

Cross-Cultural Examination of the WAR Concept: A Statistical Comparative Analysis in English, Ukrainian, and Dutch

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Abstract

The paper is devoted to the study of comparative analysis of “WAR” concept. Russia’s full-scale invasion of Ukraine on February 24, 2022 caused a wide resonance around the world and has been covered by media. The research is based on materials published on the Internet, namely Daily News (in English), Ukrainska Pravda (in Ukrainian) and Amnesty International (in Dutch). A tool Sketch Engine is used to explore and analyse authentic text corpora built by a corpus building software WebBootCaT. The research is new since an automated language processing method was used to compare synonyms for ‘war’ and words denoting the same concept in English, Ukrainian, and Dutch. This perspective demonstrates the impact of war on language as well as the relationship between war, language and social identity.

Keywords

War discourse, concept, statistical analysis, Sketch Engine, WebBootCaT, text Corpus, CQL.

1. Introduction

War discourse is one of the most significant current discussions around the world. Linguistics took deep interest and played considerable critical attention in this field. A. Hodges defines war discourse as ‘the use of language and social interaction as a mediating element in the outbreak, conduct, and disputation of armed political conflict’ [1]. Central for the war discourse is how social identities and the use of linguistic devices in texts make the readers understand and comprehend the message. Language has a great power and a pervasive role by representing war through the social worlds (in relation to social, political, and ideological orientations).

Communicating a message is one of the most important processes in all spheres of human economy. Correctly chosen words allow people to radically change relations between state entities, change the geopolitical picture of the world. The Russian-Ukrainian war has been going on for 9 years. The coverage process regarding it has lasted for a long time and at different levels. However, with the beginning of the escalation of the conflict,

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namely the full-scale invasion of the territory of Ukraine by Russian Federation on February 2022, the communication suddenly acquired new colours. The year 2022 will forever be etched in the memory of both the Ukrainian people and other nations. It is considered to be the largest and most aggressive war of the 21st century. Interest in it reached high levels among media in different countries. The media coverage of this war helps to unravel its true face and spotlight war crimes and cruel destruction. T. Yingst, a Fox News correspondent, stressed that journalists have 'a massive responsibility to make people care' about the war in Ukraine [2].

This article attempts to analyze and compare words of WAR concept in the text corpora in English, Ukrainian, and Dutch. It involves the use of special tool of corpus analysis (Sketch Engine) to search and analyse corpora of certain languages.

The aim of the study is to do a comparative analysis of the usage of the word "war" and words for the same concept in media that reflects the escalation of the Russian-Ukrainian war coverage in domestic and foreign media.

The following tasks have been set to complete the aim:

- 1) to outline the theoretical framework of the war discourse;
- 2) to make a row synonym of 'war' and words for the same concept in the Ukrainian, English and Dutch languages;
- 3) to assemble the text corpora based on articles in Daily News, Ukrainska Pravda, and Amnesty International;
- 4) to analyse text corpora in Sketch Engine and do a comparative and statistical analysis;
- 5) to draw conclusion based on findings and present them in the form of diagrams.

The novelty of the research refers to the comparative analysis of the synonyms for "war" and words for the same concept in English, Ukrainian and Dutch carried out by an automated language processing tool. This view shows what effect a war has on language and what the connection is between war, language, and social identity.

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2. Related works

A considerable amount of literature has been published on the war discourse. S. Ogilvie draws attention to creation of new language during the war in Ukraine. She stresses that

war connects nations and people in new ways and results in a new exchange of words and worldviews [3]. This process is not unique for the Ukrainian-Russian war but is applied even to the First World War. The author indicates that after its end soldiers brought new language home with them [3]. L. Barnes lines the same parallel and specifies that wars can have a significant impact on language because they often result in circumstances where languages interact and alter, have a variety of effects on language change and are the cause for the invention of new words and expressions [4]. At the same time according to the researcher, political battles are often fought over language rights.

Recent studies have examined the historical significance of language by providing an example of China's interactions with outside world as well as current competitive relationship between the US and China [5]. Scott E. Bruck argues how language affects perception during armed conflict. He states that the language of armed conflict is ambiguous and euphemisms, metaphors and clichés are widely used in professional military speech [6]. Language impacts perception in two levels: 1) a macro level (translation issues) and 2) a micro level (within one's native language [6]).

War is often associated with terrorism and both are the forms of armed conflict that target to triumph an opponent. M. Lausten provides the explanation of the concept of terrorism which is a complex phenomenon and has got attention recently; it exists in many forms and is associated with a wide variety of groups and motivations as well as it is presented in different ways and depends on the speaker [7]. In another major study J. Arquilla and R. Nomura emphasize that the discussion of military matters has long been characterized by strategic disagreement [8].

S. J. Flusberg, T. Matloch and P. H. Thibodeau emphasise the usage of war metaphor with the attempt to frame significant social and political problems, and draw on fundamental and widely accepted schematic knowledge that effectively structures capacity for reasoning and communicating about wide range of situations [9]. More recent attention has focused on analysis of metaphorical and descriptive language demonstrating how researchers studying drone texts can strengthen and support their analysis by applying their knowledge of cognitive linguistics. Cognitive linguistic approaches offer useful resources for understanding how common discourse patterns produce ideological stances on drone warfare [10]. This issue is analysed by M. Falgorzata presenting a study of cognitive discourse analysis to prove that metaphor-based understanding includes "a co-activation of the source and target domains which can be formalized in terms of metaphorical mapping" [11].

This article novelty comes from the fact that it uses automatic search of specific linguistic units for the first time to do a comparative analysis of words denoting the concept WAR. Modifying the template — including but not limited to: adjusting margins, typeface sizes, line spacing, paragraph and list definitions — is not allowed.

3. Methods and materials

Rapid progress in Information Technologies causes the need for text processing and automated word categorization. The research materials are based on articles covering the war against Ukraine in such Internet resources as Daily News, Ukrainska Pravda and

Amnesty International. Sketch Engine is used to build a corpus from the web and to analyse the data. Sketch Engine has the function of corpus building software. We implemented its corpus building tool which creates a text corpus from relevant web pages using WebBootCaT. The data from the Internet are cleaned, deduplicated and non-text is eliminated to collect linguistically relevant text material. To specify which content should be downloaded we provide a list of URLs.

Here is the procedure of creating a corpus from the web:

1. Click NEW CORPUS on the corpus dashboard.
2. Type a name for a corpus, select the language and click next.
3. Select the Find texts on the web option.
4. Click on the help icons to learn about the options and settings.
5. Repeat the procedure three times to create three corpora (in English, in Ukrainian and in Dutch).

The next task is to create a list of synonyms for the words “war” in English, “війна” (vijna) in Ukrainian and “oorlog” in Dutch. Collins dictionary (www.collinsdictionary.com/dictionary/english-thesaurus/war) is used to make a row of synonyms in the English language [13] : conflict, drive, attack, fighting, fight, operation, battle, movement, push, struggle, clash, combat, offensive, hostilities, hostility, warfare, expedition, crusade, strife, bloodshed, jihad, enmity, and armed conflict.

The practical dictionary of synonyms in the Ukrainian language by S. Karavanskyi is applied to indicate synonymous words for “війна” [18] (vijna): брань (bran), пря (pria), кровопролиття (krovoprolytta), м'ясорубка (miasorubka), сварка (svarka), суперечка (sererechka), сутичка (sutychka), конфлікт (konflikt), боротьба (borotba), змагання (zmagannia), суперництво (supernuctvo), ворожнеча (vorozhnecha), агресія (ahresia), and битва (bytva). This list was accompanied by атака (ataka), наступ (nastup), операція (operaciia), обстріл (obstril), окупація (okupaciia), конфлікт (konflikt), and агресія (ahreciia). The latter are included in the list based on dictionary definitions [19, 20, 21, 22, 27, 28].

An online dictionary of synonyms (www.mijnwoordenboek.nl/synoniem.php) is applied to compile a list of synonyms for oorlog [24]. This dictionary gives only three synonyms: guerrilla, krijg, strijd. However, it suggests a list of words and phrases with the similar meaning: bedreigende situatie, bloedvergieten, conflict, droevige gebeurtenis, gevecht, gewapende strijd, aanval, hevige strijd, kamp, komt voort uit onvrede, landenstrijd, onenigheid, onvrede, plaag van de mensheid, veldslag, vijandschap, volkerenstrijd, wapenstrijd, wereldbrand.

The next stage is to investigate the usage of the synonymous words in each corpus. To do word sketches we applied the following actions (see Fig.1):

1. First, we choose a corpus which we intend to research.
2. We click Word Sketch.
3. Then, we type a lemma which is the basic form of a word.
4. We click “Go” and a list of intended words appears on the screen.

To present a quick and understandable representation of words we use WordArt.com. It is an online cloud generator to create a word cloud for each language to provide visual representation of synonymous words based on frequency and relevance.

To visualize our obtained results and to create a percentage graph we use Google Sheet. We implement and follow the course of actions:

1. We start with data and enter them in a table.
2. We highlight this table and select Insert.
3. Then we should Click Charts.
4. We can select Box under Chart Type and as a result we receive a graph.

These graphs are presented in the article as a result.

One can search for all words using CQL (Contextual Query Language). For example:

[lempos="war-n"] / [word="war"]

[lempos="conflict-n"] / [word="conflict"]

[lempos="operation-n"] / [word="operation"]

[lempos="attack-n"] / [word="attack"]

[lempos="battle-n"] / [word="battle"].

Next, we selected the OneClick Dictionaries option and accessed the dictionaries. By analyzing and utilizing examples, we eliminate words that, based on their meanings and contexts, do not represent the intended words.

Within the framework of the research, we use such methods as descriptive, deductive, component analysis, contextual analysis, quantitative and comparative. The descriptive method is applied to find, generalize, and systematize theoretical material from various areas of linguistics on war discourse. The deductive method identifies and describes the verbal and communicative features of the researched material based on the general characteristics of similar components. Component analysis is used to study and describe the results based on the semantic characteristics of isolated verbal elements, clustering strings (words) into similarity groups. Contextual analysis is used to study the contextual features of the used vocabulary from the point of view of situational and communicative situations. The quantitative method is used to count the used verbal means in the original texts. The comparative method is used to compare the results of the researched material in English, Ukrainian, and Dutch.

4. Discussions and results

The English corpus is compiled of materials from NY Daily News (www.nydailynews.com) and consists of 100 362 words. The key word for our analysis is "war". The meaning of this term is best to be explained in context which is determined by social impact. A. Lukin sees 'war' as a lexical choice and it opens up particular choices for creating coherent text reporting [12]. The word 'war' is used the most frequently in our research material to describe russia offensive invasion in Ukraine – 642 times. Let us have a look at some examples:

1. We notice very clearly that the **Ukraine war** is not only Russia's **cruel war** against Ukraine, but also a question of whether autocracies and law of the strongest will prevail.
2. The pledge defied Russian warnings that Western assistance would **prolong the war** and the pain of Ukraine's people.
3. The attitude of Russians towards Ukrainian culture heritage is a **war crime**.

In the first example "war" is used twice and is preceded by such modifiers as 'Ukraine' and 'cruel'. The second example introduces 'war' as an object of the verb 'prolong'. The last one represents noun 'crime' modified by 'war'.

The next step is to look at synonyms of 'war' and to analyse their usage in the corpus. We created a list of synonyms for "war" in English which includes 23 positions compiled from the set of online dictionaries [13, 14, 15, 16, 17, 23]: conflict, drive, attack, fighting, fight, operation, battle, movement, push, struggle, clash, combat, offensive, hostilities, hostility, warfare, expedition, crusade, strife, bloodshed, jihad, enmity, and armed conflict. Only twelve of them occurred in English text corpus processed by Sketch Engine: attack (171), conflict (71), fight (51), occupation (9), invasion (120), operation (70), aggression (33), offensive (18), battle (15), fighting (15), push (12), struggle (12), combat (9), hostility (6), and warfare (6).

Visual representation of the words can be seen in Fig.1



Figure 1: Visual representation of the concept WAR

The examples are illustrated in the bellow sentences and have different functions:

1. The nearly **nine-month-old conflict** has disrupted trade in oil, natural gas and grain, and shifted much of the summit's focus.

2. Missiles against civilian housing and other nonmilitary targets seem to be just **terror attacks**, essentially to try to intimidate the Ukrainian population.
3. and some expressed concern about Ukraine's further push towards Kreminna.

The first three examples include synonyms for "war" which are preceded by modifiers. Their purpose is to make sentences more descriptive and/or detailed: make the meaning clear, more specific or provide additional details. These modifiers function as adjectives.

4. small town 18 kilometers (11 miles) from the border is often higher now than before the **fighting began**.
5. This **is a battle** of wills and a battle of logistics.
6. as Moscow redirected attention and troops there, Ukraine **launched** another highly effective **offensive** in the northeast near Kharkiv.

Nouns "fighting", "battle" and "offensive" are used with verbs in examples 4-6. "Fighting" is a subject of a sentence, "battle" and "offensive" function as objects of a sentence.

7. strike that killed two men Tuesday in a Polish village close to the Ukrainian border brought the **conflict home** and added to the long-suppressed sense of vulnerability in a country.
8. six months after Russia invaded, the war has slowed to a grind, as both sides trade **combat strikes** and small advances in the east and south.

In the latter two examples a noun is modified by another noun and has the function of attributive noun.

9. unlike the russians, belarusians have absolutely no **hostility towards** the Ukrainians and don't understand the point of this special operation.
10. it is painstaking, clear **offensive of** the NATO army.

The last two sentences introduce prepositional phrase of which one component is a word synonymous to 'war'.

The graph below Fig.2 shows the results of a survey of WAR concept based on Daily News materials. We included words which occur the most frequently in texts.

From the pie chart it is clear that the word "war" is the key word of the concept with 52,7 % compared to other words.

This is slightly more than half of the findings in this category.

We would like to focus our attention on secondary words of this concept "attack" with 14 %. "invasion" - 9,8 %, "conflict" - 5,9 %, "fight" - 4,2 %, "operation" - 3.4 % and "aggression" - 2,7 %.

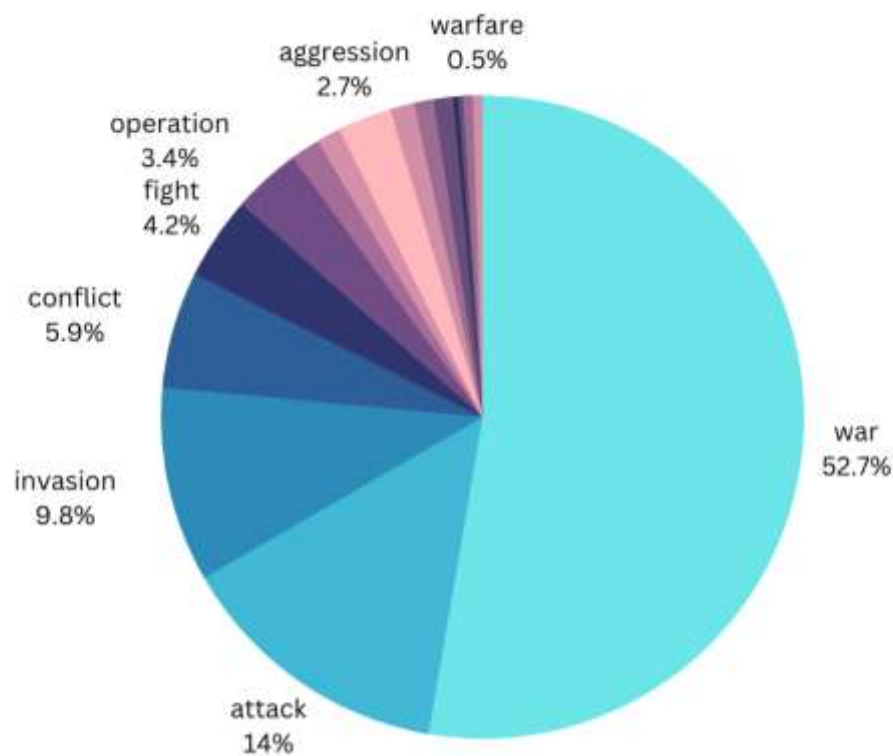


Figure 2: Concept WAR

The Ukrainian corpus includes articles published in *Ukrainska Pravda* (www.pravda.com.ua) and includes 101 220 words. The word *війна* [war] [viina] is used 636 times to denote the fighting of Ukrainian people against russian invasion. The following examples illustrate the usage in context:

- a) **Повномасштабна війна** сприяла різкому загостренню стертих соціальних протиріч.
- b) Відтак опосередковано законодавчо **визнали війну** рф з лютого 2022, а не з 2014, зменшили суми збитків репарацій...
- c) Навіть територія держави агресора за **умов війни** не може бути недоторканою.

Deeper analysis shows us linguistic functions of *війна* in sentences. In the first sentence “повномасштабна” modifies it, while verb “визнали” is used with *війна* as object in the second example. The last example includes another noun “умов” modified by *війна*.

Practical dictionary of synonyms in the Ukrainian language by S. Karavanskyj was used to collect synonyms for “*війна*” [18]. The dictionary provides us with the following list: брань [swearing] [bran], пря [stright] [pria], кровопролиття [bloodshed] [krovoprolyttia], м'ясорубка [grinder] [myasorubka], сварка [quarrel] [svarka], суперечка [dispute] [superechka], сутичка [clash] [sutychka], конфлікт [conflict] [konflikt], боротьба [fight] [borotba], змагання [competition] [zmahannia],

суперництво [rivalry] [supernytstvo], ворожнеча [enmity] [vorozhnecha], агресія [aggression] [ahresiia] and битва [battle] [bytva]. Only seven of these words were detected in the corpus: агресія [aggression] [ahresiya] (84), боротьба [fight] [borotba] (39), битва [battle] [bytva] (6), змагання [competition] [zmahannia] (6), конфлікт [conflict] [konflikt] (6), сутичка [clash] [sutychka] (3) and суперечка [dispute] [superechka] (3). To complete the synonymous words, we investigated online dictionaries based on the definition of each word [18, 19, 20, 21, 22, 27, 28] and the additional list was created: атака [attack] [ataka], наступ [offensive] [nastup], операція [operation] [operatsiia], обстріл [shelling] [obstril], окупація [occupation] [okupatsiia], конфлікт [conflict] [konflikt], and агресія [aggression] [ahresiia]. The next stage was to process the text for these words. The results are awaited: вторгнення [invasion] [vtorhnennia] (81), атака [attack] [ataka] (84), наступ [offensive] [nastup] (54), операція [operation] [operatsiia] (39), обстріл [shelling] [obstril] (75), бій [fight] [bii] (9), окупація [occupation] [okupatsiia] (15), and конфлікт [conflict] [konflikt] (6).

The set of these words has a significant meaning for Ukraine.

Every turning point in the country is reflected in the language. A. Levkova points out at the fact that each particular usage of a word means something by increasing expression, emotions and even distancing from certain phenomenon or to diversify the synonyms [26].

The main task of the language is to reflect reality, respond to current events and convey their true course.

A visual representation of the results is shown in Fig.3.



Figure 3: Visual representation of the concept ВІЙНА [WAR] [VIINA]

Here are the examples:

- 1) Тобто **смертельні сутички** українців та росіян повсюдно у пост катастрофічному світі будуть припинятися фізичним знищенням обох **сторін конфлікту**.

In this sentence we encounter two synonyms of війна: сутичка and конфлікт. Both words are preceded by modifiers, which give information and affect the meaning of a sentence.

- 1) Також у ЗС ЗБ є окремі роди військ, серед яких спеціальні війська (інженерна підтримка, зв'язок, розвідка, **війська радіоелектронної боротьби**, радіаційного, хімічного та біологічного захисту), Сили спеціальних операцій (ССО), та територіальні війська (щось на кштал наших ТрО).

Noun “війська” is modified by “боротьба” which is a synonym for “війна”.

- 2) Українська література фіксує насамперед **досвід визвольних змагань** – «Третя революція» Валер'яна Підмогильного, тексти Григорія Косинки, «Вершники» Яновського, тексти Миколи Хвильового.

This example introduces two functions: noun “досвід” is modified by “змагання” and at the same time “визвольних” modifies a noun “змагань”.

- 3) Держава, що вважає себе засновником ООН, постійним членом її Радбезу, **вчинила повномасштабну агресію** щодо нашої держави з метою знищення українського народу і анексії наших територій.

This example shows a verb “вчинила” uses with “агресія” as object and an adjective “повномасштабну” modifies “агресію”.

- 4) Вона була сформульована в контексті слів голови військового комітету НАТО, адмірала Роба Бауера про те, що «альянс має продовжувати готуватися до **майбутніх битв**».

A prepositional phrase is used, and it modifies a verb “готуватися”.

- 5) За твердженням обласної ради, внаслідок **атаки дрона** ніхто не постраждав, руйнувань також не було.

This example illustrates a genitive modifier of “атака” and marks it as a possessor of another noun.

- 6) Якщо ми говоримо, що **спроби наступу** можуть десь бути, то наша розвідка, Генеральний штаб, наші партнери говорять, що це може бути Схід і Південь.

We have another noun “спроби” modified by “наступ”.

7) По суті, **херсонській операції** передувало знищення логістичних поставок.

A modifier of операція is an adjective and gives information about it.

8) **Обстріл тривав** 4 години, росіяни ховалися у підвалах, а полонені були зверху.

Verb ‘тривати’ is used with “обстріл” as a subject.

9) Не лише **здійснив** очевидну військову **окупацію**, що стала результатом збройної агресії і застосування сили.

Contrary to the previous sentence a verb “здійснювати” is used with “окупація” as object.

The chart Fig.4 illustrates the percentage of words for the concept ВІЙНА represented in Ukrainska Pravda. It can be seen that “війна” has the greatest number and estimates at 55,9 %. If we look at the graph, we will notice that secondary words of the concept encounter less frequently and none of them exceed 8 percent. Thus, “агресія” and “атака” are 7,4 % each, “вторгнення” – 7,1 %, “обстріл” – 6,6 %, “наступ” – 4,7 %. The smallest number possess “операція” and “боротьба” reaching 3,4 %.

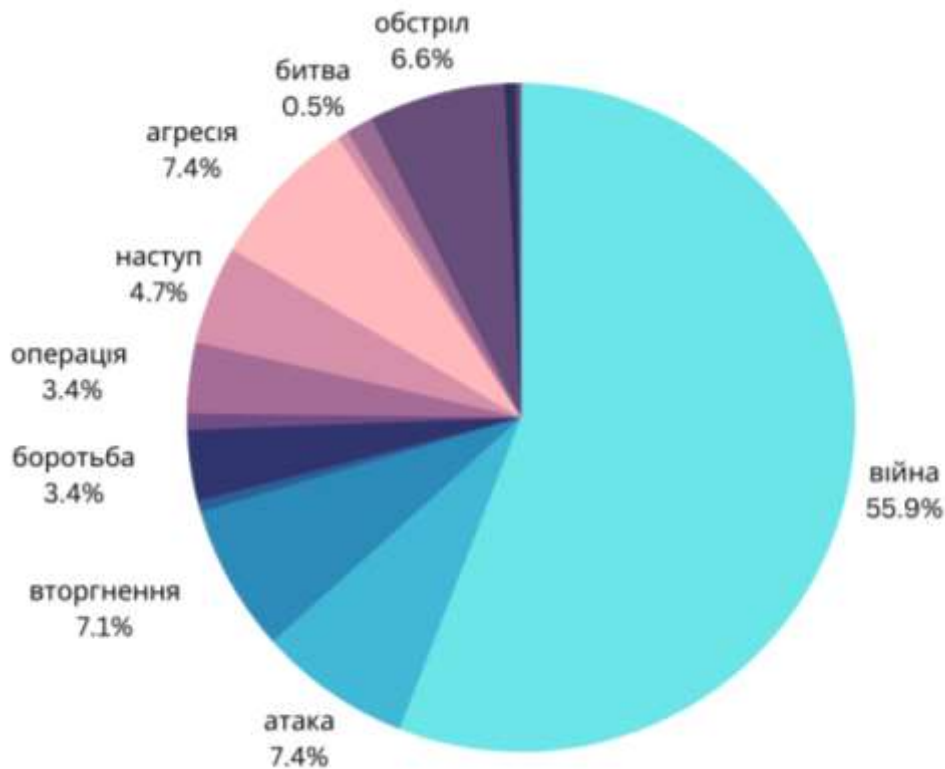


Figure 4: Concept ВІЙНА [WAR] [VIINA]

We compiled the Dutch corpus of articles published in Amnesty International (<https://amnesty.nl>) and it includes 99 600 words.

We used a number of online dictionaries [24, 25, 26] to compile a list of synonyms for oorlog. This dictionary gives only three synonyms: guerrilla, krijg, strijd. However, it suggests a list of words and phrases with the similar meaning: bedreigende situatie, bloedvergieten, conflict, droevige gebeurtenis, gevecht, gewapende strijd, aanval, hevige strijd, kamp, komt voort uit onvrede, landenstrijd, onenigheid, onvrede, plaag van de mensheid, veldslag, vijandschap, volkerenstrijd, wapenstrijd, wereldbrand. We processed the Dutch corpus and only the following words were found: oorlog (168), invasie (99), agressie (57), operatie (30), guerrilla (3), strijd (51), conflict (171), gevecht (15), aanval (480), offensief (6) and bezetten (3).

The following figure Fig.5 shows a visual representation of findings in this category.



Figure 5: Visual representation of the concept OORLOG

The word oorlog is used 168 times. Let us look at some examples:

- 1) **Oorlog Oekraïne** jaagt Europese innovatie en militaire mobiliteit aan.

In our example “Oekraïne” is a modifier of “oorlog”.

- 2) Legers mogen ziekenhuizen nooit gebruiken om **oorlog te voeren** en mogen alleen scholen of woningen gebruiken als laatste redmiddel als er geen haalbare alternatieven zijn.

Verb “voeren” is used with “oorlog” as object.

- 3) Amnesty roept de Russische autoriteiten ook op om alle onwettige acties onmiddellijk te beëindigen, waaronder de agressieve **oorlog en de mensenrechtenschendingen** die daarbij worden gepleegd.

Here two nouns “oorlog” and “mensenrechtenschendingen” are connected by a conjunction.

The following examples show the usage of synonyms for oorlog and words which are used to describe it:

1. Een **langdurige guerrilla**, illegale wapenstromen en een algehele toename van geweld en straffeloosheid liggen op de loer.

It is certain that a modifier of “guerrilla” is used to describe it.

2. In **hun strijd** om de Russische opmars te stoppen heeft Oekraïne artilleriestukken zoals de geavanceerde Pantserhouwitsers hard nodig.

Presented sentence assumes that a pronominal possessor “hun” accompanies “strijd”.

3. Een kernprincipe van het internationaal humanitair recht (het oorlogsrecht) is dat partijen in een **gewapend conflict** wel militaire doelen mogen aanvallen, maar geen burgers of civiele objecten.

This sentence suggests that verb “wapenen” is used with “conflict” as object.

4. De winter is begonnen en **de gevechten** om Oekraïens grondgebied gaan door.

Determiner “de” is used before “gevecht” in this example.

5. Bij daaropvolgende **Russische aanvallen** in bevolkte gebieden werden burgers gedood en burgerinfrastructuur vernietigd.

This example has important implication for a modifier of “aanval” is used here.

6. Door het publiek onwetend te laten over protesten en het toezicht op de protesten te belemmeren, probeert het Kremlin elke publieke uiting **van onvrede** uit te roeien.

Prepositional phrase is used here and functions as information-givers in the sentence.

7. We ontmoeten families van wie dierbaren zijn omgekomen bij **gruwelijke aanvallen** en van wie het leven voor altijd is veranderd door de Russische invasie.

Taken together this example suggests that “aanval” and “invasie” are modified by adjectives “gruwelijke” and “russische”.

8. De hele **operatie was** niet zonder risico, hoewel een confrontatie met russische militairen.

From the example we can assume that verb “zijn” is used with “operatie” as subject. Let us turn to the graph Fig. 6 introduces the findings of the research on concept OORLOG. The

results are quite unexpected as concept word “oorlog” is not the key word and has only the third largest number with 15,6 %. The largest number goes to “aanval” with 44,6 % and the second – to “conflict” with 15,9 %. The other figures are less than 10 %: “invasie” – 9,2 %, “agresie” – 5,3 %, “strijd” – 4,7 % and “operatie” – 2,8%.

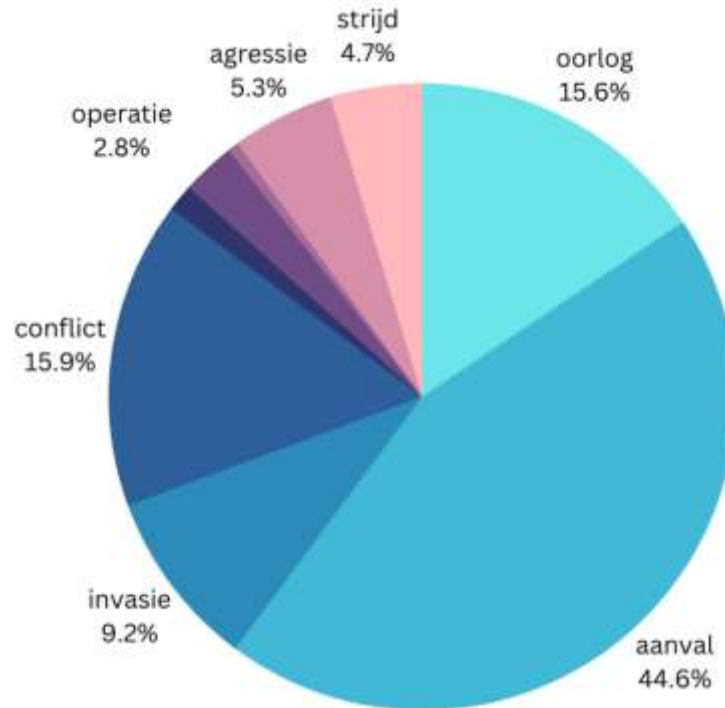


Figure 6: Concept OORLOG

5. Conclusions

The study of cross-cultural comparative analysis of the "WAR" concept is the focus of the research. The study is founded on materials published online, including articles from Daily News (in English), Ukrainska Pravda (in Ukrainian) and Amnesty International (in Dutch). To examine and analyze three text corpora were created by WebBootCaT and a tool Sketch Engine was used for the analysis. The current study presented a novel idea in the field. The scope of the analysis compared concepts WAR, ВІЙНА, and OORLOG and words expressing the same idea in English, Ukrainian, and Dutch using an automated language processing technique. This viewpoint illustrates how media affects language with the connection to war.

This study aimed to determine the concepts of WAR, ВІЙНА (VIINA) and OORLOG which represent the same notion covered by media in different languages. One of the most significant findings to emerge from this study is that the key word of the concepts in English and Ukrainian coincides and reach the highest number. However, the key word of the concept OORLOG in Dutch varies: “aanval” displaced “oorlog” and overtook it three times. The relevance of other concept components is clearly maintained in general. Another

significant difference is that “invasion” in English and “invasie” in Dutch prevail in usage compared to “вторгнення” (vtorhnennia) in Ukrainian. At the same time “конфлікт” (konflikt) to denote this concept is used only six times in the Ukrainian language while in English it increased by 11 and in Dutch the number soared further by 28.

Table 1

Comparative analysis of the concepts WAR, ВІЙНА (VIINA) and OORLOG

War(642)	Війна [War] [VIINA] (636)	oorlog (168)
attack (171)	Атака [attack] [ataka] (84)	aanval (480)
invasion (120)	Вторгнення [invasion] [vtorhnennia] (81)	invasie (99)
conflict (71)	конфлікт [conflict] [konflikt] (6)	conflict (171),
fight (51), fighting (15)	боротьба [fight] [borotba] (39), бій [fighting] [bii] (9)	gevecht (15)
operation (70)	операція [operation] [operatsiia] (39)	operatie (30)
offensive (18)	наступ [offensive] [nastup] (54)	offensief (6),
aggression (33)	агресія [aggression] [ahresiia] (84),	agresie (57)
battle (15)	битва [battle] [bytva] (6)	strijd (51)
occupation (9)	окупація [occupation] [ocupatiia] (15)	bezigheid (3)

The scope of the study is limited in terms of the corpora as materials have been compiled from articles published on websites (Daily News in English, Ukrainska Pravda in Ukrainian and Amnesty International in Dutch). Further research needs to examine more closely the links between relationship of concept components.

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References

- [1] A. Hodges, War discourse. 2015. URL: <https://works.bepress.com/adamhodes/55/>
- [2] J. Barr, They risk it all to cover war in Ukraine. Are people still watching? 2023. URL: www.washingtonpost.com/media/2023/02/22/ukraine-war-anniversary-tv-media/.

- [3] S. Ogilvie, How war shapes languages, 2022. URL: www.prospectmagazine.co.uk/columns/how-war-shapes-language.
- [4] L. Barnes, Language, war and peace: an overview. 2008: 3-12. doi:10.1080/10228190308566188.
- [5] P. Loftus, F. Jon Nesselhuf and H. Ward, A war by words: Language and cultural understanding in the age of information warfare. 2020. URL: www.airuniversity.af.edu/JIPA/Display/Article/2425627/a-war-by-words-language-and-cultural-understanding-in-the-age-of-information-war/.
- [6] S. E. Bruck, Lost in translation: How language affects perception during armed conflict, 2019. URL: <https://smalwarjournal.com/jrml/art/lost-translation-how-language-affects-perception-during-armed-conflict>.
- [7] M. Lausten, Language at war. A critical discourse analysis by speeches of Bush and Obama on war and terrorism, Publisher: Bod Third Party Title, 2016. URL: www.books.google.nl/books?is=FWSuDAAAQBAJ&printsec=frontcover#v=onepage&qv&f=false.
- [8] J. Arquilla, R. Nomura, Three wars of ideas about the idea of war, Comparative strategy, Volume 34? Issue 2, 2015: 185-201. doi: 10.1080/01495933.2015.1017370.
- [9] S. J. Flusberg, T. Matloch and P. H. Thibodeau, War metaphor in public discourse. Metaphor and symbol. Volume 33. Issue 1, 2019. doi: 10.1080/10926488.2018.1407992.
- [10] M. Voice, Language, cognition, and drone warfare: Applying cognitive linguistic tool in the critical analysis of drone discourses, in Journal of war and culture studies. Volume 15. Issue 4 (2022): 425-443. doi: 10.1080/17526272.2022.2116192.
- [11] M. Fabiszak, A conceptual metaphor approach to war discourse and its implications, Adam Mickiewicz University, 2007.
- [12] A. Lukin, War and its ideologies: A social semiotic theory and description. Springer Singapore. 2019. doi: 10.1007/978-981-13-0996-0.
- [13] Collins dictionary. URL: www.collinsdictionary.com/dictionary/english-thesaurus/war.
- [14] L. Annabelle, The meaning of 'war': From lexis to context, Journal of Language and Politics, V. 12, N. 3, 2013. doi: 10.1075/jlp.12.3.06luk.
- [15] Thesaurus dictionary. URL: www.thesaurus.com.
- [16] Cambridge dictionary. English thesaurus. URL: <https://dictionary.cambridge.org/thesaurus/>
- [17] Merriam-Webster dictionary. URL: <https://www.merriam-webster.com/thesaurus>.
- [18] S. Karavanskyi, Practical dictionary of synonyms in the Ukrainian language, 1991 (in Ukrainian).
- [19] Ukrainian dictionary of synonyms. URL: <https://1675.slovaronline.com>.
- [20] A. A. Burachok, Dictionary of the synonyms in the Ukrainian language. V. 1. Kyiv. 2001.
- [21] A. A. Burachok, Dictionary of the synonyms in the Ukrainian language. V. 2. Kyiv. 2001.
- [22] O. Vusyk, Dictionary of the synonyms in the Ukrainian language. Ternopil: Navchalna knyka. 2012.
- [23] Online dictionary of synonyms. URL: www.mijnwoordenboek.nl/synoniem.php.
- [24] Online synoniemenwoordenboek. URL: <https://synoniemen.net>.

- [25] Nederlandse synoniemen. URL: <https://www.worde.org/word/thesaurus>.
- [26] Woordenboek Engels-Nederlands. URL: www.linguee.nl/engels-nederlands/vertaling/dictionary+of+synonyms.html.
- [27] A. Levkova, Words of war: a writer about the language of wartime. URL: <https://theukrainians.org/slova-vijny/>. (in Ukrainian).
- [28] Academic dictionary of the Ukrainian language. URL: www.sum.in.ua.