type of newspaper and whether a smiley was present or not present ($X^2(1) = 91,68, p < .001$). Emoticons were present in 26.2% of the status messages from popular newspapers, while in the quality news status messages, an emoticon was present in 4.4% of the status messages. Within the sentences from popular news organizations' status messages though, a greater portion did not contain an emoticon (73,8%) compared to the sentences that did include an emoji (26,2%). This difference was even larger for the quality news ones with 95,6% not containing an emoticon while 4,4% did include an emoticon. This is visible in Table 1.

Table 1: *Chi-square distribution between presence of an emoticon and type of newspaper*

Emoticon	Popular	Quality
Present	131 (26.2%)	22 (4.4%)
Not present	369 (73.8%)	478 (95.6%)

Difference in presence of intensifiers between type of newspaper

Another chi-square analysis was carried out to test whether there is a significant relation between type of newspaper and the presence of intensifiers that appear in the status message per category. A chi-square analysis points out that there is a significant relation between the use of intensifiers and type of newspaper ($X^2(4) = 98,992, p < .001$). Status messages from

quality news organizations contained significantly more often no intensifier (69.0%) than those from popular newspapers (48.2%). In addition, popular newspapers also contain significantly more ‘special cases’ intensifiers (19.8%), such as words written fully in capital letters or multiple exclamation marks than quality newspapers (2.4%). The difference between the other types of intensifiers (deleted element, replaced element and more than one word element) did not contribute to the significant relation between type of newspaper and presence of intensifiers per category that appear in the status message. This can be seen in Table 2.

Table 2: *Chi-square distribution between type of intensifier and type of newspaper*

Type of intensifier	Popular	Quality	Total
Deleted element	48 (9.6%)	70 (14.0%)	118 (11.8%)
Standardized residual	-1.4	1.4	
More than one word element	25 (5.0%)	17 (3.4%)	42 (4.2%)
Standardized residual	.9	-.9	
No intensifier	241 (48.2%)	345 (69.0%)	586 (58.6%)
Standardized residual	-3.0	3.0	
Replaced element	87 (17.4%)	56 (11.2%)	143 (14.3%)
Standardized residual	1.8	-1.8	
Special cases	99 (19.8%)	12 (2.4%)	111 (11.1%)
Standardized residual	5.8	-5.8	

Difference in subjectivity ratings between popular and quality newspapers of the human-based rating

A t-test was conducted to see whether there is also a significant difference between popular and quality newspapers in how human readers actually perceive subjectivity, which was already included as a rating in the corpus. The independent samples t-test comparing two types of newspapers in their subjectivity ratings, found a significant difference between type of newspaper and subjectivity rating ($t(997.96) = 13.366, p < .001$). Status messages from popular newspapers scored a higher subjectivity rating ($M = 0.71, SD = 0.18$) than those from the quality newspapers ($M = 0.56, SE = 0.18$). This can be seen in Table 3.

Table 3: *The quantity, mean and standard deviation of the subjectivity rating of popular and quality newspapers*

		N	M	SD
Type of newspaper	Popular	500	0.714	0.00820
	Quality	500	0.559	0.00816

Conclusion

Several conclusions can be drawn from the results of the statistical tests. This means that the first sub-question can be answered; ‘Is there a difference in the presence of emoticons in popular compared to quality news status messages?’ Results show that there is a difference between these two types of newspapers, as it was found that emoticons are more often present in the status messages of popular news organizations than in those of quality newspapers. After this, the second sub-question can also be answered, which questioned whether there is a difference in the presence of intensifiers in popular versus quality news status messages. This research pointed out that intensifiers are more often found in popular than in quality news on social media. The last question can also be answered, which was ‘is there a relation between the theory-based indicators of subjectivity studied in this paper compared to how subjectivity is perceived by human readers?’. Results show that the subjectivity rating human readers give to the sentences is higher for popular news status messages on social media than for status messages from quality newspapers. Therefore, it can be stated that the two theory-based indicators of subjectivity that were studied in this paper seem to be related to how human readers actually perceive subjectivity. However, there are other indicators of subjectivity as well, as will be further explained in the discussion.

Discussion

To start with, it was found that emoticons are more often present in status messages of popular news organizations on Facebook. Thus, the first sub-hypothesis can be confirmed. This is in line with previous research. It was found by Tang and Hew (2019) that emoticons are a way to express subjectivity. Emoticons were explained as a way for the author to express that a sentence should be exclaimed. As popular news organizations’ status messages are more often written using emotions or a private state, it is likely that in this case more often the author thinks this phrase should be exclaimed. On the other hand, the status messages of the quality newspapers are more frequently factual and do not contain emotive language, for which an emoticon might not be suitable to show emphasis. Welbers and Opgenhaffen (2019)

also found that emoticons do not match with the professional news norms, to which the quality news organizations might aim to stick more to than the popular news authors.

Secondly, intensifiers were more often found in popular news status messages compared to those of quality newspapers. This was mostly the case for the special cases intensifiers, so the exclamation marks, question marks and capital letters. An example is for example ‘Absolutely HORRIFIC’ as it said in a status message by the Daily Mail. It was striking that the ‘deleted element’, ‘more than one word element’ and ‘replaced element’ intensifiers did not contribute significantly to the difference in the presence of intensifiers between quality and popular news status messages as this was actually expected. Thus, the second sub-hypothesis can only partly be confirmed. The other findings were in line with the theory, namely that quality news status messages contained more often no intensifier and in popular status messages a ‘special cases’ intensifier was more often present compared to quality news status messages. As with the emoticons, the most plausible explanation for this would be that quality newspapers stick more to the professional news norms, while popular news organizations choose to balance more towards the social media logic, in which intensifiers and exclamation marks are more accepted.

Furthermore, it was found that the theory-based indicators of subjectivity investigated in this paper and the way in which readers actually perceive subjectivity are related. This is in line with sub-hypothesis 3. This relation makes the findings of this current research, but also the reliability of the RoBERTa-base transformer model which was used to generate the subjectivity ratings which were already present in the corpus, stronger. This is the case, because it means that not only the theory, which was dealt with in this paper, but also the way in which human readers actually perceive subjectivity, conclude the same; overall subjectivity ratings were higher for popular news status messages than for quality news status messages.

Altogether, it was found that the main research question can be answered, and the hypothesis can be confirmed. This means that the previously mentioned presumption which Ogenhaffen and Welbers (2019) already had when they carried out their research without controlling for the topics, can now be confirmed; even when the topics are controlled for, the status messages of popular news organizations do contain a higher degree of subjectivity than those of quality newspapers. It must however be noted that this is not the case only due to the higher presence of emoticons and intensifiers that was found in the status messages of popular news organizations. It can be concluded that the use of emoticons and intensifiers does contribute to the higher degree of subjectivity, however other factors can be contributing as well. When we refer back to the balance that news organizations have to find between the

general media logic and the social media logic as the importance of social media grows, the higher degree of subjectivity for popular news status messages can be explained as follows. It is likely that quality news organizations retain more importance to the general media logic, as they want to be seen as a reliable platform that disseminates factual and objective news as was stated by Narloch (2006). The use of emoticons and intensifiers does not fit well with this general media logic (Welbers & Opgenhaffen, 2019). Therefore, while deciding on their balance between the general and social media logic norms, the quality news organizations are likely to lean more towards the general media logic. On the other hand, popular news organizations likely attribute more importance to the social media logic with its shareability and attractiveness, which was found to be achieved through the use of, among others, emoticons and intensifiers (Welbers & Opgenhaffen, 2019) as this adds an extra layer on top of the news (Al-Rawi, 2017; Marchi, 2012). Thus, the explanation for the higher presence of emoticons and intensifiers in popular news status messages may be caused by the different goal of the two types of news platforms and the characteristics that go along with those two goals. Furthermore, the shift from objective to more subjective reporting which Welbers and Opgenhaffen highlighted as a result of the rise of social media, may also be less important for quality news organizations. Their target audience is likely to consist more of older people who tend to go to the news organization's website or read the newspaper, while the younger generations are more often registered on several social media platforms which they visit regularly and get their news from (Ortiz-Ospina, 2019).

The results of this study are important in order to make sure that the increasing number of people who get their news intake from social are informed about the possibility of encountering subjective news, which can cause cases of misinformation or fake news (Ortiz-Ospina, 2019). As mentioned before, these two concepts are related to subjectivity (Vieira et al., 2020; Rashkin, H., 2017). However, there are also several limitations to this study. Firstly, referring back to the note made to the conclusion previously in this section, for this research only intensifiers and emoticons were measured. These are just two forms of subjectivity, while there are various other indicators. In order to really conclude anything about subjectivity in general, it is therefore a limitation of this research that not every, or at least more forms of subjectivity were investigated. Perhaps a milder form of subjectivity would not have shown any difference in the use between quality and popular news status messages. Secondly, for this specific study only status messages on Facebook were included. However, this is just one social media platform while several others, such as Instagram have grown rapidly (Ortiz-Ospina, 2019). When we would have included Instagram, it could have been

the case that this difference in subjectivity between the quality and popular news organizations that we encountered on Facebook, is not visible on Instagram. After all, this platform attracts yet again a different target audience. Therefore, in order to make broad conclusions about news on social media, it would have been better to include posts from news platforms on for example Instagram as well.

As a result of the findings and limitations of this current study, several suggestions for future research can be made. To start with, it is suggested that future research will investigate other forms of subjectivity. There is currently no other research which looks at other indicators of subjectivity than emoticons and intensifiers in status messages on Facebook, as was done in this paper. Specific suggestions would be emotive language or the use of personal pronouns. Another suggestion would be to extend this current research, so the focus on intensifiers and emoticons, to another platform on social media. As Instagram is currently one of the largest platforms, the suggestion is to choose this website (Ortiz-Ospina, 2019). The outcomes of this study would allow for a more substantiated conclusion regarding subjectivity in news on social media. In addition, for the intensifiers it was striking that only the ‘special cases’ and ‘no intensifier’ scored significantly differently between the quality and popular newspapers. The suggestion is to take a closer look at these intensifiers in news status messages. Perhaps if they would be divided up into smaller different groups, different results would be found as the current results go against the sub-hypothesis which was unexpected. To illustrate, it was expected that the separate intensifier groups would all show a significant difference between quality and popular news status messages and not just the ‘no intensifier’ and ‘special cases’ ones.

To conclude, with the ongoing rapid growth of social media, more people use this platform instead of a website or real newspaper to keep themselves up to date with regard to the news. This development means for the news organizations that there is a great potential for them to reach more people when they communicate their news on social media. However, this new platform also brings along new norms of what is accepted from news organizations and allows for more eloquent language and subjectivity. This research has shown that intensifiers and emoticons are more often used in popular news organizations status messages on Facebook than in those of quality newspapers. In addition, both the two theory-based indicators and the way in which human readers perceive subjectivity, found that overall popular news status messages were more subjective than the quality news status messages. These findings can be used to inform especially people who get most of their news from popular news organizations about the possibility of subjectivity of the news. In this way,

misinformation and fake news, which have been shown to be related to subjective language use, and the possible consequences this can have on our daily life and the choices we make can be limited as people are timely informed about it.

References

- Callison, C. & Young, M.L. (2020). *Reckoning: Journalism's Limits and Possibilities*. Oxford University Press. <https://doi.org/10.1093/oso/9780190067076.001.0001>
- Cappelen Damm Akademisk (2017, December 2017). *Putting a Face on It: Individual Exposure and Subjectivity in Journalism*. <https://doi.org/10.23865/noasp.28>
- Chong, P. (2017). Valuing subjectivity in journalism: Bias, emotions, and self-interest as tools in arts reporting. *Journalism*, 20(3), 427-443. <http://dx.doi.org/10.1177/1464884917722453>
- De Smedt, T. & Daelemans, W. (2012). Pattern of Python. *Journal of Machine Learning Research*, 13(1), 2063-2067. https://www.researchgate.net/publication/262411310_Pattern_for_Python
- Gottfried, J. & Shearer, E. (2016, May 26). *News Use Across Social Media Platforms 2016*. Pew Research Center. <https://www.pewresearch.org/journalism/2016/05/26/news-use-across-social-media-platforms-2016/>
- 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>
- Liu, Y., Ott, M., Goyal, N., Du, J., Joshi, M., Chen, D., Levy, O., Lewis, M., Zettlemoyer, L., & Stoyanov, V. (2019). RoBERTa: A robustly optimized BERT pretraining approach. <http://arxiv.org/abs/1907.11692>
- Marchi, R. (2012). With Facebook, Blogs, and Fake News, Teens Reject Journalistic “Objectivity”. *Journal of Communication Inquiry*, 36(3), 246-262. <https://doi.org/10.1177/0196859912458700>
- Mutsaerts C. (2012). *National Media Bias in Quality and Popular Newspapers*. Erasmus University. <https://thesis.eur.nl/pub/13332/Mutsaerts.pdf>
- Nahon, K., Hemsley, J., Walker, S. & Hussain, M. (2012). Fifteen minutes of fame: The power of blogs in the lifecycle of viral political information. *Policy & internet*, 3(1), 1-28. <https://doi.org/10.2202/1944-2866.1108>
- Narloch, J. (2006). *Comparison between tabloids and quality papers*. GRIN. <https://www.grin.com/document/186369>
- Newman, N., Levy, D. & Nielsen, R.K. (2015). Reuters Institute Digital News Report 2015. *Reuters Institute 1*(1), 1-25. <http://dx.doi.org/10.2139/ssrn.2619576>.
- Ortiz-Ospina, E. (2019, September 18). *The rise of social media*. Our World in Data. <https://ourworldindata.org/rise-of-social-media?ref=tms#article-citation>.

- Quirk, R., Greenbaum, S., Leech, G. & Svartvik, J. (1985). *A Comprehensive Grammar of the English Language*. London Longman. <https://doi.org/10.1177/007542428702000108>
- Rashkin, H., Choi, E., Jang, J.Y., Volkova, S. & Choi, Y. (2017). Truth of Varying Shades: Analyzing Language in Fake News and Political Fact-Checking. *Association for Computational Linguistics*, 1(8), 2931-2937. [10.18653/v1/D17-1317](https://doi.org/10.18653/v1/D17-1317)
- Ruigrok, N., Gagestein, S. & Van Atteveldt, W. (2016, September 7). *Facebook: Vriend of vijand voor nieuwsmakers?* Stimuleringsfonds voor de Journalistiek. <https://www.svdj.nl/over-svdj/>
- Salaverría, R. (2019). Digital Journalism. *The International Encyclopedia of Journalism Studies*, 1(1), 1-22. <https://doi.org/10.1002/9781118841570.iejs0189>
- Savinova, E., & Moscoso del Prado Martin, F. (in prep.). Estimating subjectivity with a transformer-based regressor trained on naïve speakers' judgements.
- Schudson, M. (2016). The objectivity norm in American journalism. *Journalism*, 2(2), 149-170. <https://doi.org/10.1177/146488490100200201>
- Strömbäck, J. (2008). Four phases of mediatization: An analysis of the mediatization of politics. *The International Journal of Press/Politics*, 13(3), 228-246. <https://doi.org/10.1177/1940161208319097>
- Tang, Y. & Hew, K.F. (2019). Emoticon, Emoji, and Sticker Use in Computer-Mediated Communication: A Review of Theories and Research Findings. *International Journal of Communication*, 13(1), 2457-2483. <https://ijoc.org/index.php/ijoc/article/viewFile/10966/2670>
- Trilling, D., Tolochko, P & Burscher, B. (2016). From Newsworthiness to Shareworthiness: How to Predict News Sharing Based on Article Characteristics. *Journalism & Mass Communication Quarterly*, 94(1), 38-60. <https://doi.org/10.1177/1077699016654682>.
- Van Mulken, M.J.P. & Schellens, P.J. (2012). Over loodzware bassen en wapperende broekspijpen. Gebruik en perceptie van taalintensiverende stijlmiddelen. *Tijdschrift voor Taalbeheersing*, 34(1), 28-55. [10.5117/TVT2012.1.OVER418](https://doi.org/10.5117/TVT2012.1.OVER418)
- Vieira, L., Jerônimo, C., Campelo, C. & Marinho, L. (2020). *Analysis of the Subjectivity Level in Fake News Fragments*. Simpósio Brasileiro de Sistemas Multimídia e Web. [10.1145/3428658.3430978](https://doi.org/10.1145/3428658.3430978)
- Vis, K., Sanders, J. & Spooren, W. (2012). Diachronic changes in subjectivity and stance- A corpus linguistic study of Dutch news texts. *Discourse, Context & Media*, 1(2-3), 95-102. <https://doi.org/10.1016/j.dcm.2012.09.003>

Walker, M. & Matsa, K.E. (2021, September 20). *News Consumption Across Social Media in 2021*. Pew Research Center.

<https://www.pewresearch.org/journalism/2021/09/20/news-consumption-across-social-media-in-2021/>

Welbers, K. & Opgenhaffen, M. (2019). Presenting News on Social Media. *Digital Journalism*, 7(1), 45-62. <https://doi.org/10.1080/21670811.2018.1493939>

Statement of own work

Sign this *Statement of own work* form and add it as the last appendix in the final version of the Bachelor's thesis that is submitted as to the first supervisor.

Student name: Laura Lisa Onckels Student number:
s1052703

PLAGIARISM is the presentation by a student of an assignment or piece of work which has in fact been copied in whole or in part from another student's work, or from any other source (e.g. published books or periodicals or material from Internet sites), without due acknowledgement in the text.

DECLARATION:

- a. I hereby declare that I am familiar with the faculty manual (<https://www.ru.nl/facultyofarts/stip/rules-guidelines/rules/fraud-plagiarism/>) and with Article 16 "Fraud and plagiarism" in the Education and Examination Regulations for the Bachelor's programme of Communication and Information Studies.
- b. I also declare that I have only submitted text written in my own words
- c. I certify that this thesis is my own work and that I have acknowledged all material and sources used in its preparation, whether they be books, articles, reports, lecture notes, and any other kind of document, electronic or personal communication.

Signature:



Place and date: Nijmegen, 08-06-2023