

Conceptual metaphor use in American newspapers regarding COVID-19

Bachelor thesis



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Abstract

Since the COVID-19 pandemic has entered the world, it is impossible to imagine the news without it. History has proven that communication about pandemics and/or infectious diseases has been used for ideologic and political purposes, as social preferences are embedded in our daily communication. One way to zoom in on communication differences between political opposites, is through metaphor use. Metaphors influence one's thoughts strongly, as it highlights one aspect and covers up another aspect. Therefore, it plays a major role in ideologically influenced media articles about the COVID-19 pandemic. The most frequently used metaphor type for communication about pandemics is the war metaphor. Therefore, this study's aim is to examine to what extent there is a difference in the use of war metaphors between liberal and conservative newspaper articles regarding the COVID-19 pandemic. To do so, a corpus study consisting of 200 news articles from liberal newspapers and 200 news articles from conservative newspapers was conducted. It was found that liberal newspapers make more use of metaphors than conservative newspapers. However, the difference was not found in the use of war metaphors, but in other types of metaphors.

Key words: COVID-19 pandemic, war metaphor use, ideologically influenced news articles

Introduction

By the end of 2019, the first contamination of the now well-known coronavirus, scientifically called COVID-19, was determined. The virus was linked to a seafood and wild animal market in Wuhan City, China (Lu, Stratton & Tang, 2020). Contaminated patients suffered from fever, a dry cough, a cold and/or dyspnea. This was the beginning of a worldwide pandemic, which was declared by the World Health Organization (WHO) on March 11 2020 (World Health Organization, 2020). The virus rapidly spread to the rest of the world and by the end of May 2020, over six million people had been contaminated worldwide. A large number of these contaminations were concentrated in the United States (Centers for Disease Control and Prevention, 2021). COVID-19 led to a major response from the World Health Organization as well as the involved governments. Since COVID-19 was identified as a pandemic, it formed a global threat. It had affected roughly every context of economic, social and political life in the US, but also in the rest of the world. Therefore, it received much media coverage worldwide. This paper sheds its light on how the media cover the COVID-19 pandemic in various US newspapers.

Discourse, of which the media are an enormous part, is more complicated than purely language communication, as it also embodies a certain social aspect, giving prominence to its participants (van Dijk, 1988). The social aspect of discourse, meaning peoples' norms and values, could lead to differentiation in the purposes of communication. History has proven that pandemics and infectious diseases have been used for ideologic and political purposes for years, and still continue in doing so (Scott, 2014). Research into previous diseases, such as SARS and AIDS, are great examples of this phenomenon (Chiang & Duann, 2007; Craig, 2020). Newspapers at that time framed the SARS or AIDS virus in a way in which they mislead their readers into a certain political judgment towards the crisis (Chiang & Duann, 2007). For instance, it is misleading as they highlight the importance of a ruling government in comparison to the highlighting of the importance of medical assistance. Thus, the difference is found in which consequences of the pandemic are highlighted and which are not. This is also the case for the COVID-19 pandemic.

As the US copes with the problem of ideologically biased media, this suggests that discrepancies are likely to occur between several US newspapers in their informs about the pandemic (Feldman, Hart & Milosevic, 2015; Groseclose & Milyio, 2005). The difference in ideological and political beliefs lays between democrats and republics, also referred to as

liberals and conservatives. Research by Schoonvelde, Brosius, Schumacher and Bakker (2019) stated that there is a significant difference in the linguistic habits of liberals and conservatives. Liberal winged texts are composed of linguistically more complex words and sentences. Furthermore, in the speeches of conservative presidents the language used has, overall, a lower score on integrative complexity than liberal presidents (Cichocka, Bilewicz, Jost, et al., 2016). Integrative complexity measures the structural complexity of a sentence based on both differentiation and integration (Baker-Brown et al., 1992). Integration is illustrated by the use of conjunctions and differentiation by the use of exclusive and tentative words or negations. The difference in language habits between conservatives and liberals can be further explained by means of personality differentiation. According to the Big Five personality dimensions, conservatives score lower on openness and higher on conscientiousness, need for closure and ambiguity than liberals do (Gerber, Huber, Doherty & Ha, 2010). The differentiation in personality dimensions can explain the difference in language use between liberals and conservatives. According to the framework drawn up by Gerber et al. (2010) the dimension openness is linked to the use of tentative and longer words. Therefore, liberals use more complex words and sentences as found in the work of Schoonvelde et al., (2019). The need for closure manifests itself in the reduction of uncertainty and ambiguity which is done through the use of nouns instead of verbs and adjectives in conservative language habits (Webster & Kruglanski, 1994). This means that conservative language contains relatively more nouns and fewer verbs and adjectives than liberal language use.

Several studies state that the difference between the two ideologies is reflected not only in their use of language, but also in their opinion and behavior regarding the coronavirus. It was found that the percentage of conservatives moderately concerned about COVID-19 is lower than the percentage of liberals doing so (Badger & Quealy, 2020). Moreover, liberals' behavior towards COVID-19 is considerably more in line with the established guidelines of the World Health Organization than conservatives' behavior. Conservative-dominated districts, analyzed through a GPS data tracking study, perform less social distancing than liberals (Allcott, Boxell, Conway, Gentzkow, Thaler & Yang, 2020; Gollwitzer, Martel, Brady, Pärnamets, Freedman, Knowles & Van Bavel, 2020). The extent to which both ideologies behave regarding hygiene regulations and restricted traveling shows reasonable differences as well (Goldstein & Wiedemann, 2020; Stecula, 2020). To illustrate, only one-third of the participants in a study of the behavior regarding the restrictions for the

coronavirus of conservative media consumers affirmed they wear a face mask when necessary and not more than three percent of the consumers concur with the government prioritizing prevention of the spread of the virus over maintaining of the country's economics (Hamilton & Safford, 2020). This is, compared to liberals who according to Badger and Quely (2020) adhere to the rules well, a relatively low percentage.

The use of metaphors in ideologically influenced texts can be identified as another manner to look at differences between liberals and conservatives. By using metaphors, one highlights something that is found important, and conceals something else (Lakoff & Johnson, 2003). Therefore, a metaphor is found to be a great strategy to persuade an ideological meaning in the media. Many different definitions of metaphors have been composed. Lakoff and Johnson (2003, p. 5) define a metaphor as "understanding and experiencing one kind of thing in terms of another". A metaphor is structured through a topic and a vehicle (Ortony, 1975). The topic is the idea that the person utilizing the metaphor is trying to illustrate and the vehicle is the idea that conceives the meaning about the topic. In the sentence: 'The coronavirus is a battle that has not been won yet', 'the coronavirus' operates as the topic and 'a battle' operates as the vehicle. The vehicle transfers assumptions to the topic. In the presented example, 'battle' conveys the meaning that 'coronavirus' is an enemy with whom the speaker and/or listener are/is in war with and has to be defeated.

A metaphor is not merely used as a poetry feature. In language use, metaphorical expressions are used commonly. Research into the occurrence of metaphors in texts found that metaphors occur approximately between three and 18 times per 100 words (Cameron & Stelma, 2004; Steen, Dorst, Herrmann, Kaal, Krennmayr & Pasma, 2010). The Conceptual Metaphor Theory (CMT) argues that metaphors are, in addition to their stylistic function, embodied in our everyday functioning and understanding of the world (Reijniere, 2017). Since many things in our daily life are done from a certain habit, people are not aware of the conceptual system that links the topic to the vehicle (Fabiszak, 2007). There is linguistic evidence that states that our conceptual system is of metaphorical nature (Lakoff & Johnson, 1998). This can be demonstrated by the concept of arguing. Almost every aspect of arguing is linguistically linked to war. For example gaining or losing ground in an argument, attacking someone's position or defending your case (Lakoff & Johnson, 2003).

As mentioned earlier, metaphors have a strong influence on our conceptual system. As such, it is a powerful tool to influence one's thoughts about a certain subject, as it highlights the thing that the speaker finds important and leaves out the thing that it finds not. Therefore,

metaphoric language plays a great part in ideologic media texts about the COVID-19 pandemic. Research into metaphor use in the media regarding pandemics or diseases has shown that there is one dominant metaphor type relating to media about pandemic or diseases, which is the war metaphor (e.g. “fight”, “battle”, “enemy”, “invader” etc.) (Sirait, Seva & Linnga, 2020; Chiang & Duann, 2007; Semino, 2020). Additionally, in media coverage about previous pandemics (Chiang & Duann, 2007; Craig, 2020), the media have also made frequent use of the war metaphor (Semino, 2020). The spread of the war metaphor in the media could have contributed to the fear and panic people felt/feel about the virus. On the other hand, this could have led to more awareness among people about the risks of the virus (Sirait et al., 2020). Not only the function of the metaphor is explainable, also its meaning. The frequent use of the war metaphor in media coverage about the COVID-19 pandemic can be explained due to the similarities the type of metaphor holds with the coronavirus. For instance, both a war and a pandemic are dangerous, ask for strategy and involve death and wounded (Semino, 2020). The urge to adopt a war metaphor in times of crisis, is supported by the idea of Grady (1997), who stated that a problem can be seen in terms of an opponent. War is an extreme example of an opponent and is therefore used in times of a pandemic, as it creates a great impact.

Since the COVID-19 pandemic can be seen as a crisis, media coverage uses metaphors in their reports about the pandemic. According to Lakoff (1995), liberal and conservative media give opposite preferences to the use of metaphors in their media articles. However, no research has been done on whether this also relates to the preferences in the use of war metaphors. In addition, there are variations found between different countries regarding the use of the war metaphor (Martinex-Brawley & Gualda, 2020; Reijnierse, 2020). The speeches of two political leaders, Rutte in the Netherlands and Macron in France, were compared and analyzed. It was noticed that Macron used many variants of the war metaphor in his speech, while Rutte did not mention it once (Reijnierse, 2020). These variations in metaphor use could have been the results of different ideological ideas. However, the ideological background of both leaders was not examined.

The literature review above demonstrates the interests in the research field of liberal and conservative media, the news about the COVID-19 pandemic and the use of metaphors and the war metaphor in specific. It shows that extensive research has been done and even combined certain aspects of these fields. For example, liberal and conservative media are compared with respect to their metaphor use, however, this was not done during the COVID-

19 pandemic. Moreover, differences between two leaders regarding their war metaphor use in COVID-19 related speech were found, however, their political background was not examined. Thus, a research gap is noticed in the field of metaphor use regarding the COVID-19 pandemic in ideologically influenced texts. Research has shown that there are indeed differences in language habits between liberals and conservatives related to their personality traits (Badger & Quely 2020; Gerber et al., 2010; Schoonevelde et al., 2019). This is an interesting finding since the behavior regarding the restrictions of the coronavirus of both liberals and conservatives differs as well. It is a given fact that metaphors are more embodied in our everyday life than people assume, also called the Conceptual Metaphor Theory (CMT). A significant difference in the use of metaphors could be a reasonable explanation for these differences in behavior. Both Lakoff (1995) and Reijnierse (2020) encountered differences in metaphor use. These studies, however, did not examine both war metaphors and political backgrounds. Lakoff (1995) found that liberal and conservative texts differ in their use of metaphors, but did not specifically mention differentiation in war metaphors. Reijnierse (2020) found a difference in the use of war metaphors between two different leaders, but did not examine whether this was due to their different political positions. Moreover, neither of them researched COVID-19-related news in the US. This study will investigate whether there is a difference in war metaphor use between liberal and conservative newspapers regarding COVID-19-news. This will be done through corpus analysis analyzing both liberal and conservative newspaper articles about the coronavirus. Therefore, the research question for the present study is:

To what extent is there a difference between liberal and conservative newspapers in the United States regarding war metaphor use in COVID-19 news?

Based on the literature review a hypothesis has been drawn up. Research found that liberals, in general, abide by the restrictions of the coronavirus more closely than conservatives (Allcott, Boxell, Conway, Gentzkow, Thaler & Yang, 2020; Gollwitzer, Martel, Brady, Pärnamets, Freedman, Knowles & Van Bavel, 2020). Liberals are also more aware of the dangers that the coronavirus accompanies (Badger & Quealy, 2020). Since the war metaphor might have contributed to the fear and awareness of the virus, the following hypothesis is drawn up:

The war metaphor will be more present in liberal newspapers than in conservative newspapers.

Method

Materials

News articles that were published prior to the time of the American elections were chosen for analysis in this research. The corresponding timeframe is from March 1 till November 1, 2020. During this time frame the contaminations went up quickly and the American elections were coming closer (Frijters, 2021). Thus, eight months' worth of material was analyzed. This was a deliberate choice because newspapers are, during the pre-election period, more inclined to write texts that are ideologically influenced to drive them into a certain political direction. Moreover, war metaphors were extensively used at the beginning of the pandemic, which started around March 2020 (Semino, 2020). Four newspapers were selected in order to analyze. The two liberal newspapers that were analyzed are *New York Times* and *Bangor Daily News*. The two conservative newspapers that were analyzed are *Daily News* and *LA Review Journal* (BU Libraries, 2021). The news articles were collected through Nexis Uni, which is an online database specially created for students and employees providing national as well as international news- and company information (LexisNexis, n.d.). The selected news articles had to comply with specific requirements. In the first place, the news article had to come from the *New York Times*, *Bangor Daily News*, *Daily News* or the *LA Review Journal*. Secondly, the article's main subject had to be the coronavirus and for this reason, every article was checked individually to ensure the main subject is indeed the coronavirus. The article had the coronavirus as main subject when the words 'COVID-19', 'coronavirus' and/or 'SARS-CoV-2' were found in the title, lead and/or first paragraph. The unit of analysis and collection was the entire article. The articles were selected through proportional stratified sampling. As the articles were derived from different newspapers, this had to be taken into account, as well as the months in which the articles were published. For each newspaper, 12 or 13 articles were randomly selected per month for a period of 8 months. This resulted in 100 newspaper articles that were analyzed per person. As there were four students coding, 400 news articles were analyzed.

Procedure

The analysis was done by four students of the Radboud University. In order to identify and code the metaphors that are going to be found in the article, a strict procedure had to be adhered to. The chosen procedure was the Metaphor Identification Procedure (MIP). MIP is a

method to identify metaphorically used words for both spoken and written words (Pragglejaz Group, 2007). This method checks for each lexical unit whether its meaning is metaphorical or not. The MIP procedure consists of four steps:

1. Read the text and understand the global meaning of it
2. Identify the lexical units in the text
3. A. Determine the meaning of the lexical unit in the context.
3. B. Determine whether the lexical unit has a more basic meaning in other contexts than it has in the given context by looking it up in the dictionary. A more basic meaning can be recognized by being more precise, older in historical context and related to bodily action.
3. C. Only applies when the lexical unit has a more basic meaning in another context. Determine whether the meaning in the given context is comparable with the other, basic meaning of the lexical unit.
4. Provide an answer to the question: is this word metaphorically used? If the answer above is yes, then the lexical unit is metaphorically used.

The following example sentence demonstrates more elaborately how MIP works in practice. “The COVID-19 pandemic has to be defeated” features as the example sentence. Step two identifies the lexical units by separating them by means of slashes. “/The/ COVID-19/ pandemic/ has / to be / defeated/”. In step three, the meaning of each lexical unit will be analyzed. To compare a word that has no metaphorical meaning and one that has a metaphorical meaning, two words of the example sentence are chosen to analyze.

“COVID-19”

3a Contextual meaning of the word is a noun, refers to the coronavirus that is spreading through the world nowadays.

3b The noun does not have a more basic, different meaning when presented in a different context

3c The contextual meaning is thus the same as the basic meaning

Metaphorically used? No

“defeated”

3a Contextual meaning of the word is a verb, refers to the coronavirus that has to be exterminated due to many contaminations and deaths.

3b The verb does have a more basic, different meaning when presented in a different context, namely, to win a fight, battle or competition against someone.

3c The contextual meaning is not the same as the basic meaning.

Metaphorically used? Yes.

To minimize the number of words that had to be analyzed, only nouns and verbs were included in the analysis. Once a metaphor is identified, it had to be determined whether the metaphor is a war metaphor or another type of metaphor. A metaphor was identified as a war metaphor when it referred to a war term, which is a word or expression used in military situations. Examples of war terms are battle, attack, defeat, front line, win, etc. All metaphorically used words that were not identified as war terms were covered under 'other type of metaphor'.

There were multiple variables that had to be noted down in the codebook. First of all, a number of variables had to be pre-coded, namely; newspaper of the article, publication date of the article and length of the article in words. There were more variables present in the codebook. The number of metaphors found in the article, the number of war metaphors found in the article and the number of metaphors per 100 words. To ensure the reliability of the research, each coder also coded 10 articles from a different newspaper. 40 articles, ten percent of the total number of 400 articles, were analyzed in pairs by a first and second coder. Two separate Cohen's Kappa's were calculated. The intercoder reliability for metaphor identification was good $\kappa = .817$. The intercoder reliability for type of metaphor identification was good as well $\kappa = .869$.

Statistical treatment

Multiple statistical tests were conducted in order to answer the research question of this study. To conduct statistical tests, the measurement level of each variable has to be determined. There are two independent variables in this research. The first independent variable is the type of metaphor, consisting of two levels: either a war metaphor or a different type of metaphor. The measurement level is nominal and this variable is a within-subject variable. The second independent variable in this research is the type of news article, consisting of two levels: either conservative or liberal. The measurement level is nominal and this variable is a between-subject variable. The dependent variable in this research is the total number of metaphors per 100 words, with scale as the measurement level. This results in a 2x2 mixed design. The design can be found in Appendix A. A mixed ANOVA was conducted to check whether there is a difference in the number of war metaphors and other type of metaphors per 100 words between liberal and conservative newspapers. If the interaction effect of the mixed

ANOVA is significant, two independent t-tests were conducted. Multiple frequency tests were conducted to provide a clear overview of the number of metaphors per 100 words for each newspaper and their minimum, maximum and mean.

Results

First of all, a test was conducted to check whether the length of the articles differed between liberal and conservative newspaper articles. Liberal newspaper articles consisted of a minimum of 70 words and a maximum of 986 words ($M = 545.82$, $SD = 211.57$).

Conservative newspaper articles consisted of a relatively higher maximum number of words compared with liberal newspaper articles, which is 1739, but a relatively equal minimum number of words, being 66 ($M = 576.17$, $SD = 310.85$).

A mixed ANOVA was conducted with the number of metaphors per 100 words as the dependent variable, type of metaphor as within-subject factor and type of newspaper as between-subjects factor. The mixed ANOVA revealed a significant main effect for metaphor type ($F(1,39) = 654.89$, $p < .001$) and a significant main effect for type of newspaper ($F(1,39) = 654.89$, $p < .001$). The standardized number of other type of metaphors in the article ($M = 1.55$, $SD = 1.21$) was significantly greater than for the standardized number of war metaphors in the article ($M = .13$, $SD = .27$). The main effects were qualified by a significant interaction effect between metaphor type and type of newspaper ($F(1,39) = 84.92$, $p < .001$).

In order to interpret the significant interaction effect between metaphor type and type of newspaper, two independent t-test were conducted. The independent t-test with number of metaphors per 100 words as dependent variable and type of newspaper as independent variable examined whether there is a difference between liberal newspapers and conservative newspapers for each type of metaphor, both war metaphor and other type of metaphor. For war metaphors, the independent t-test showed no significant difference between liberal and conservative newspapers ($t(346.088) = .081$, $p = .245$). The standardized number of metaphors per 100 words for war metaphors in liberal newspapers ($M = .125$, $SD = .213$) showed no significant difference to the standardized number of metaphors per 100 words for war metaphors in conservative newspapers ($M = .127$, $SD = .320$). For other type of metaphors, the independent samples t-test showed a significant difference between liberal and conservative newspapers ($t(387.86) = 9.296$, $p < .000$). The standardized number of metaphors per 100 words for other types of metaphors in liberal newspapers ($M = 2.057$, $SD = 1.184$) was higher than the standardized number of metaphors per 100 words for other types of metaphors in conservative newspapers ($M = 1.036$, $SD = 1.006$).

Conclusion and discussion

The aim of this study is to examine to what extent there is a difference in the use of war metaphors between liberal and conservative newspaper articles in their news about the coronavirus. Based on the relevant literature found, it was hypothesised that war metaphors will be more present in liberal newspapers than in conservative newspapers. The hypothesis was based on the fact that liberals adhere to the rules more, while conservatives are more likely to act in the opposite way (Allcot et al., 2020; Gollwitzer et al., 2020). As the war metaphor is used to spread fear and awareness about the potential dangers the virus accompanies, it is likely that liberals use the war metaphor more often (Sirait et al., 2020).

This research found results that are partly in line with the hypothesis. Firstly, liberal newspapers make more use of metaphors. This supports the research done by Schoonvelde et al. (2019), which stated that texts composed by liberals score higher on integrative complexity, which means that the sentences are more complex. A metaphor is considered complex, as it describes one thing in terms of another thing (Lakoff & Johnson, 2003). However, the maximum number of words per news article for conservative newspapers is higher than for liberal newspapers, which contradicts the statement above. This could be explained by the fact that when media attention increases, the language use becomes less complex (Schoonvelde et al., 2018). It is likely that liberal newspapers obtained more attention during the time before the elections, which could declare the low number of words per news article. It was also found that war metaphors occur approximately 3 times per 100 words and other type of metaphors occur approximately 5 times per 100 words, which results in a total of 8 metaphors per 100 words. This outcome corresponds with other research that found that the occurrence of metaphors in texts is approximately between 3 and 18 times per 100 words (Cameron & Stelma, 2004; Steen et al., 2010).

However, the difference in the use of metaphors is not found in the use of a war metaphor alone. The difference is found between the use of war metaphors and the use of other type of metaphors. Liberal and conservative newspaper articles consist of relatively the same amount of war metaphors, as shown in the tests of frequency. The difference in metaphor use was found in the use of other types of metaphors. Analyses showed that liberal newspapers make more use of other type of metaphors than conservative newspapers do. This is somewhat in line with the hypothesis, which stated that liberals use war metaphors more often.

The variation in findings between this research paper and other research papers can be explained due to multiple limitations. First of all, this study was conducted by students all from the same age group and who were unfamiliar with the MIP method which was used to identify the metaphors. This could have caused the discrepancies, but, research into intercoder reliability has shown that studies find it hard to code reliable (Enschot, Spooren, van den Bosch et al. 2010). Secondly, the corpus was relatively small, as there are over 10.000 news articles published about the COVID-19 pandemic and this study only covered 400 news articles. Lastly, the news articles were selected randomly with the only condition being the three keywords (COVID-19, coronavirus and/or SARS-CoV-2) had to be in the title, lead and/or first paragraph. Therefore, some articles were not purely and only about the coronavirus which could have caused the results to be different. To illustrate, in some cases the title of the news article contained the word coronavirus/COVID-19, however, sometimes only one line in the entire text was about this subject. This may have led to a lower outcome of metaphors, especially war metaphors since this is related to the coronavirus and not to other, more general, subjects.

Future research could aim at expanding the research area cross-culturally, focusing not only on American newspapers but, for example, newspapers that are published in countries where the COVID-19 pandemic hit extremely hard, such as India or China. This may result in different outcomes, as the situation there is quite different. Related to the use of war metaphors, it could be predicted that those newspapers make use of the war metaphor more often as the battle they have to fight is harder than in other countries. Another recommendation for future research is to examine political differences between two different countries. The current study focused on different political preferences within one country, but it might be interesting to examine this for two or even three countries, since countries also differ majorly in their political positions. Lastly, future research could focus on countries that differ in language. This study examined the differences in English texts only. As it is researched that language influences thought, another recommendation for future research might be to examine the difference in metaphor use between different languages and their political preferences (Boroditsky, 2001).

To conclude, this research has contributed to the knowledge about metaphor preference, especially for the use of war metaphors, for both liberal and conservative newspapers in media news articles related to the COVID-19 pandemic. The newspapers differ in their metaphor use, however, not specifically in the use of war metaphors.

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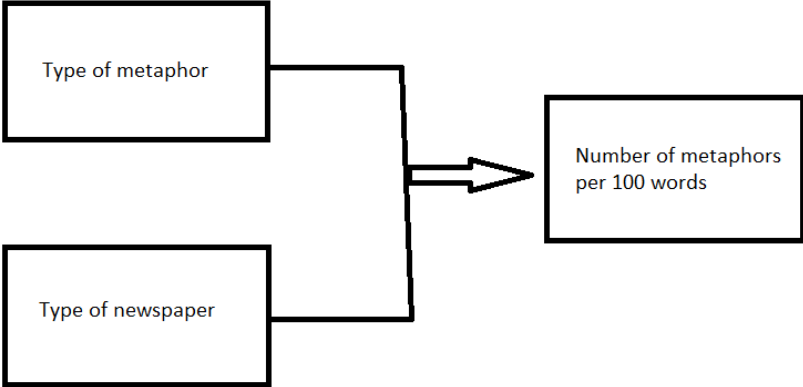
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Appendix

Appendix A



Appendix B

Appendix A. 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: Sanne van der Maas
Student number: s1028493

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- b. I also declare that I have only submitted text written in my own words
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