

Neologisms with the Prefix Anti- in the Ukrainian Online Media in the Covid-19 Pandemic Period

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Abstract

The language of online publications of COVID-19 pandemic period has been enriched by many lexical innovations. One of the productive means of derivation is the prefix of Greek origin *anti-*. Considering the attention of the audience to online publications on the topic of COVID-19, the responsibility for the way of presenting information is growing, so it is important to explore not only the meaning of words with the prefix *anti-*, but also their expressiveness and tonality that they can give to the whole text.

Prefix *anti-* formed the adjectives *антикоронавірусний* – “anticoronavirus”, *антиковідний* – “anticovid”, *антикарантинний* – “anti-quarantine”, *антимасковий* – “anti-mask”, the nouns *антимасочник* – “anti-mask”, *антимаска* – “anti-mask”. The words *антивакциноматор* – “anti-vaxxer”, *антирекорд* – “antirecord”, which existed in the language before the COVID-19 pandemic, are updated and specify their meaning, some medical and biological concepts such as *антиген* – “antigen”, *антитіла* – “antibodies” tend to be determinologized.

It is found that the words with the prefix *anti-* have a distinct stylistic marking in the analyzed texts, they are characterized by expressiveness, which can be positive or negative one. This is due to the ability of the formant *anti-* to be added to words with both positive and negative meanings. Machine analysis of the text made it possible to determine the tonality of the texts with neologisms with the prefix *anti-*.

In the language of online media, words with the prefix *anti-* and without it are in antonymous relations, but in some contexts – in synonymous ones. This result of the study should be taken into account when creating media texts, because depending on the communicative purpose, the author could use neologisms with the prefix *anti-* to give the publication a more pronounced tonality and expressiveness.

The use of such words in the language of online media is motivated by the tendency of language economy, search for means of expression, reflection of social polarization, nominative need, intensification of globalization processes and related lexical borrowings.

Keywords

innovative vocabulary, neologism, derivation, prefix *anti-*, lexical compatibility, online media, media text, connotation, tonality.

1. Introduction

Each language is a dynamic structure as some words come out of active use, while others appear, and these new words cannot only reflect new realities, but also reveal the attitude of speakers to social phenomena and processes. These changes are focused on the media, due to the tasks of social communication, news coverage, analysis of processes and phenomena. The growing share of

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consumers receiving news from the Internet and the declining share of those who use two sources (television and the Internet) at the same time (in 2021, 49% of the audience are consumers of online media and social network news who do not watch the TV news) [1] make the Internet an environment in which lexical items appear or gain new life and then move on to other communication areas. The activity of creating neologisms is largely stimulated by the globalization trends, the possibilities of the Internet contribute to the intensification of these processes, especially in times of radical social change. The level of public interest, the presence of polar positions, public debates, the desire for dialogic speech determine the different expressiveness of innovative vocabulary. At a period since the end of 2019, when humanity is facing new challenges with the emergence of the COVID-19, the media has focused on areas of life that were previously on the periphery of the agenda. As researchers rightly point out [2], everyday speech has been supplemented by words that previously belonged to the specialized terminology of certain professional groups as physicians and virologists (coronavirus, self-isolation, antibiotic resistance, sanitizer, spreaders, epidemic situation, drug, completely asymptomatic, etc.) and some are completely new complex words (ZOOM-parties, Covid-passports, covid-dissident, etc.).

The aim of the study is to highlight the innovative vocabulary with the formant anti- in the language of Ukrainian online publications of the COVID-19 pandemic period, as well as to study its semantics and pragmatics of use.

The **tasks** of the study are to:

- Study the basic meanings given to neologisms by the prefix anti-, to determine the derivation potential and the value of the prefix anti- in neologisms of the COVID-19 pandemic period.
- Investigate the lexical compatibility of words with the prefix anti- in the language of online media of the COVID-19 period, to determine the combinatorial features of the analyzed lexical units within phrases or sentences and identify their expressiveness.
- Trace the possibility of machine semantic analysis of content with the prefix anti- during the COVID-19 pandemic period.

The object of the research is texts of online publications of the COVID-19 pandemic period, containing words with the prefix anti-.

The subject of the research is innovative vocabulary with the prefix anti-, its semantics and connotative components of meaning, lexical compatibility, pragmatics of use, expressiveness, tonality.

2. Related Works

The prefix anti- as a means of creating innovative vocabulary reveals the polarity of social processes and phenomena. Robert M.W. Dixon notes that anti- is a productive prefix in English from the second half of the sixteenth century [3], Stephan Gramley, Vivian Gramley, Kurt-Michael Pätzold consider these prefixes among other means of word formation as productive compared to others, though less frequent in absolute terms [4], Dan Chateu, Erin V. Knudsen, Debra Jared have investigated the meaning of the prefix anti-, the relationship between spelling and meaning [5], Alison Digid studies the meaning of the prefix anti- on the material of the English corpus; in particular, the researcher considers that in nouns this prefix can be a manifestation of national, religious, ethnic, political identification. Prefix anti- provides “a view of political and social causes and how oppositions are waged, through legislations by institutions, through protests and demonstrations, and never forms of protests when the anti- positions at a more grass roots level: websites, pressure groups and wristbands are part of the armory of opposition” [6, p. 215]. Dedy Subandowo considers the prefix anti- among other types of negative affixes in English [7, p. 135]. Marjana Vaneva notes that this Greek prefix does not mean “no” but “against” [8, p. 670], and it is used, in particular, in the sense of preventing any action [8, p. 671].

During the COVID-19 pandemic, the lexical structure of the language was supplemented by many innovations formed in various ways, including the method of prefixation; scientists attest to the productivity of the prefix anti- in derivational processes in the Ukrainian language at different phases of its development. Many words with this prefix are recorded in dictionaries, primarily of foreign origin, but also with words of Slavic origin.

E. Novikova considers adjectives with the prefix anti- as one of the most productive derivative units with the meaning of the one who is the opposite [9, p. 136], “in innovative adjectives which are formed from the names of politicians, the value of the opposite is overshadowed by a negative assessment, including irony” [9, p. 136]. The researcher emphasizes that the prefix anti- is mostly combined with borrowed adjectival creative bases, and neologisms formed by augmentation of this prefix to the actual Ukrainian creative base, are atypical for the Ukrainian language [9, p. 136]. The peculiarity of derivatives with the prefix anti-, according to N. Klymenko, is that they do not name a particular object, but outline what it is not or how it differs from the already named, called after the characteristic features [10, p. 184]. B. Greschuk notes that the prefix anti- in the Ukrainian language does not belong to the actual negative word-forming formants, its specificity is the ability to cause the formation of opposite, antagonistic concepts [11]. It expresses a more confrontational objection [11]. Researchers show a tendency of all prefixes of negative semantics not to join the basic words with a negative connotation [11]. O. Styshov notes, that in the Ukrainian language, the prefix anti- means an opposition or denial of a sign, nominated by the adjective creative basis in adjective-neologisms; an opposite, hostility to what is called by the substantive creative basis in noun innovations [12, p. 161]. The prefix anti- is used to create words with the opposite meaning, hostile to something; against [13, Vol. 1, p. 48-49]. According to researchers, productive prefix elements, in particular anti-, are characterized by a flash activity, it has a high potential and ease of combinatorics [14, p. 7]; the demand for the component anti- is due to the unity of non-linguistic and linguistic factors, because accelerating the pace of life, weakening regulatory requirements create at the language level prerequisites for the implementation of natural tendencies to language economy [14, p. 7].

Productivity of the prefix anti- in the Ukrainian language [12, p. 161; 15, p. 185], especially in the derivation of innovations from the political sphere, is largely due to such extralingual factors as the direction of general denial [15, p. 185]. O. Styshov, referring to the research of Núñez Cabezas E.A., Guerrero Salazar S., notes that some foreign linguists explain this fashionable trend among politicians to continue words and expressions to gain time, obscure the idea, complicate speech [12, p. 161]. Antroponymic formations that denote social and political phenomena, trends, views, are always associated with negative connotations or at least have a colloquial color [15, p. 185]. Innovative words with a component anti- do not only perform a nominative function, but also have a significant stylistic marking.

3. Methods and Materials

The number of scientific research methods has been used for multifaceted analysis of neologisms with the prefix anti-. The descriptive method made it possible to provide an exact and complete description of innovative words with the formant anti-, to systematize and inventory the factual material. This method was used both to describe the meanings of the prefix anti- in various neologisms, and to describe the meanings of new words in general. Several stages of analysis were used sequentially for the description. The first stage singles out morphemes (prefix anti-) and lexemes (neologisms) as units of analysis. The second stage involves secondary segmentation, namely the division of sentences into phrases with neologisms, the division of phrases into lexemes, the separation of tokens of creative parts and the formant anti- as a word-forming tool. At the third stage, the selected units were interpreted. The techniques of external interpretation were used to establish a connection with extralinguistic phenomena, among which the key ones were sociological methods, in particular the reception of thematic groups, i.e. the study of groups of words related to a common theme. The description of lexemes was made in a specific historical period of language development, especially during the COVID-19 pandemic period. Paradigmatic and syntagmatic methods were combined among the methods of internal interpretation within the descriptive method. The comparative method revealed common, identical, and different features in neologisms with the prefix anti- and the base words. Based on comparison and contrast of language units, their differential features were established, and syntagmatic methods made it possible to study the compatibility of the analyzed units, and to identify the context of their use. This method also allowed to compare the meanings of different words with the formant anti-, to establish synonymous and antonymous relations between them.

The use of the structural method is based on the understanding of language as a holistic structure in which all the elements are interconnected within a system of linguistic relations. Among the methods of structural analysis, distributive analysis was used as a method of language research based on the surroundings of individual units in the text. It was found that in the distributive properties of the analyzed neologisms with the prefix *anti-* their internal properties are revealed, such ones that reflect the functional role of these innovative language units. The distributive analysis allowed to distinguish the meanings of analyzed neologisms as polysemous lexemes depending on their distribution, i.e., surrounding.

The analysis of neologisms as a result of prefix derivation was also carried out using another method of structural analysis that is the immediate constituent analysis. This analysis revealed consistent links and mechanisms for the creation of innovative lexemes with the prefix *anti-*. The immediate constituent analysis allowed to deepen the understanding of the meaning of the formant *anti-* in the lexical innovations.

The splitting of the word meaning into its constituent components – semes is the basis of component analysis. Word compatibility, its syntactic properties make it possible to establish the structural organization of components in the word meaning. Component analysis was used in combination with the distributive method and with the method of functional analysis. The method of component analysis allowed to determine the semantics of analyzed innovations, the method of functional analysis determined the functions of such words in the language of online publications. The combination of these methods made it possible to identify the tonality of lexical innovations depending on their compatibility. Methods and techniques of machine analysis have revealed the ability of innovative lexemes with the prefix *anti-* to influence the tonality of the whole text or its individual fragments. The induction method was used to summarize the results of the study.

The base for the research is publications in the Ukrainian online media of the COVID-19 period. Among them there are news from Interfax-Ukraina, Ukrinform, UNIAN; text online versions of TV news such as TSN, 24 tv.ua; radio news as Radio Svoboda, DW (in Ukrainian), ArmyFM; online versions of newspapers and magazines as Dzerkalo tyszchnia, Den, Korespondent, Fokus; online publications (resources): Ukrainska Pravda, Ekonomichna Pravda, Apostrof, Rubryka, Chas Diy, Internet channel of the Bihus.Info project, information and analytical portal Ua.news, analytical portal Slovo I dilo.ua; regional online publications: Volyn.Info, Raion Lutsk, DepoVinnytsia, Novynyi Vinnytsi, Novadoba.

4. Experiment

In neologisms of the COVID-19 period, the prefix *anti-* realizes the following meanings as:

A) it should counteract, prevent something that is nominated by the creative base in the adjectives *антикоронавірусний* – “anticoronavirus”, *антиковідний* – “anticovid”. The creative base are the innovative adjectives such as *коронавірусний* – “coronavirus”, *ковідний* – “covid” (derived from the nouns – names of the coronavirus disease COVID). Given the negative connotations of the name of the disease, the prefix *anti-* in these adjectives has no negative sems, on the contrary, it acquires a positive meaning.

B) it has the meaning of hostile to what is called by the creative base in the adjectives *антикарантинний* – “anti-quarantine”, *антимасковий* – “anti-mask”, nouns *антимаска* – “anti-mask”, *антимасочник* – “anti-mask”. The words *quarantine* and *mask* are perceived by some speakers positively as a means of disease prevention, by others – negatively, as one of the means of restriction, so the meaning of the prefix *anti-* as the opposite to the creative word can be both positive and negative.

C) it is the antipode to what is called by a creative word in the noun *anti-record*. As the formant *anti-* is attached to words with a positive meaning, new words acquire the opposite, negative meaning, and have negative expressiveness.

A feature of the derivation capabilities of the formant *anti-* in the period of the COVID-19 pandemic is its ability to be added to words with both positive and negative semantics, in some words the connotations of the creative base depend on individual experience and background knowledge of speakers.

In the language of online publications of the COVID-19 pandemic period, the prefix *anti-* is a means of creating innovative adjectives and nouns. Its productivity is due to extra lingual factors, particularly, the emergence of new realities that require nomination, the presence of a disease prevention system and the polar views on disease prevention measures. Actual language factors can be considered as a general tendency to save language resources, expressive possibilities of words with this prefix, tendencies to update the lexical structure of language due to foreign borrowings, to complicate language structure and verbal differentiation. The tendency to language economy, the desire to find expressive means is manifested, particularly, in the fact that words with the prefix *anti-* are used in the titles of publications, while in the text they are replaced by broader descriptive expressions: *Anticoronavirus fund is fully distributed – Shmygal* (title); *To date, the Fund for Combating COVID-19 is fully distributed, but the possibility of redistribution of funds remains. This was stated by the Prime Minister of Ukraine Denis Shmygal* (a fragment of text) [16].

Innovative vocabulary with the prefix *anti-* in the language of online publications can take on different shades of meaning in specific contexts depending on lexical compatibility.

The adjectives *антикоронавірусний* – “anticoronavirus” and *антиковідний* – “anticoVID” are synonymous, showing the ability to enter attributive relations with the same nouns, the meaning of which largely determines the connotations and expressive load of the neologism. Lexical compatibility includes the following groups of nouns:

1. names of realities, the purpose of which is to combat coronavirus, these words refer to

a) medicine: *антикоронавірусний / антиковідний препарат* – “anticoronavirus” / “anticoVID drug”, *антикоронавірусна вакцинація* – “anticoronavirus vaccination”; these phrases reveal the neutral or positive meaning of adjectives-neologisms.

b) economy: *антикоронавірусний / антиковідний фонд* – “anticoronavirus” / “anticoVID fund”. The peculiarity of this phrase is the ability to replace the adjective-definition with a word without the formant *anti-*; while the semantics of the phrase remains unchanged, that is, adjectives with the prefix *anti-* and without it may not be antonyms, but synonyms. *They want to take funds to support the population from the covid fund* [17]; *How not to spend the anticoVID fund* [18]. Machine analysis of the last text revealed that the tone of the text is negative, and the statement with the most negative evaluation value is: *Ironically, the Ministry of Social Policy and the Ministry of Health did not spend the most money* [18] (Fig. 1).

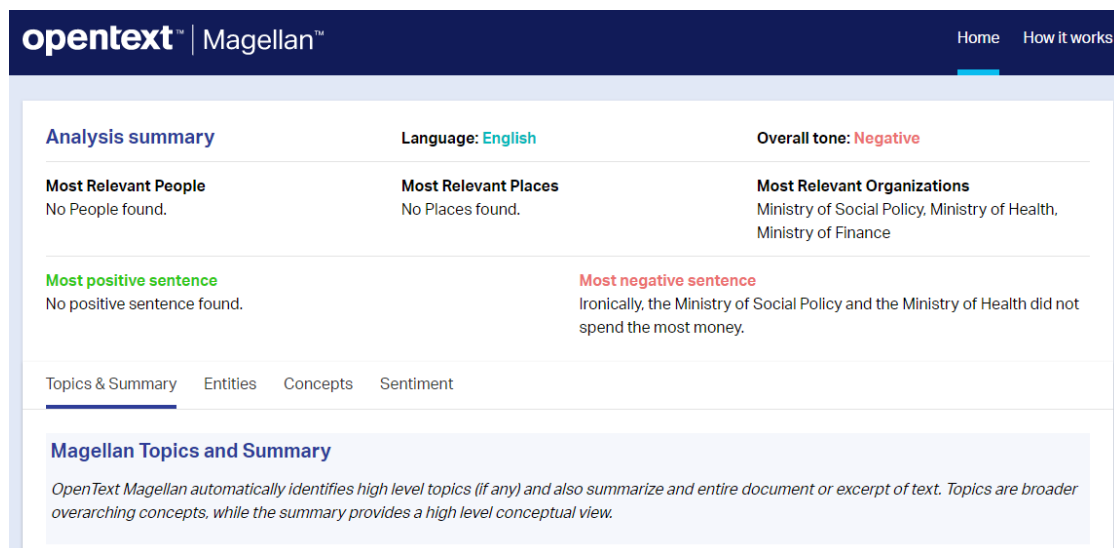


Figure 1: The result of evaluation of the text tonality [18]

c) social sphere: *антикоронавірусний/антиковідний карантин* – “anticoronavirus” / “anticoVID quarantine”, *антикоронавірусні / антиковідні обмеження* – “anticoronavirus” / “anticoVID restrictions”. In combination with the word *quarantine*, the neologism *anticoronavirus / anticoVID* will have a positive color for those who positively perceive quarantine measures, and negative – for opponents. In modern conditions, this phrase can be considered pleonastic, because there is a sema

“against the spread of coronavirus” in the meaning of the word *quarantine* in the pandemic period. Instead, the combination with the word *restriction* gives a negative color to the neologism, which is reinforced by the verbs such as to cancel, remove, and the adjective severe, reflecting the negative attitude of society to the following preventive measures: *Montenegro has imposed severe anticoronavirus restrictions on tourists* [19] In such contexts, the neologism *anti-coronavirus* / *anticovid* is neutral or has negative connotations. Negative tone appears in the sentence *We are also people: in Vienna, they protested against the new anticovid restrictions* [20]. Machine analysis of this text revealed that there is no positive sentence in it, the most negative expression is *According to him, the imposed restrictions are totalitarian* (Fig. 2).

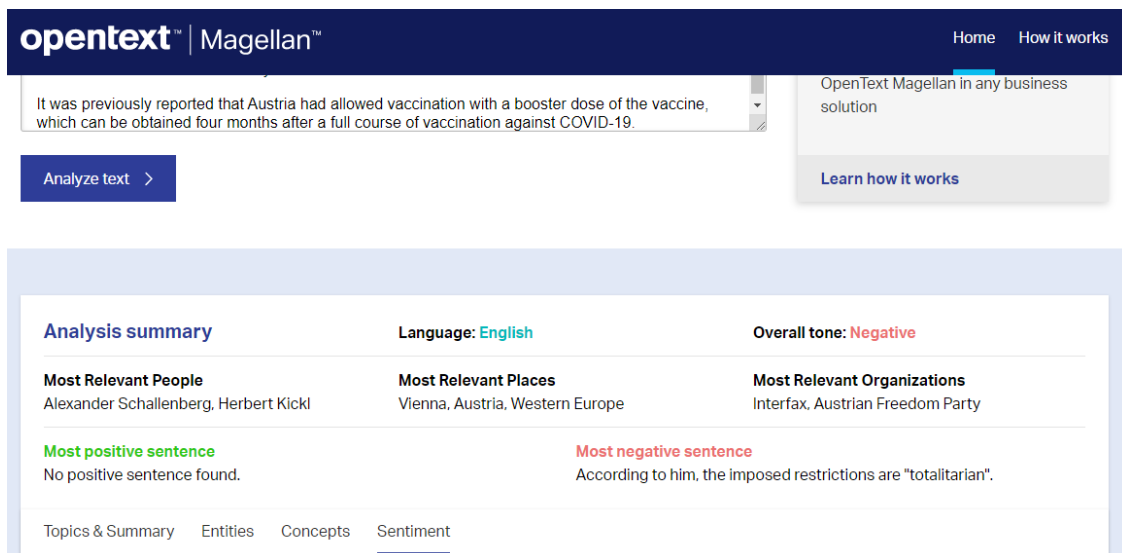


Figure 2: The result of evaluation of the text tonality [20]

2. names of directions and types of activity of the state for disease prevention, results of this activity: *антикоронавірусний/антиковідний додаток* – “anticoronavirus” / “anticovid application” (digital program in a smartphone), *антикоронавірусний/антиковідний пакет* – “anticoronavirus” / “anticovid package” (list of laws and regulations), *антикоронавірусний/антиковідний штаб* – “anticoronavirus” / “anticovid headquarters”, *антикоронавірусний/антиковідний план* – “anticoronavirus” / “anticovid plan”, *антикоронавірусні/антиковідні закупівлі* – “anticoronavirus” / “anticovid procurement”, *антикоронавірусні/антиковідні заходи* – “anticoronavirus” / “anticovid measures”, *антикоронавірусні/антиковідні навчання* – “anticoronavirus” / “anticovid training”, *антикоронавірусний/антиковідний набір* – “anticoronavirus” / “anticovid set” (in this context, a list of cost items to combat coronavirus). The realities denoted by these nouns could be interpreted by speakers as more or less effective in the system of disease prevention; so, as a result of such lexical compatibility, positive connotations arise.

3. names of documents: *антикоронавірусна / антиковідна перепустка* – “anticoronavirus” / “anticovid pass”, *антикоронавірусний/антиковідний сертифікат* – “anticoronavirus” / “anticovid certificate” (confirms the measures taken by a person to prevent the disease). In combination with the word “*pass*” (a document certifying the right to overcome certain restrictions), the phrase indicates the presence of restrictions, so this combination of words has negative connotations, which confirms the combination with the word to protest and the double objections of against and anti-: *In Israel, they are protesting against anticoronavirus passes* [21]. Instead, the combination with the word *certificate* is neutral: *Where to get an anticovid certificate* [22].

4. names of realities that, in the opinion of the author of an article, cannot prevent the disease: *антикоронавірусна/антиковідна ікона* – “anticoronavirus” / “anticovid image”, *антикоронавірусна/антиковідна молитва* – “anticoronavirus” / “anticovid prayer”; in this text there is an additional ironic color, enhanced by the use of quotation marks: *Cyril is on a “Mercedes” with a flasher drove around Moscow “anticoronavirus” image* [23]. The irony is heightened by the use of the words “Mercedes with a flasher” in the sentence.

5. names of realities related to the behavior and communication in a society: *антикоронавірусний / антиковідний етикет* – “anticonavirus” / “anticoVID etiquette”, *антикоронавірусні/антиковідні правила* – “anticonavirus” / “anticoVID rules”, *антикоронавірусне / антиковідне вітання* – “anticonavirus” / “anticoVID greetings”, *антикоронавірусні / антиковідні рекомендації* – “anticonavirus” / “anticoVID recommendations”. In these phrases, the neologism has positive connotations due to the positive meaning of nouns that relate to the regulation of the behavior of participants in communication in their interests.

6. names of household items, types of transport: *антикоронавірусний / антиковідний світильник* – “anticonavirus” / “anticoVID lamp”, *антикоронавірусний / антиковідний папір* – “anticonavirus” / “anticoVID paper”, *антикоронавірусний / антиковідний гаджет* – “anticonavirus” / “anticoVID gadget”, *антикоронавірусний / антиковідний подарунок* – “anticonavirus” / “anticoVID “gift”, *антикоронавірусні / антиковідні товари* – “anticonavirus” / “anticoVID products”, *антикоронавірусна / антиковідна плівка* – “anticonavirus” / “anticoVID tape”, *антикоронавірусний / антиковідний костюм* – “anticonavirus” / “anticoVID suit”, *антикоронавірусний / антиковідний пневмошолом* – “anticonavirus” / “anticoVID pneumatic helmet”. Neologisms form phrases with nouns which name the familiar objects in new circumstances; such phrases reflect the desire in everyday life to create real or imaginary obstacles to the spread of the disease, create positive connotations, give the text positive expressiveness, evoke positive associations with technological progress, the success of scientific research, for example, in the sentence: *The first in the world: the Czechs invented the “anticonavirus” paper* [24]. According to the results of machine analysis using the Magellan system, it was confirmed that such a combination does not contain negative connotations (Fig. 3).

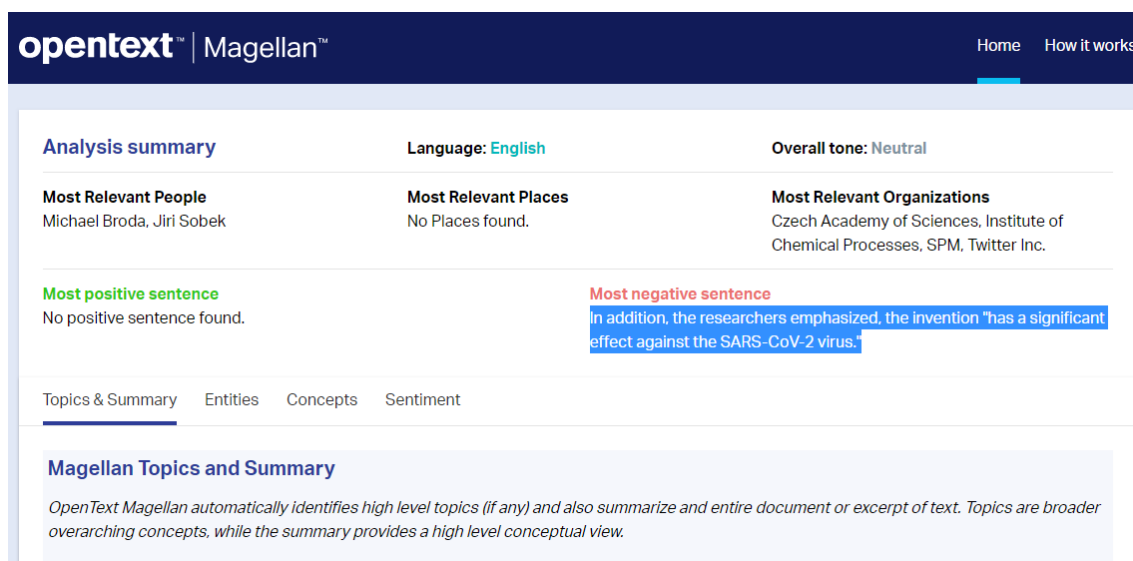


Figure 3: The result of evaluation of the text tonality [24]

7. names of types and genres of art, types of entertainment: *антикоронавірусний / антиковідний танець* – “anticonavirus” / “anticoVID dance”, *антикоронавірусний / антиковідний концерт* – “anticonavirus” / “anticoVID concert”, *антикоронавірусна / антиковідна підбірка* – “anticonavirus” / “anticoVID selection” (list of songs, movies and other entertainment), *антикоронавірусний / антиковідний реп* – “anticonavirus” / “anticoVID rap”, *антикоронавірусний / антиковідний флешмоб* – “anticonavirus” / “anticoVID flashmob”. Such combinations have positive connotations, may be aimed at relieving psychological stress due to mostly negative information about the COVID-19, quarantine, various restrictions: *Lutsk doctors performed “anticonavirus” dance* [25]. Checking the tone of the text of the article using the Magellan system confirmed the neutrality of the statement (Fig. 4).

8. names of people or groups of people: *антикоронавірусні / антиковідні волонтери* – “anticonavirus” / “anticoVID volunteers”, *антикоронавірусний / антиковідний батальйон* – “anticonavirus” / “anticoVID battalion”. In Ukrainian realities, the nouns volunteer and battalion

have a positive value and show positive expressiveness, giving the adjective-neologism positive connotations of admiration, approval, and support.

9. names of achievements used figuratively: *антикоронавірусний / антиковідний рекорд* – “anticonavirus” / “anticoVID record”. The positive meaning of the word *record* (the highest achievement in something, the highest degree of manifestation of something [13, Vol. 8, 496]), expressiveness associated with a word “success” is manifested in the sentence: *Dnipro residents set an anticonavirus record, almost 10,000 people were vaccinated against coronavirus in the city in a day* [26]. In other contexts, the use of such a phrase is illogical, erroneous; the authors are not fully aware of the meaning of this word, the text has an ironic tone, not motivated by the content of the message: *New anticonavirus record in Kyiv: the number of new cases has doubled in a day* [27]. The meaning of the prefix **anti-** and creative word determines the perception that the record was intended to combat the coronavirus or showed a sign of “*opposite to the coronavirus*”, “*hostile to the coronavirus*”. The sentence refers to a significant number of identified cases of the disease, so it was appropriate to use an adjective without the prefix *anti-*, but the expressiveness of the text would remain unmotivated.

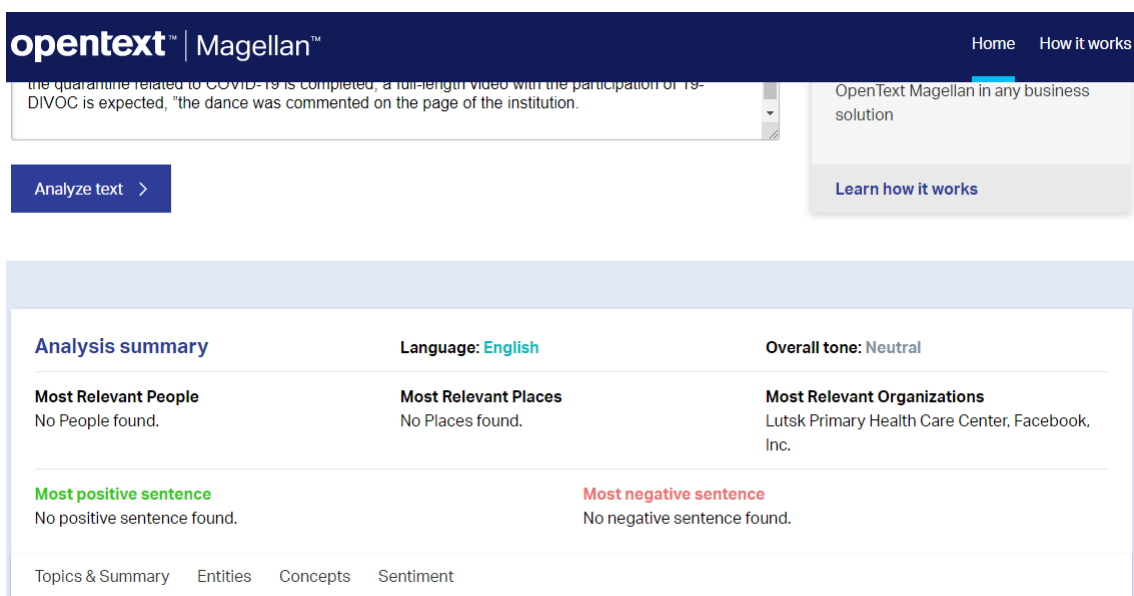


Figure 4: The result of evaluation of the text tonality [25]

10. names of mass public events: *антикоронавірусний / антиковідний протест* – “anticonavirus” / “anticoVID protest”, *антикоронавірусний / антиковідний мітинг* – “anticonavirus” / “anticoVID rally”. In this context, the adjective acquires a negative connotation due to the connotations of nouns (protest is a strong denial of something, a categorical statement of disagreement with someone or something, the undesirableness of something [13, Vol. 8, p. 313], rally is a mass meeting concerning the discussion of some topical issues [13, Vol. 4, p. 755]). However, from the content of the publication this is a hostile attitude to measures to prevent coronavirus, it would be better to use the adjective *antiquarantine*: *Anticonavirus protests took place in three cities in the Netherlands* [28]. Examination of this text using the Magellan system revealed that it has a positive tone, but contains sentences with a negative tone, the most negative is the expression: *People threw stones and burning objects at police in protest* (Fig. 5).

The meaning of the word *anticonavirus* in a combination with words *protest*, *rally* expands to this one that does not accept any information related to the coronavirus, does not believe in the existence of the coronavirus, denies everything related to this disease. The high degree of polarization of public sentiments inherent in this phrase confirms the use in a broader context of the words such as *сумички* – “fights”, *травмований* – “traumatized”, *госпіталізований* – “hospitalized”, *затримали* – “detained” (with the meaning of forcefully stop someone for a purpose [13, Vol. 3, p. 359]). *Zaporizhia News: clashes took place during an anti-coronavirus rally – one person was injured* [29];

In Zaporizhia, five people were detained at an “anticovid” rally, one of the detainees was hospitalized – the police [30].

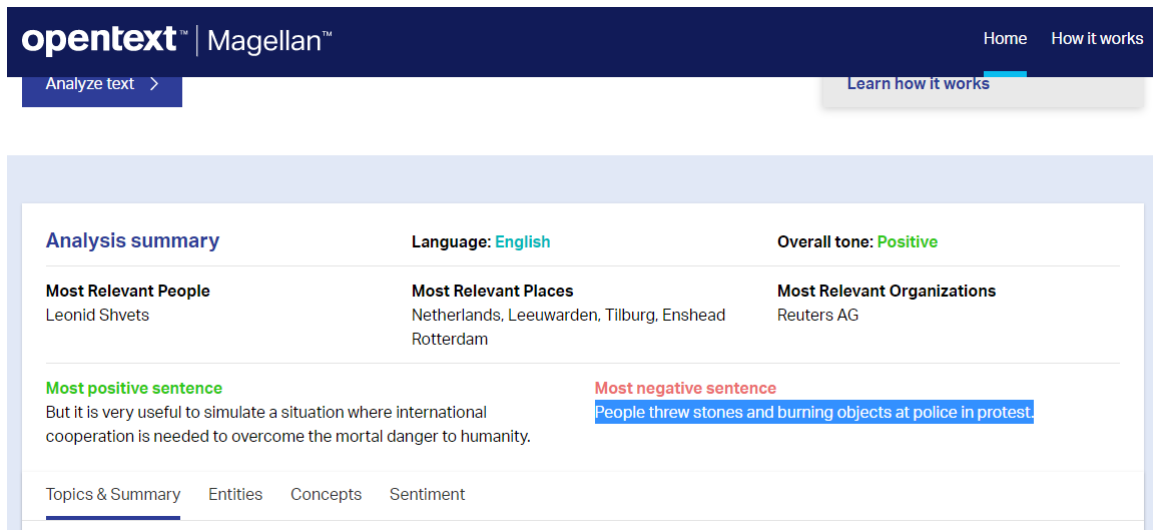


Figure 5: The result of evaluation of the text tonality [28]

11. names of the list of topical issues, views, ideas: *антикоронавірусний порядок денний* – “anticoronavirus agenda”. The meaning of the word *anticoronavirus* in this phrase (which denies the existence of coronavirus) becomes clear from a broader context: *The networks of bots organized by them began to promote the anticoronavirus agenda* [31]. Negative connotations are enhanced using the word “bot”: a special program that creates fake accounts.

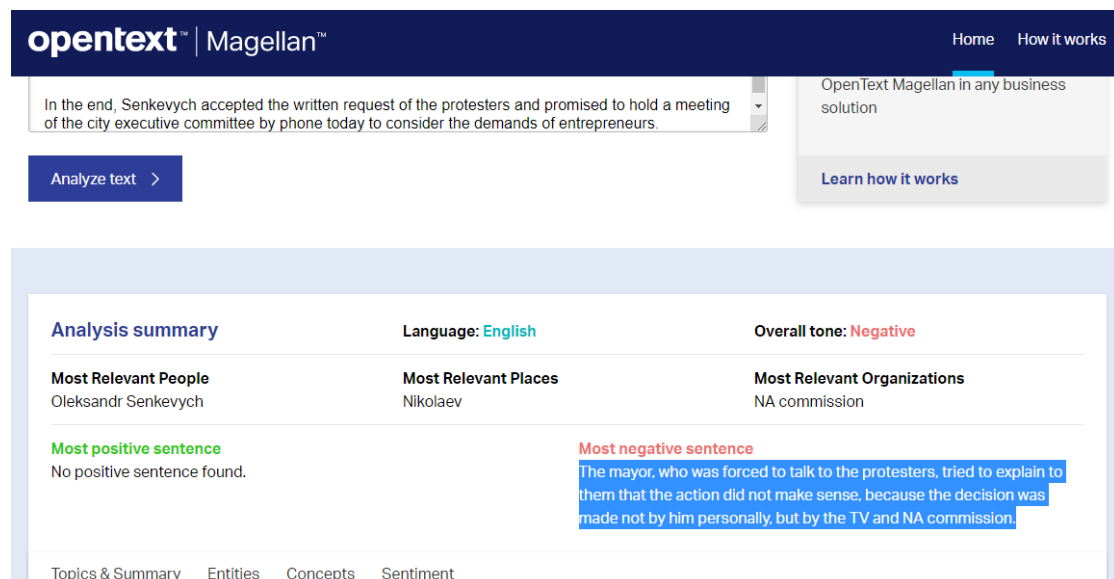


Figure 6: The result of evaluation of the text tonality [32]

The lexical compatibility of the adjective *антикарантинний* – “antiquarantine” covers the following groups of nouns:

1. names of mass protests: *антикарантинна сутичка* – “antiquarantine conflict”, *антикарантинний спротив* – “antiquarantine resistance”, *антикарантинний протест* – “antiquarantine protest”, *антикарантинний бунт* – “antiquarantine riot”, *антикарантинний мітинг* – “antiquarantine rally”, *антикарантинні теорії змов* – “antiquarantine conspiracy theories”, *антикарантинний майдан* – “antiquarantine maidan”. In this context, the word *antiquarantine* reveals an expressive tone, the sign of which “+” or “-” depends on the individual background knowledge and experience of the speaker. Neologism *antiquarantine* is given in

quotation marks or without them; quotation marks are an additional marker of the expressiveness and informality of the name: *Antiquarantine meeting in Mykolaiv: businessmen broke into the City Council* [32]. The machine check did not find any positive sentence in this text, the most negative statement is: *The mayor, who was forced to talk to the protesters, tried to explain to them that the action did not make sense, because the decision was made not by him personally, but by the TV and NA commission.* The text has a general negative tone (Fig. 6).

Machine examination of the text *Anti-quarantine clashes in The Hague: about 400 detainees* [33] confirmed that its general tone is negative, the sentence with the most pronounced negative tone is: *During the demonstration against the restrictive measures due to the coronavirus, riots broke out.* There are no sentences with a positive tone in the text (Fig. 7).

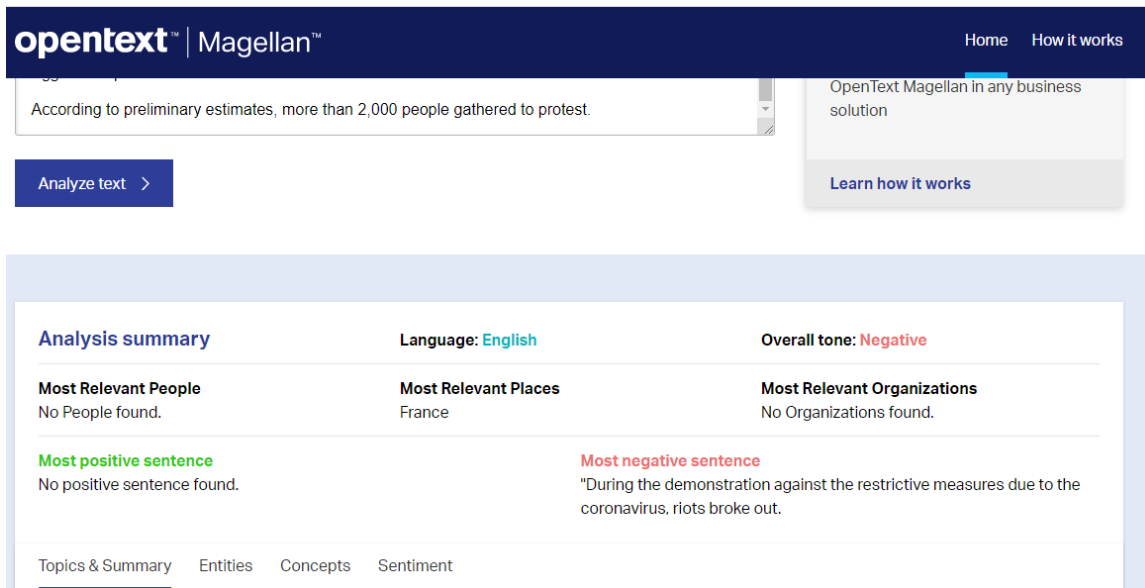


Figure 7: The result of evaluation of the text tonality [33]

2. names of events, entertainment, offers of discounts on goods or services: *антикарантинний флешмоб* – “antiquarantine flash mob”, *антикарантинна вечірка* – “antiquarantine party”, *антикарантинний концерт* – “antiquarantine concert”, *антикарантинна знижка* – “antiquarantine discount”, *антикарантинна акція* – “antiquarantine action” (in a positive sense it means sale of goods at a discount, on credit [34]), *антикарантинне КАСКО* – “antiquarantine CASCO”. In the combination with the names of realities that are attractive to the consumer due to the lower price of goods and services, the adjective *antiquarantine* acquires the meaning “which should counteract the negative perception of what is called by a creative base”, the hostility is not relevant in this context. At the same time, the analysis of online texts shows the actualization of positive or neutral connotations of the word *antiquarantine*, which arise because of combining with the names of events, that are perceived as positive ones. The meaning of the word *antiquarantine* can be interpreted differently in conjunction with the word party, flashmob, as a party or flashmob can be perceived as a non-aggressive form of protest: *Antiquarantine party: in Madrid, students organized celebrations for more than 25,000 people* [35].

3. names of activities of public authorities aimed at preventing the spread of the disease: *антикарантинні заходи* – “antiquarantine measures”, *антикарантинний рейд* – “antiquarantine raid”. Such combinations contain logical errors, as, for example, in the sentence: *In Vinnytsia region, the police are stepping up antiquarantine measures, preparing for the "red zone"* [36]. The report should be understood as information about police measures against quarantine, i.e., a protest is against state measures to prevent COVID-19, which is a priori impossible given the functions of the police as a state structure.

The adjective *антимасковий* – “antimask” is combined with:

1. names of measures and forms of protest: *антимаскові протести* – “antimask protests”, *антимасковий бунт* – “antimask riot”, *антимаскові настрої* – “antimask sentiments”,

антимасковий рух – “antimask movement”, *антимасковий вектор* – “antimask vector”, due to such compatibility the expressive meaning of the prefix *anti-* increases, negative connotations arise: *Antimask protests and increased quarantine: Italy and Spain protest against restrictions* [37]. In publications, the negative attitude towards people described by this adjective can be justified by an additional negative definition: *Antimask freedom fighters, who speak under the slogans of protest against the “global conspiracy” against humanity, behave themselves as participants in this conspiracy. Calling for freedom, they become involved themselves* [38]. According to the results of machine analysis of the text it was found that the most positive evaluation value is contained in the expression: *The system of imposing demand created by the consumer society in these conditions became a mechanism of deconstruction of civilization*, and the most negative one is: *The country-example of modern civilization was among the first in the tragic consequences of the epidemic*. The tone of the material is negative (Fig. 8).

2. names of groups of people: *антимаскова група* – “antimask group”, *антимаскові борці* – “antimask fighters”. Such compatibility reveals negative connotations due to the evaluation of the activities of people who oppose the mandatory wearing of masks and quarantine restrictions in general, and at the same time spread misinformation about the harm of these measures. *Facebook has shut down one of the largest antimask groups on its platform for violating the disinformation policy on COVID-19*. The publication debunks the group's myths: *masks that allegedly interfere with the free flow of oxygen and have a negative psychological effect are a means of suppression and enslavement* [39].

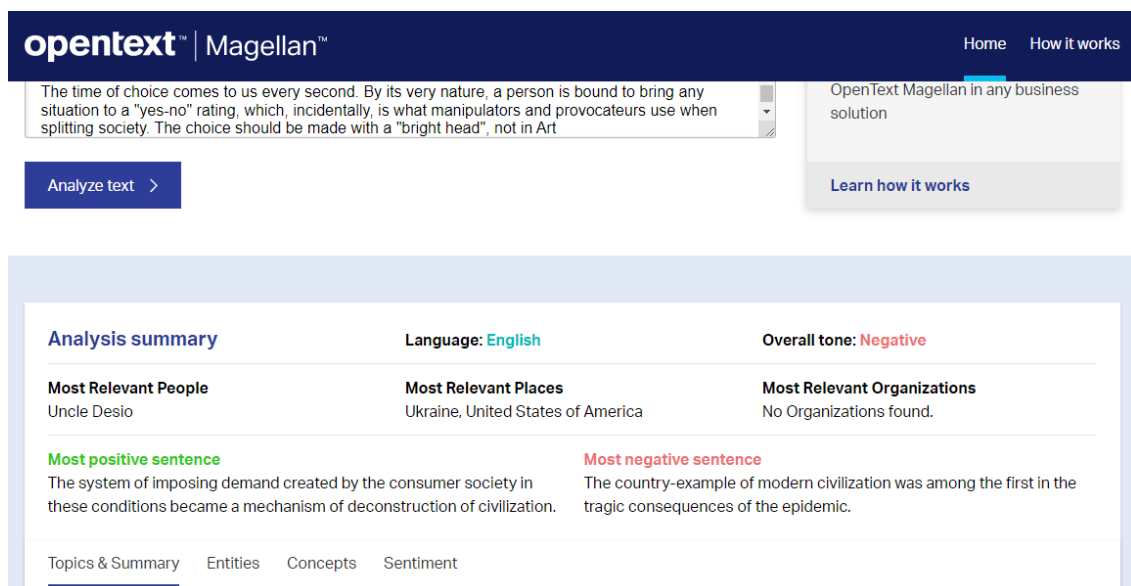


Figure 8: The result of evaluation of the text tonality [38]

3. names of activities of public authorities aimed at preventing the spread of the disease: *антимаскові заходи* – “antimask measures”, *антимасковий рейд* – “antimask raid”. At first glance, the combination of antimask raid (raid against masks) is wrong: *Cops staged an anti-mask raid on the URC (Ukrzaliznytsia – Ukrainian railway company) train but were forced to flee* [40]. However, we could assume that in this sentence the adjective with the prefix *anti-* acquires an additional meaning which reveals the opponents of what is called by a creative word. An adjective neologism reveals negative connotations of rejection, disapproval.

Among the nouns-neologisms formed with the prefix *anti-*, we distinguish the following lexical-semantic groups:

1. Names of people: *антимасочник* – “antimask” (a person who opposes the wearing of masks), *анти-маска* – “antimask”, *антивакцинатор* – “antivaxxer” (a person who opposes vaccination); the last word is not a neologism of the COVID-19 pandemic period, but at this time its meaning is being concretized.

By transmitting a static feature, nouns become a kind of labels in the nominations of people, they are a means of identification, markers of social polarization: *Ukrainians were divided into two groups – mask and anti-mask* [41]. Such words reveal a negative expressive load, are characterized by pejorativeness, emotionally expressive shade, which is primarily concentrated in the prefix anti-. Machine verification using the Magellan system confirmed that the overall tone of this text is negative. The most negative phrase is: *That is, all those who, even in the time of evidence, did not shy away from pseudo-scientific approaches and did not care too much about the provability of their claims*. The most positive phrase is *Organized resistance* (Fig. 9).

The screenshot displays the OpenText Magellan interface. At the top, the text input field contains: "Ukrainians were divided into two groups - masked and anti-masked. And the right not to wear a muzzle has become almost the main motto of organizations that deny the existence of the pandemic, eliminate the danger of COVID-19 and believe that it was invented to chip people." Below the input, a blue button labeled "Analyze text" is visible. To the right, a sidebar offers "OpenText Magellan in any business solution" and a "Learn how it works" link. The main analysis results are shown in a white box with a blue border. It includes an "Analysis summary" section with "Language: English" and "Overall tone: Negative". It states "No entities were detected." and highlights the "Most positive sentence" as "Organized resistance" and the "Most negative sentence" as "That is, all those who, even in the time of evidence, did not shy away from pseudo-scientific approaches and did not care too much about the provability of their claims." At the bottom, there are tabs for "Topics & Summary", "Entities", "Concepts", and "Sentiment".

Figure 9: The result of evaluation of the text tonality [41]

The expressiveness of the word enhances the lexical compatibility with a) adjectives – the names of the signs of antisocial states of a person: *п'яний антимаасочник* – “drunk antimask”; b) verbs – names of actions that indicate antisocial, aggressive, even criminal behavior: *«виховати» журналіста* – “to boot a journalist”, *вистрелити в голову* – “to shoot in the head”, *спробувати втекти від контролерів* – “try to escape from the controllers”, *влаштувати погром* – “to arrange a pogrom”, *розстрілювати людей* – “to shoot people”, *розтרוцити сокирою* – “to smash with an ax”, *напасти на поліціантів* – “to attack the police”, *влаштувати дебош* – “to arrange a brawl”, *влаштувати розбірки* – “to arrange a showdown”, *влаштувати стрілянину* – “to arrange a shooting”. The noun *антимаасочник* – “anti-mask” in such a sentence is a subject, it acquires an extremely negative meaning due to the combination with the names of negative, aggressive actions: *In Mariupol, an anti-mask smashed ATB with an ax* [42]. *An anti-mask arranged a brawl aboard the Odessa-Antalya plane* [43]. If the noun *anti-mask* is an object, the verbs are called actions demonstrating the social intolerance for people called by this neologism: to beat, to kick out with screams and mats, to teach to fly, landing face in the snow, to detain, to beat and push out of the cabin, to stick out: *They beat him with their feet and hands: in Melitopol they shouted anti-mask out of the minibus with screams and mats* [44]. The lexical compatibility of this word testifies to its inherent negative connotations, shows a bright negative tone.

2. Names opposite to the names of achievements: *антирекорд* – “antirecord” (maximum of something negative; maximum non-achievement). This word is combined with nouns – names of statistical indicators of morbidity, mortality, number of hospitalizations: *daily antirecord of coronavirus incidence, daily antirecords with COVID-19, new coding antirecords for sick and dead per day, antirecord on vaccination* [45], *antirecord on mortality*, there are negative connotations in such contexts. In some phrases, a word *record* is used instead of the word *antirecord*. Between words with the prefix *anti-* and without it there are not antonymous, but synonymous relations, which is unjustified, because the record as the highest achievement is associated with victory, joy of the result of hard work, shows positive expressiveness; instead, the combination with the words mortality,

hospitalization, which do not name achievements and have negative connotations, can be interpreted as an oxymoron: *Ukraine has updated the COVID-19 death record* [46]. To correctly check the tone of journalistic texts containing the word *anti-record*, in particular the article: *In Ukraine - anti-record for vaccination* [45], it is used two systems Magellan and Semantic analysis tool which showed the same result – negative color (Fig. 10-11).

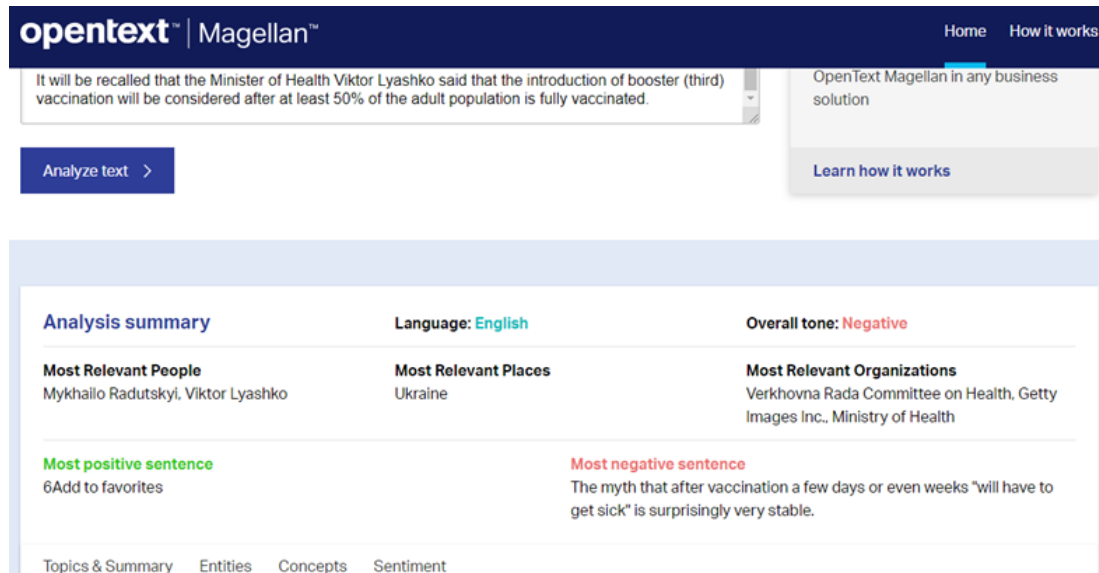


Figure 10: The result of evaluation of the text tonality [45]

Thus, the study of texts with the prefix *anti-* firstly in a manual mode, followed by verification with the software Opentext Magellan allowed to establish and then confirm the tonality of a number of texts containing words with the prefix *anti-*. The vast majority of tests are negative. It should be noted that the use of software based on artificial intelligence technologies eliminates the need for manual word processing, expanding the capabilities of text analytics combining a number of features provided by modern tools.

It should be noted that Opentext Magellan is the best software that uses artificial intelligence technologies, such as machine learning algorithms, conversion and visualization of user research results, provided free of charge and it allows to increase their operational efficiency.

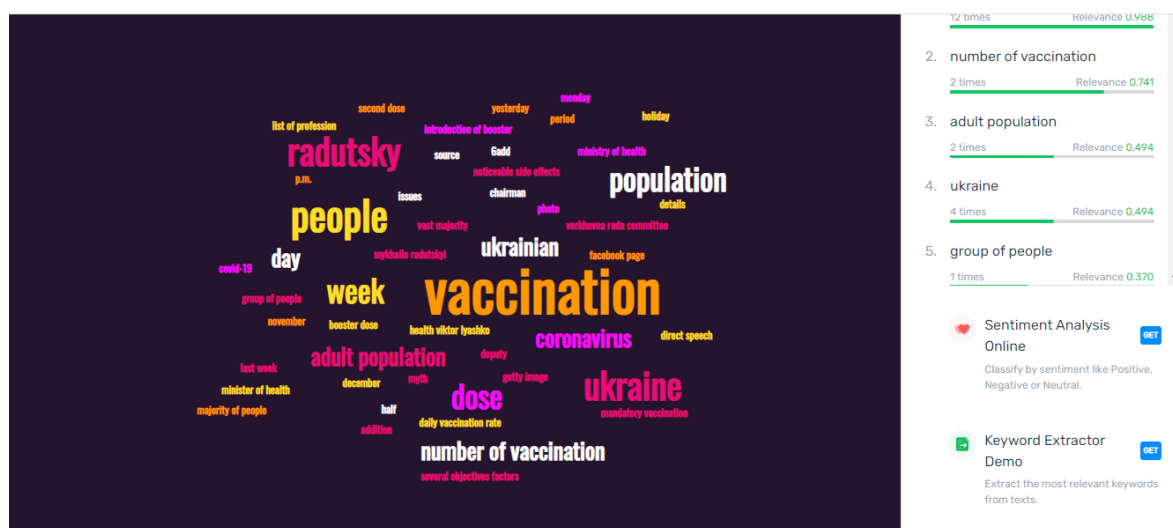


Figure 11: The result of evaluation of the text tonality

Medical and biological terms *антитіла* – “antibodies”, *антиген* – “antigen” with the prefix *anti-* become determinologized in the texts of the COVID-19 period, the innovativeness of these lexical units is associated with the moving from professional to common vocabulary.

5. Results / Discussions

The prefix *anti-* is a productive means of creating neologisms used in the online media of the COVID-19 pandemic period. In adjectives, it realizes the meaning “which must oppose, prevent what is called by a creative word”, “hostile to what is called by a creative word”, “opposite to what is called by a creative word” (Fig. 12).

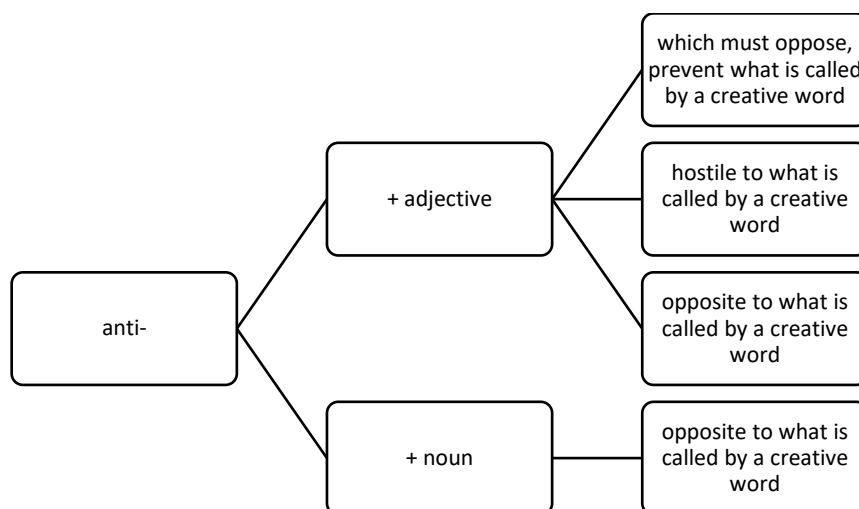


Figure 12: The meaning given to neologisms by the prefix *anti-*

This formant is a means of derivation of neologisms – adjectives *anticoronavirus*, *anticovid*, *antiquarantine*, *anti-mask*, and nouns *anti-mask*, *antirecord*. The innovativeness of the noun *antivaxxer* is manifested in the specification of the meaning of “who opposes vaccination against COVID-19”, the word *antirecord* becomes figurative with the specification of the negative assessment of the phenomena. The use of the prefix *anti-* to create nouns, namely names of persons is a reflection of social polarization.

The methods and techniques of structural and component analysis have found that the use of neologisms with the prefix *anti-* in some contexts contains a logical error. In particular, in the adjectives *anti-quarantine* and *anti-mask*, combined with the words *raid*, *measures*, any of the meanings of the prefix *anti-* contradicts the meaning of the whole statement.

In the language of online media there is a tendency to determinologization of the words as *antigen*, *antibody*.

The peculiarity of derivation of new lexical units with the prefix *anti-* in the COVID-19 period is the ability of this formant to be added to words with both positive and negative meanings; there is possible individual perception of the creative word (quarantine, mask) as positive or negative one given the speaker background knowledge and experience. Therefore, depending on the connotations of the creative word, the formant *anti-* acquires not only its traditional negative meaning, but also positive.

Words with the prefix *anti-* in the language of online media are expressive. In adjectives it is manifested in the word itself and is motivated by both the meaning of the *anti-* and the meaning of the creative word. Also, in adjectives the expressiveness is largely due to lexical compatibility, the meaning of the noun is the denoted word. The neutral or positive meaning of the noun determines the neutral or positive meaning of the neologism, the negative meaning of the noun determines the negative meaning of the neologism (Fig. 13-14).

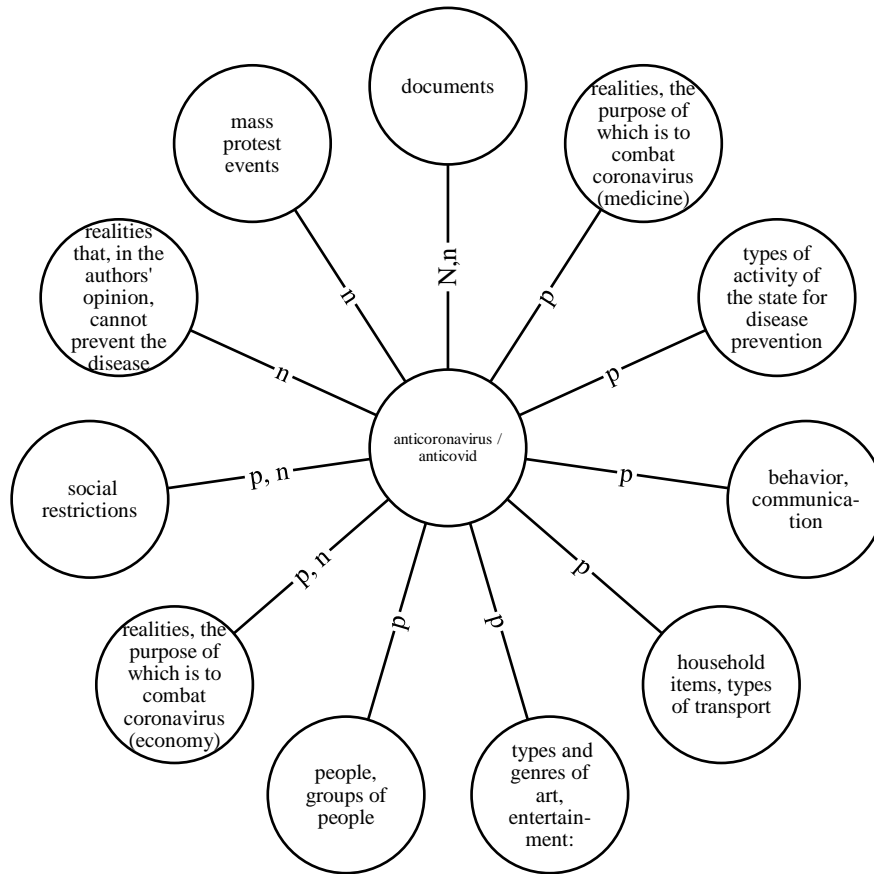


Figure 13: Dependence of connotations of the neologism-adjective *anticoronavirus / anticovid* on the lexical environment (p – positive, N – neutral, n – negative)

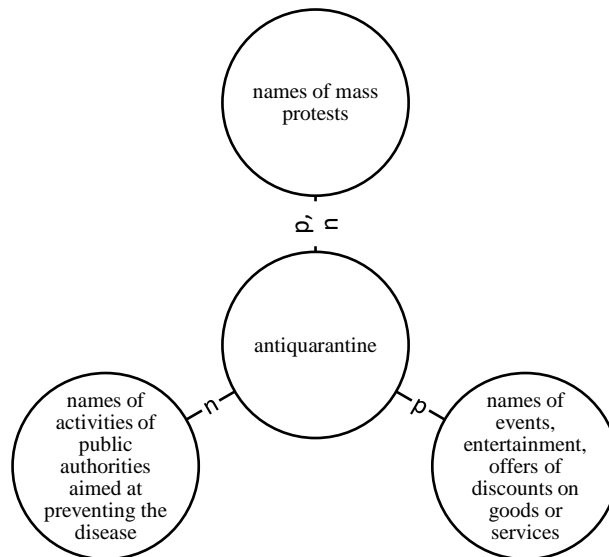


Figure 14: Dependence of connotations of the neologism-adjective *antiquarantine* on the lexical environment (p – positive, N – neutral, n – negative)

In nouns-neologisms with the prefix *anti-* the expressiveness is also manifested both at the level of words and at the level of sentences. Nouns that are names of persons have a negative meaning, reinforced by the negative meaning of adverbial verbs, also negative is the words in which the meaning of the prefix *anti-* is “opposite to the named by creative word”, “opposite to positive”, and therefore negative, as *antirecord* (Fig. 15). Medical terms that have become a common place are mostly neutral.

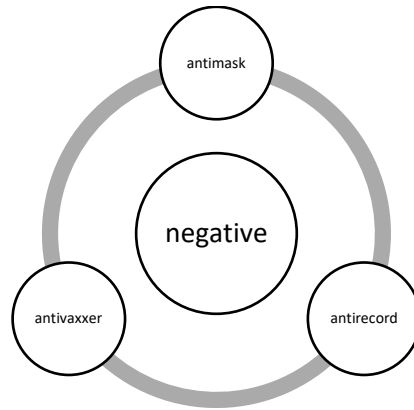


Figure 15: Tonality of the text with nouns-neologisms with the prefix anti-

Machine analysis of the text made it possible to identify the tone of the text, which uses neologisms with the prefix *anti-*. In some cases, the connotations of the neologism with the prefix *anti-* to the general tonality of the text were confirmed, in others the tonality of the text was different from the connotations of the word used in this text with the prefix *anti-*. This may be due to the various factors as the meanings of other words used in the text, disregard in machine analysis of the meanings of words in a particular lexical environment, the differences between machine and individualized author's intellectual analysis of the text.

In the language of online media, words with the prefix *anti-* and without it are in antonymous, but in some contexts – in synonymous relations. This result of the study should be considered when creating media texts, because depending on the communicative purpose, the author may use neologisms with the prefix *anti-* to give the publication a stronger tone.

Neologisms with the prefix *anti-* are often used in the headlines of online media publications, while the text replaces them with broader descriptive phrases (Fig. 16). It confirms the ability of such words to accumulate expression, to evaluate, to serve as a means of language economy.

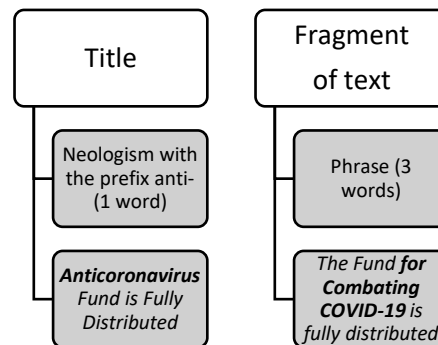


Figure 16: The use of neologisms with the prefix anti- in the title as a manifestation of the trend towards language economy

The obtained results allow to predict the expressive load, the emotional background of the whole text. The use of research results will also allow you to choose the most appropriate word for accurate transmission of information, to achieve savings in language resources. This can contribute to the maximum effectiveness of online publications, the achievement of communicative tasks, so they should be used by authors when writing texts.

6. Conclusions

The use of the prefix *anti-* in the neologisms of the COVID-19 pandemic period is one of the linguistic manifestations of the division of society into opposite groups in the perception / non-

perception of the pandemic fact, in attitude to preventional measures against the spread of the disease. Words with the formant anti- are an important means of discourse constructing, their connotations indicate the presence of polar positions, show interaction or opposition between them.

In the creation of words with the prefix anti-, the ability of language is arisen to reflect complex relationships by economical means and to demonstrate attitude to new realities, this prefix accumulates linguistic expression, is a manifestation of evaluation, the bearer of the category of negation. Typical derivational models are adapted to specific situations of social change, the meaning of word-forming morphemes expands, updates, deepens, and individualizes. The use of neologisms with the formant anti in the language of online media reveals the importance of lexical borrowing processes, demonstrates the activity of interlingual connections in the modern world, the important role of online media in activating these processes both at the level of interlingual exchange and at the level of vocabulary consolidation and development in journalistic discourse with the subsequent transition to other areas of the Ukrainian language. There is a noticeable tendency to borrow words with the formant anti- from English. It is worth paying attention to the role of online media in the processes of determinologization.

The analysis showed the dependence of word semantics on lexical compatibility; connotations of words with the prefix anti- are motivated not only by the internal structure of the language unit, but also by the textual environment, background knowledge, individual meaning, which is attributed to the words of the speaker. The instability of semantics inherent in neologisms in the perception of several speakers causes in some contexts unjustified motivation to use words, logical and expressive incompatibility. Publications in online media can contribute to the development of stable connotations due to the specification of the word meaning by means of lexical compatibility.

7. References

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