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COGNITIVE-DISCURSIVE APPROACH TO THE ANALYSIS OF INFORMATION WAR

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Abstract

The article focuses on information war in media communication. The objective is to reveal the heuristics of a cognitive-discursive approach to the phenomenon with emphasis on the functioning of a complex conceptual structure in the media and its role in world representation. The cognitive-discursive method is employed. It is argued that it is strengthened by the corpus approach and the modelling method that in combination give a holistic view of the mental constructs of the discursive type. The material for the study comprises 101 texts retrieved from the English language quality press, time period is from 01.01.2010 till 11.10.2019. The authors introduce the notion of discourse-world of information war. It is defined as a representational structure, which is regularly textualized in the discourse of mass media. It is proved that discourse-world of information war presents a macrostructure that is created by journalists and interpreted by readers under the influence of situation that determines its conceptual content. The paper analyses the discourse-world of information war in the American press. Key concepts constituting the macrostructure of the discourse-world are systematized. The notion of the world-modelling potential of the concept is put forward. World-modelling potential of the concept DISINFORMATION is characterized according to the parameters of semiotic density, syntagmatic relations, figurative and evaluative representations, factual information. The results may prove fruitful for further development of the theory of the language of information war.

1. Introduction

Information and psychological war is a complex phenomenon that encompasses different instruments such as intelligence, disinformation, propaganda, cyberattacks, etc. The shift from the physical battlefield to the sphere where information is used to win the hearts and minds of people has made it as dangerous as radiation. The effect is unnoticeable, but deadly.

The problem of working out measures to counteract information threats forms one of the prioritized state tasks, set by the President in the Decree on the approval of the national security doctrine (Ukaz, 2016). It postulates the increasing information influence on the part of the western media, aimed at "eroding traditional Russian spiritual and moral values".

2. Problem Statement

The task of ensuring Russia's information security, set by the President, is vital. Within the framework of this paper, it is regarded as a contribution to the study of the language of information and psychological confrontation. As it is a discourse study of a complex phenomenon of information war, we take into account the paradigm situation, existing in modern linguistics, i.e. we choose a broad mixed-methods approach to the study of language use in discourse, which draws upon cognitive linguistics, discourse analysis and corpus studies. We argue that information war is regularly textualized in an aggregate of media texts, united by the topic of confrontation between the West and Russia. Modelling it as a conceptually-complex representational structure of media discourse can give insights into the balance of powers in global politics and clarify what opinions and attitudes biased worldviews project. Cognitive-discursive approach to the analysis may prove fruitful on condition it is combined with a corpus method and a modelling method.

3. Research Questions

The present study is designed to provide a rationale for studying information war as a cognitive-discursive phenomenon. It sheds light on the conceptual organization of the discourse-world of information war (hereafter – DW of information war) in the media. We interrogate the macrostructure of the DW of information war through a quantitative corpus-driven approach in combination with a qualitative analysis to increase the validity of the research results. We try to find what concepts constitute the macrostructure of the DW and explain how it is organized in order to shape readers' attitudes and enhance certain ideological stance. We single out basic concepts within the structure of the DW and characterize world-modelling potential of one of the most foregrounded concepts to characterize its dynamic features, acquired due to the functioning in media discourse.

3.1. Development of linguistics of information and psychological war in Russia

Growing concern for protecting national interests of Russia in the information sphere stimulates the reaction of scholars to rise to the challenges of the time and determines the growth of relevant scientific publications. (Bernatskaya, 2016; Gavrilov, 2018; Kopnina & Skovorodnikov, 2017;

Linguistics …, 2017, 2019; The Problems…, 2017; Sinelnikova, 2014). Linguistics of information war has to be a new branch of linguistics (Russian scholars prefer the term *information and psychological war* to the term *information war*). The object of the study is the use of language as a means of waging information war. The discipline originates in the depths of political linguistics (Chudinov, 2015; Ivanova, 2016; Sinelnikova, 2014). It has received a systematic foundation in two monographs written by groups of Russian scholars with Professor Skovorodnikov as editor-in-chief (Linguistics ... 2017, 2019). Although terminological heterogeneity is still a mark and a disadvantage of a "young" and "immature" linguistic discipline, which needs to improve its methodological apparatus, the interest of experts to the problems of information war has continued to grow (Kushneruk & Chudinov, 2019). Information war is generally defined as a confrontation between combatants, resulting from a conflict of interests and/or ideologies, which is realized with language use to influence people's mind (individual, collective) for its cognitive suppression and/or subordination, as well as by protection from such negative influence (Linguistics... 2017, p. 13).

A two-year period of the development of Linguistics of information war in Russia has shown a noticeable surge of ideas about possible approaches to the study of information confrontation through language. Scholars have tried to take into account a wide range of factors having military, technical, political, economic, axiological, psychological, media, and cognitive character. Behind the existing diversity of goals, objectives, and approaches, there lies a fundamental agreement of scholars on understanding information war as a discursive phenomenon. It reflects the unanimity of views that information war has a predominant distribution in the media discourse (Kushneruk & Chudinov, 2019).

3.2. Mass media as a battlefield of information war

Mass media are an actual battlefield of information war, which is conducted by media managers to form public opinion on most controversial issues. It is waged and framed by the determinants of foreign policy coverage being associated with the struggle for power to proclaim what is true and false, with distortion of facts and language influence on the audience. Its primary aim is to steer public opinion (The Problems…, 2017, p. 19). In terms of discourse analysis, the media are considered a set of published texts distributed through various channels and intended for a wide range of readers (Vysockaja & Petrova, 2018). As stated by Kopnina and Skovorodnikov (2017), the media can provide information about the following aspects of information war: 1) its goals and objectives; 2) objects and targets; 3) channels and genres used as weapons; 4) strategies of information and psychological attacks; 5) language tools; 6) methods of confronting information and psychological war.

Along with these, media texts present a source of data about conceptually complex representational structures textualized in discourse, which are systematically constructed in the media to cause damage to the subject of opposition. In our terminology, this structure is called DW of information war.

4. Purpose of the Study

Though much has already been done by scholars, unraveling the linguistic mechanisms of information war, the question of the impact on cognitive schemes of reality interpretation has almost remained unanswered. Moreover, one can hardly find researches that would encompass quantitative and qualitative elements of analysis for better understanding of information war in media discourse. With this in mind, the authors apply corpus linguistics tools and discourse analysis to address the research questions and ponder on media managers' intentional construction of a "special reality", or discourse-world, which presents mental pictures of fragments of reality that can cause harm to individuals and groups of people – their image, reputation, and collective identity. The objective of the paper is to demonstrate the heuristics of a cognitive-discursive approach to the study of information war, viewed as a conceptually complex representational structure objectified in the media discourse. The materials for the study are taken from the virtual corpus "News on the Web" (https://www.english-corpora.org/now/). The time frame ranges from 01.01.2010 till 11.10.2019.

5. Research Methods

5.1. Cognitive-discursive and mixed-methods approaches

At the beginning of the XXI century linguistics raises the questions of correlations between mental and linguistic phenomena and their dependence on social practices. Against this background, cognitive-discursive approach enables researches to focus on the coordination of mental, communicative and language factors in the media discourse and their role in the processes of world representation. It seems, though, it is not enough to limit the research to one method.

Media discourse is a multidimensional, "enlarged" linguistic context that must be analyzed within the framework of a modern linguistic paradigm. The established paradigm synthesizes cognitive and communicative factors, and offers a mixed-methods perspective, which may prove adequate if qualitative techniques are combined with the quantitative: "Mixed-methods research enables researchers to provide a stronger evidence base for studying a research problem than either quantitative or qualitative research alone, as each informs the other and contributes in examining the linguistic phenomenon under investigation" (Qaiwer, 2016, p. 68). Following Qaiwer, our research is designed to use mixed methodology that includes a cognitive-discursive approach in combination with a corpus analysis and a modelling method.

Since information war is regularly objectified in thematically united media texts, a cognitive-discursive approach allows us to find out how a complex conceptual structure is "packaged", as well as reveal what part it has in the ideological organization of media communication addressed to the reading public. The use of the cognitive-discursive method makes it possible to characterize the world-modelling potential of a representational structure with the focus on the goals of communication. The corpus method combined with the method of modeling has heuristic value for discourse analysis as it may strengthen the qualitative analysis of the material. Corpus technologies allow observing and finding out regularly-occurring patterns and the activity of language units within a relatively short time period, as well as comparing data from different corpora.

The use of the above mixed-methods approach is aimed at reconstructing a conceptually complex representational structure in media discourse, which is generated in an aggregate of media texts united by the subject of information confrontation. The resulting model will allow us to reveal the specifics of the cognitive content and draw conclusions about the whole macrostructure and its constituting elements – concepts.

5.2. World-Modelling Theory

World-Modelling Theory is a branch of discourse studies that aims to explain the characteristics of mental and linguistic representations of reality in discourse for the purposes of communication. The term *world-modelling* is defined as "structuring information about reality reproduced in discourse, that leads to the formation of mental representations of varying degrees of conceptual complexity" (Kushneruk, 2018, p. 468). The theoretical and methodological core of World-Modelling theory comprises Russian and European advances in cognitive semantics and discourse analysis (Boldyrev, 2016; Gavins, 2007; Tincheva, 2018; Van Dijk, 2006; World Building…, 2016).

The main premise is that reality is not given us directly, but through mental representations, the totality of which constitute the reality in our minds. Under *representational structures* we mean text-driven mental constructs of different conceptual quality, projecting worlds that conform to the purposes of communication. The basic representational structure is a *discourse-world*. We follow Tincheva (2018) who stipulates that discourse-worlds "need to be approached as entirely cognition-bound constructs and not as objectively existing parts of an objective communicative reality. They have to be seen as resulting from cognitive processes of constructing and organizing mental structures into mental networks. <…> discourse-worlds are, rather, cognitive entities simulating a (possibly objectively existing) reality" (p. 298).

DW is a projected reality that presents a dynamic system of meanings, created by media managers and interpreted by readers under the influence of extra-linguistic factors – cultural, pragmatic, psychological, ideological, etc. The authors also develop the idea of heterogeneity of conceptual content, which determines the diversity of representational structures (Boldyrev, 2016, p. 16). Within the framework of structural typology, there are distinguished two types of mental structures – conceptually simple and conceptually complex. The conceptual content of the first type can be represented by a list of elementary features, while the second type presents structures of integrated, multi-dimensional non-stereotype knowledge. Discourse-world belongs to the second type. Discourse-worlds are generated in discourse to meet the demands of interpersonal and institutional interaction and are considered in relation to the processes and results of world representation.

6. Findings

Discourse-world as a representational structure can be reconstructed and assessed on the basis of a large number of texts, that are thematically, communicatively, or functionally connected. The term *DW of information war* denotes a complex representational structure revealed in media discourse that is created

by media managers and received by readers in an aggregate of texts, united by the theme of information confrontation.

6.1. Key concepts in the discourse-world of information war

Media managers create a discursive picture of reality, which gives an idea of the balance of forces in global politics and features of information and psychological war. From the point of view of its conceptual content, the DW of information war presents a macrostructure that is determined by agents of discourse and interpreted by readers under the influence of geopolitical, social, ideological, national, cultural and other factors. It is a mental structure, against which some concepts are profiled, or brought into focus, that forms the attitude of readers to the issues of information confrontation. Concept is generally defined as a mental construct that gives knowledge about objects of reality and is stored in the minds of community members. The choice of concepts that are regularly profiled, or cognitively distinguished in the DW of information war, reflects the most important ideological stance that determines the nature of world representation.

As has been mentioned above, we try to combine quantitative elements with the qualitative while analysing the DW of information war. On the basis of "News on the Web" corpus a sample has been formed. It contains 101 texts (149,925 words) extracted from the English-language media by the keywords "information war". The research corpus, thus, comprises contexts semantically related to information war. We have considered several formal parameters to specify the organization of the DW of information war (Table 01):

LEXEMES – key nouns that generally describe the content of the DW of information war and represent basic concepts relevant to the theme of information war.

FREQ – the number of times the noun is used in the corpus.

TEXTS – the number of articles in which the word is used.

ENTIRE CORPUS – the number of times the word is used by all articles in all 4.4 million articles in Wikipedia.

Table 01. Lexemes that nominate key concepts in the discourse-world of information war

LEXEMES, N	FREQ	TEXTS	ENTIRE CORPUS
DISINFORMATION	42	17	1447
PROPAGANDA	118	42	36617
CYBER	80	16	36044
WARFARE	35	17	24676
COUP	34	13	33633
CONSPIRACY	47	13	50239
OUTLET	69	26	80602
JOURNALIST	188	34	223695
INTELLIGENCE	81	28	148090
WAR	405	89	748700

According to Table 01, in the DW of information war the concepts of DISINFORMATION, PROPAGANDA, CYBER, WARFARE, COUP, CONSPIRACY, OUTLET, JOURNALIST,

INTELLIGENCE, WAR are regularly textualized. Taking into account the multilayered semantics of the key lexemes, we highlight the main reference blocks that constitute the DW of information war. Here we primarily rely on lexicographically fixed (systemic) knowledge.

Information: intended to mislead, distributed by a government organization in relation to a competing power or the media (DISINFORMATION); often inaccurate, which a political organization publishes or broadcasts in order to influence people (PROPAGANDA);

Confrontation: war, military action, struggle, state of competition, hostility between people or groups, campaign against an undesirable situation or activity(WAR); war activity, violent struggle or conflict (WARFARE);

Enactors: journalists, people whose job is to collect news and write about it for newspapers, magazines, television or radio (JOURNALIST); news agencies (OUTLETS);

Medium and channel of distribution: computer technologies, Internet (CYBER);

Methods of struggle: sudden, violent, illegal seizure of power, coup (COUP); secret, criminal conspiracy, group plan, organization, conspiracy, intent (CONSPIRACY); collection of information of military or political significance, collection of intelligence information, intelligence (INTELLIGENCE).

These are "cognitive pillars" of the DW that give a general idea of its global conceptual content. To get a complete picture of the interaction of conceptual structures and modifications of concepts in the discourse about information war, we proceed to their qualitative assessment. In this paper we reduce the task and consider world-modelling potential of one concept.

6.2. World-modelling potential of concept DISINFORMATION

Identifying key mental elements that constitute the DW of information war, we emphasize the importance of dynamic features of concepts that are acquired by a mental structure as a result of its functioning in media discourse. We introduce the notion of *world-modelling potential of concept*, which is realized through discursive vectors of semantic dynamics of a unit, or discursively-generated associations. It is the ability of a mental structure to transmit discursive meanings, predetermined by ideological, axiological, communicative, pragmatic, and other factors.

The procedure of analyzing world-modelling potential of concept is described in our previous work (Kushneruk & Chudinov, 2019, p. 158–167). The analysis is aimed at finding correlations between the features that form the systemic potential of the concept, i.e. the features that are lexicographically fixed, and the features that are acquired as the concept progresses in the text continuum. The following parameters are taken into account: *semiotic density, syntagmatic relations of the lexemes that nominate the concept, figurative and evaluative characteristics*, and *factual information of the concept*.

The first step to be taken is to characterize the systemic potential of the concept through dictionary definitions. Cf.: DISINFORMATION: 1. False information which is intended to mislead, especially (https://www.abbyy.com/ru-ru/). 2. False information accurately and often covertly spread (as by the planting of rumors) in order to influence public opinion or obscure the truth (https://www.merriam-webster.com/dictionary/disinformation). Basically, lexicography gives the idea of paradigmatic relations of a lexeme and helps to the identify the list of static features of concept as opposed to dynamic features generated in discourse. Thus, static features of the concept are: false information, deliberately distributed,

misleading, propaganda, from government agencies, rival power, the media, influence on public opinion, concealment of the truth.

Semiotic density has to be a measure of the amount of words (including their derivatives), word-combinations, idioms, proverbs that represent a particular concept. Semiotic density provides information about the importance of the concept within the structure of the DW. The semiotic density of the concept is revealed if we consider the linguistic means representing the concept in the media discourse: ***disinformation, disinformation campaign, misinformation, false information, questionable information***.

Syntagmatic relations of lexemes, which nominate concept DISINFORMATION, allow to establish the main vectors of associative semantic development of the concept in the DW of information war. They enable us to characterized the links the concept is involved as an element of the DW. To illustrate the main points, we give contexts extracted from the American quality newspaper "the Washington Post" for 2019.

Disinformation is a serious threat to the United States. One of the reasons is that its flows are uncontrollable. Cf.: "***disinformation can spread so easily***". This is a force that can do a lot of damage, and lessen the faith of Americans in the political system. Cf.: "***disinformation that undermines our faith in our political system***". Disinformation and espionage have already captured the collective consciousness (of American citizens). Cf.: "***Not since the 1980s have espionage and disinformation so captivated our collective mind***". Together with fake news, disinformation can destroy the foundations of a free society that has been cherished in the country for centuries. Cf.: "*the makers of disinformation and "fake news" will easily abuse our passions for their benefit, and we will allow them **to undermine the free society** we have painstakingly built over the past few centuries*". Protection against disinformation is required. Cf.: "*how do we **defend ourselves against disinformation***". Liberal democracy needs to have the methods of confronting. Cf.: "*Every individual in a liberal democracy possesses **the tools to counter disinformation***".

Figurative and evaluative characteristics of the concept are manifested in metaphors. For instance, Russia has been called America's implacable enemy in the cold war and the culprit of the most controversial disinformation campaigns. Cf.: "*After all, Russia, America's Cold War **nemesis**, is considered the primary **culprit** in today's most controversial disinformation campaigns*". Lexeme *nemesis* has the following meanings: "a situation, event, or person which causes them to be seriously harmed, especially as a punishment" (https://www.abbyy.com/ru-ru/), "retributive justice" – punishing justice. The semantics contributes to a negative evaluation of the referent. It is reinforced in the context of the meaning of the word *culprit* – "a person who is responsible for a crime or other misdeed". Disapproving evaluation semes help readers to develop a mental representation of disinformation in close association with Cold war and Russia's illegitimate activities.

Criminal and morbid metaphors are often used in the media when characterising disinformation. An implicit parallel with a disease enhances negativisation of disinformation, which requires a vaccine to activate the immunity of society at schools, colleges, and universities. Cf.: "*... the Humanities can play a crucial role in creating a modern **disinformation vaccine**. Schools, colleges, and universities should*

devote more time to educating future generations about the complexity of society and the various ideas and interests that shape the information we consume".

Factual information includes information from history. Information war is traced back to the 18th century. Cf.: *Yet our media landscape,* **the breeding and feeding ground of questionable information, also has many similarities to the 18th century**. **The information wars of this earlier period not only provide perspective – they also provide a solution to the political divisions that disinformation campaigns seek to exploit**. It is emphasized that the media landscape was a breeding ground for the dissemination of dubious information three centuries ago. The information wars of the yore set a perspective and provided a solution to the political differences that disinformation campaigns are currently using.

7. Conclusion

The impact of the media on people is increasing. To prevent blurring the traditional Russian spiritual and moral values, it is vital to solve the problem of protecting national interests in the information sphere. Against this background, the aspirations of Russian scholars are aimed at developing linguistic bases for countering information threats in the media sphere.

The theoretical and methodological framework put forward in the paper has demonstrated the possibilities of using the cognitive-discursive approach in combination with the corpus method and the modeling method. It is proved that the symbiosis of the three makes it possible to combine quantitative analysis based on corpus data with qualitative analysis in order to better characterize the idiosyncrasy of the DW of information war as a conceptually complex representational structure.

Out of ten concepts constituting the macrostructure of the DW of information war, concept DISINFORMATION was selected to be analyzed in terms of semiotic density, syntagmatic relations of the lexemes that nominate the concept, figurative and evaluative characteristics, and factual information. It enables us to conclude that in the American media, information confrontation is closely associated with the problems of spreading false information coming from the main political opponent of the United States – Russia. The following vectors of semantic development, which reflect the discursive realization of the concept, have been revealed: disinformation → espionage; disinformation → fake news; disinformation → history; disinformation → cold war; disinformation → Russia.

It seems that the combination of cognitive-discursive heuristics and corpus approach to the study of mental and linguistic phenomena in discourse may be promising for the further development of the linguistics of information and psychological war.

Acknowledgments

References

Bernatskaya, A. A. (2016). Symptoms of info-psychological war, or how the abandoned home smells (based on M. P. Shishkin's novel "Venus's hair"). *Ecology of Language and Communicative Practice*, *1*(6), 239–258. [In Russ.].

Boldyrev, N. N. (2016). Tipologija konceptov i jazykovaja interpretacija. Novaja Rossija: tradicii i innovacii v jazyke: materialy Mezhdunar. nauch. konf. (28–30 sentjabrja 2016 g.). Ekaterinburg.

Chudinov, A. P. (2015). Cognitive science – Cognitive sciences – Federation of cognitive sciences (from the history of cognitive linguistics). *Voprosy kognitivnoy lingvistiki*, *1*(42), 117–121[In Russ.].

Gavins, J. (2007). *The Text World Theory: An Introduction.* Edinburgh Univ. Press.

Gavrilov, L. A. (2018). Political discourse in the conditions of information/psychological warfare. *Ecology of Language and Communicative Practice*, *2,* 89–98. [In Russ.].

Ivanova, S. V. (2016). Linguistic resources employed in an information warfare : demonization effect techniques. *Political linguistics*, *5*(59), 28–37[In Russ.].

Kopnina, G. A., & Skovorodnikov, A. P. (2017). Journalistic writing as a resource of information warfare. *Ecology of Language and Communicative Practice*, *1*(8), 170–181. (In Russ.).

Kushneruk, S. (2018). Two days in the life of leaders: world-modelling potential of political event. The European Proceedings of Social & Behavioural Sciences (EpSBS). WUT2018. IX International Conference «Word, Utterance, Text: Cognitive, Pragmatic and Cultural Aspects», *XXXIX,* 466–475.

Kushneruk, S. L., & Chudinov, A. P. (2019). Linguistics of information-psychological war in the making: methodological heterogeneity and first results. *Ecology of Language and Communicative Practice*, *4*(I), 105–118. [In Russ.].Retrieved from http://discourseworld.ru/electronic-library/stati_na_russkom_yazyke/kushneruk_s_l_chudinov_a_p_2019_razvitie_lingvistiki_inform atsionno_psikhologicheskoy_voyny_metodolo/

Lingvistika informacionno-psihologicheskoj vojny [Linguistics of the information-psychologic war]. (2017). Kniga I. Krasnojarsk.

Lingvistika informacionno-psihologicheskoj vojny [Linguistics of the information-psychologic war]. (2019). Kniga 2. Krasnojarsk.

Problemy konstruirovanija identichnosti rossijan v diskurse SMI pod vlijaniem koncepta «informacionnaja voĭna» [The Problems of Constructing the Identity of Russians in SMI Discourses Under the Influence of the Concept of "Information Vo] (2017). Moskva; Ekaterinburg.

Qaiwer, S. N. (2016). A Study of Identity Construction in Political Discourse: Thesis submitted to the University of Nottingham for the Degree of Doctor of Philosophy. Retrieved from https://www.researchgate.net/publication/309607807_A_study_of_identity_construction_in_politi cal_discourse

Sinelnikova, L. N. (2014). Information warfare ad infinitum: Ukrainian way. *Political linguistics*, *2*(48), 95–101. [In Russ.].

Tincheva, N. (2018). Discourse-world profiling expressions: contrasting data from British and Bulgarian political speeches. In book: Language Close Up, pp. 297–317. Sofia: Sofia University Press. Retrieved from https://www.researchgate.net/publication/331198543_DISCOURSE_WORLD-PROFILING_EXPRESSIONS_CONTRASTING_DATA_FROM_BRITISH_AND_BULGARIA N_POLITICAL_SPEECHES

Ukaz (2016). Ukaz Prezidenta RF ot 05.12.2016 № 646 «Ob utverzhdenii Doktriny informacionnoĭ bezopasnosti Rossiĭskoĭ Federacii» // Prezident Rossii [Oficial'nyj sajt]. Retrieved from http://www.kremlin.ru/acts/bank/41460

Van Dijk, T. (2006). Discourse, context and cognition. *Discourse Studies*, *8*(1), 159–177.

Vysockaja, I. V., & Petrova, N. E. (2018). K probleme periodizacii jazyka sovremennyh rossijskih SMI. *Voprosy zhurnalistiki*, *3*, 36–47.

World Building: Discourse in the Mind. (2016). Gavins, J. & Lahey, E., eds. Bloomsbury.