

Sentiment Analysis on News Reporting: The Sentiment of Adjectives in News Articles

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ABSTRACT

This research paper investigates the use of adjectives in online news reporting and their impact on reader engagement and the overall sentiment of the news articles. The study is grounded in the theoretical framework of corpus linguistics, exploring the lexical choices of adjectives in a diverse range of news articles from various genres. The analysis is based on a mini corpus of 889 news articles with a total of 618,796 tokens, and it employs Laurence Anthony's AntConc software for data analysis. The research findings reveal that adjectives play a crucial role in shaping the tone and sentiment of news articles. The study categorises adjectives into three groups: positive, negative, and neutral. Notably, the analysis demonstrates that while a significant portion of adjectives used in news articles is neutral and context-dependent, there is a balanced presence of both positive and negative adjectives. This suggests that news reporting aims for objectivity in the content of the articles. In conclusion, this research highlights the importance of adjectival phrases in news reporting, demonstrating that adjectives can influence reader emotions and affect the newsworthiness of articles. While negative adjectives may be more prevalent in headlines to capture attention, the content of news articles tends to maintain objectivity and balance. Future research could delve deeper into the differences between news headlines and article content to better understand the strategies employed by journalists in online news reporting.

Keywords: Adjectives, corpus linguistics, emotive words, sentiment analysis, textual analysis

Introduction

Online newspaper sites often use emotive language in their news reports especially in critical and controversial topics. The phrase 'astonishing win' will surely arouse strong feelings among readers than the word 'win'. Simply said, emotive language strikes readers' emotion and rile them up to ensure they participate in the discussion online where there are billions of users with differing interests. The invention of the Internet has changed the way humans lead their lives. This includes how people obtain news. Today's news environment is shifting from a hard-printed newspaper into the digitally-displayed newspaper. In this case, the effectiveness of news reporting is important in ensuring readers' interest towards the news.

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According to Mokalkar, et al; (2016), the media portrays the news with negativity as they try to make profit out of sensationalism. This shows that emotive words have a major impact in making the news interesting. Being applied to news reporting, these emotive words; be they positive or negative, will create a feeling of sensation towards the readers and bait them into reading the news.

Background of the study

Words can trigger readers' feelings towards the subject and make them want to respond to the news. The lexical element is a major part of the construction of ideas according to Halliday's (1994) linguistics theory. He also pointed out that lexical classification is the basic part of the human thinking process. Because different individuals have different cultural backgrounds and different upbringings, which makes them to have different social experiences, they will have different views of sociolinguistics and will interpret everything differently. Xin (2005) added, "Classification means that the description of the objects or events is mainly realised by polarised lexical choice" (He & Zhou, 2015). The use of lexis in messages is always controlled by the intention of the speaker. In news discourse, the ideologies of the story may be hidden in the emotive language used by the author. Lexical choice can influence the readers if they are used correctly.

Words can be powerful. They can flatter us, frighten us and make us do something (Macagno & Walton, 2014). Politicians, news channels, and managers have been using this strategy with various intentions behind their utterances. Politicians want to win votes; news channels want to sell newspapers and managers want to keep the employees happy. One of the strategies used is the selection of emotive language; often times the adjectives in their utterances. Emotive language is word choice that is used to evoke emotion and is intended to cause an effect (emotional response) on the audience (Tsitsanoudis-Mallidis, N., & Derveni, E., 2018). Different choices of emotive language in an utterance may ignite different kinds of emotion.

In Zhang's theory (2011), words can be divided into three categories according to their emotional colouring: commendatory words, derogatory words and neutral words. Commendatory terms are words with active evaluation showing the user's favourable attitude to descriptive objects. Derogatory terms are words with negative evaluation that reflect the user's negative attitude. Neutral terms are words with no evaluation, and by using neutral words the user makes no comments on his or her descriptive objects but only states the fact. Both commendatory and derogatory words have evaluative colouring. Therefore, writers may use different colouring words at will, especially adjectives and adverbs, which will carry ideologies behind them.

An adjective is a powerful tool in dictating the polarity of news in any written or spoken domain. Descriptive words, either adjectives or adverbs play a vital role in 'accompanying' the noun or verb which is the core element of a sentence. A sentence is 'hollow' without employing descriptive words. Adjectives and adverbs are crucial in making news exciting and dictating the polarity of the news according to the writers' directions.

Studies of adjectives in text discourse have always been associated with sentiment analysis. These studies analyse the writers' opinions on certain issues via the lexical usage of the text. Kim and Hovy (2006) introduce an approach of exploiting the semantic structure of a sentence,

anchored to an opinion bearing verb or adjective. The study presents a method to identify an opinion by its holder and topic from online news media texts. The new findings stemmed from their research are 1) their research looks into verbs and adjectives (not as collocates) to determine the types of sentiment in selected sentences and 2) their research uses a different style of statistical analysis. Both research analyse the use of adjectives in online news discourse.

Godbole, Srinivasaiah, & Skiena (2007) study the sentiments of iconic figures (politics, sports, etc.) in news and blogs. The analysis is based on the modifying words that preceded the nouns and finds that the portrayals of these figures are different in news and blogs. Some controversial American politicians are portrayed negatively in the news but portrayed positively in blogs. They indicate that this kind of study may enable organisations to predict future changes in the market by looking into the sentiments of the public.

Problem Statement

The evidence depicts the importance of adjectival phrases in news reporting. Adjectives can evoke readers' emotions and influence the newsworthiness of news reporting. A study of the use of adjectival phrases in news reporting is needed in order to gain insight into the pattern of adjectives and sentiment in the news reports.

Research Objectives

This study aims to analyse the use of adjectival phrases in news reporting and gain insight into the general sentiment in news reporting from various genres.

Methodology

The principles of corpus linguistics guided the data collection and data analysis. The mini corpora comprises of 889 news articles from various genres with 618,796 token. The mini corpora was analysed using Laurence Anthony's AntConc to find adjectival phrases within the corpora. The frequency of adjectives was gathered for the next stage of the analysis. In order to avoid bias in choosing the polarity of the adjectives, the list of positive and negative words produced by Liu, Hu and Cheng (2005) from their research *Opinion Observer: Analysing and Comparing Opinions on the Web* was used as the reference. The list of words was derived from data mining across various social media sites. The words were derived from customers' reviews of various products on social media. The social media context of this list is suitable for this study as news reporting uses the same register and language. Finally, the adjectival phrases that went through the filter were tabulated for description analysis.

Findings of the Study

Table 1: Top 15 adjectives

Adjective	Freq	Adjective	Freq	Adjective	Freq
new	1023	right	639	next	new
first	936	many	508	public	first
last	900	very	490	such	last
other	702	much	448	high	other
old	659	former	362	good	old

Based on the analysis of the first 5000 word hit in the mini corpora, there are 321 adjectives. Table 1.1 shows the top 15 most frequently used adjectives in the mini corpora. The most appeared adjective in the corpora is 'new' with the frequency of 1023 hit. The second most appeared adjective is 'first' with 936 hit and the third most appeared adjective is 'last' with 900 hit. The fourth most appeared adjective is 'other' with 702 compared to fifth, 'old' with 659. Among the top 15, there 5 positive connotation adjectives which are 'new', 'first', 'very', 'good', and 'high'. On the other hand, 10 of the adjectives are neutral adjectives and are very context dependent. There are no adjectives that carry the negative connotation.

Out of the 321 adjectives, there were 21 adjectives with positive connotation, 22 adjectives with negative connotations and 278 adjectives that carry neutral connotation or context-driven adjectives. The table below shows the list of positive and negative adjectives.

Table 2: Positive adjectives

Adjective	Freq	Adjective	Freq	Adjective	Freq
good	298	fantastic	18	excellent	13
great	251	delighted	17	ideal	13
happy	113	lovely	17	prolific	13
special	111	moderate	17	proven	13
successful	57	grateful	16	unbelievable	13
unique	30	progressive	14	ambitious	12
impressive	22	accurate	13	innovative	12

Table 2 shows the list of positive adjectives used in the news reporting corpora. There were 21 positive adjectives in the first 5000 word hit in the corpora with the adjective 'good' being the most frequently used in the news reporting with 298 hits. The second most used adjective was 'great' with 251 hits while the third most was 'happy' with 113 hits. The fourth most used positive

adjective was ‘special’ with 111 hits and that was the last positive adjectives to go over the 100-frequency mark.

Next, the positive adjectives ‘successful’, ‘unique’, ‘impressive’, and ‘fantastic’ appeared 57, 30, 22 and 18 hits respectively. The next positive adjectives which all appears 17 hits in the corpora were ‘delighted’, ‘lively’, and ‘moderate’. The positive adjectives ‘grateful’ and ‘progressive’ appeared 16 hits and 14 hits respectively. There were 6 positive adjectives that appeared 13 times which are ‘accurate’, ‘excellent’, ‘ideal’, ‘prolific’, ‘proven’, and ‘unbelievable’. Lastly, the positive adjectives that appeared 12 times are ‘ambitious’ and ‘innovative’.

Table 3: Negative adjectives

Adjective	Freq	Adjective	Freq	Adjective	Freq
hard	179	lethal	19	bloody	17
bad	115	unacceptable	18	horrible	17
dangerous	53	unconscious	18	bizarre	16
unusual	35	waste	18	dirty	16
ill	32	brutal	18	troubled	14
disturbing	23	horrible	17	evil	13
fake	22	inappropriate	17		
suspicious	20	aggressive	17		

Table 3 depicts the negative adjectives appeared in the corpora. There were 22 negative adjectives out of the first 5000 word hit. The first negative adjective was ‘hard’ with 179 hit, and the second adjective is ‘bad’ with 115 hits. Next, the negative adjective ‘dangerous’ appeared 53 times and ‘unusual’ and ‘ill’ appeared 35 times and 32 times respectively. The negative adjectives ‘disturbing’ came next with 23 hits, ‘fake’ with 22 hits, ‘suspicious’ with 20 hits and ‘lethal’ with 19 hits.

Next, the negative adjectives that appeared 18 times are ‘unacceptable’, ‘unconscious’, ‘waste’, and ‘brutal. Whereas, the negative adjectives that appeared 17 times are ‘horrible’, ‘inappropriate’, ‘aggressive’, ‘bloody’, and ‘horrible’. Then, ‘bizarre’ and ‘dirty’ with 16 hits, whereas negative adjective ‘troubled’ appeared 14 times. Lastly, negative adjective ‘evil’ appeared 13 times.

Based on the analysis above, the majority of the adjectives are neutral adjectives. However, when highlighting emotive adjectives, the frequency of negative adjectives is almost similar as positive adjectives. The discussion of this phenomenon will be discussed further in the next section.

Conclusion

Based on the analysis in previous section, it can be concluded that overall, news article writing provides just and objective reporting. It can be seen by the large number of adjectives are adjectival phrase with neutral connotation. This proves the writing of news reporting is bound to the ethical capacity of journalists to provide non-bias view on the issue pertaining to the interests of the reader. However, this contradicts with a research by Hamdi, et al. (2021) which look at the news article headlines. The researchers found that news articles headlines are written with the intention to provide sensationalism in order to gain attention of the Internet users.

However, the frequency of negative adjectives are just as similar as the frequency of positive adjectives. This shows the objectivity of news reporter in in writing news. Comparing this result to the research by Hamdi, et. al (2021), it can be concluded that the negative adjectives that carries negative connotation is widely used strictly in writing news headlines. This is because the news headline needs to be able to produce engagement by Internet users. However, the content of the news itself remains objective. This is because the journalists are bound to ethical value of journalism as they need to report the news objectively. Further research should be done on news reporting as a whole. As the two important section of news article – the headline and the news writing were written with different intention.

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