MEDIÁLNÍ STUDIA

MEDIA STUDIES

JOURNAL FOR CRITICAL MEDIA INQUIRY

3/2022

FROM "COVID IDIOTS" TO "COVIDSHOW AND "COVIDHYSTERIA". ANALYSIS OF DIGITAL NEWS COMMENTERS' VERBAL AGGRESSIVENESS AND MEANS OF LINGUISTICS CREATIVITY DURING COVID-19 PANDEMIC IN LATVIA (2020 – 2021)

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ABSTRACT

The main objective of this interdisciplinary study is to find out if verbal aggressiveness expressed by news commenters on the three largest digital news media (delfi.lv, tvnet.lv, apollo.lv) in Latvia fosters COVID-19 pandemic-related linguistic creativity during two state of emergency periods in Latvia (2020 – 2021). Did the commenters' dissatisfaction with the course of the pandemic and their response to the news of the pandemic contribute to the creation of new words related to COVID-19?

Using data provided by the Index of the Internet Aggressiveness (IIA), a research tool, and employing content analysis to evaluate the comments and pandemic-related words used in the comments, the study concludes that as the level of aggressiveness of commenters spikes, the use of COVID-19-related aggressive keywords and the number of new pandemic-related words increases as well. However, the aggressive words associated with COVID-19 account for a small proportion of commenters' aggressiveness and incivility during pandemic.

The most widely applied word-formation pattern to coin COVID-19 related words is the syntactic word-formation pattern, allowing the commenters to quickly create compound words, one part of which relates to COVID-19, while the other part expresses their attitude and assessment of the pandemic realities. Most of the new words are used only once and do not become a stable part of the commenters' vocabulary, thus showing the variability, instability, and fragmented character of communication in digital public sphere.

Keywords: digital media users' comments ▪ verbal aggressiveness ▪ linguistic creativity ▪ COVID-19 ▪ pandemic ▪ Latvia

1.   INTRODUCTION

COVID-19 pandemic as a social and public health crisis (Walby, 2021) left an impact on individuals' daily life and communication, and the impact is still ongoing. When the pandemic broke out in 2020, the population in Latvia – just like in other countries – was overwhelmed by huge volumes of information, introducing new concepts describing the pandemic; the process has not stopped in the second year of the pandemic. Mass media allowed the population to follow information regarding the virus, epidemiological restrictions, and their impact on various spheres of life, governmental decisions, mask wearing, progression of the disease, vaccines, and the vaccination process, as well as research on COVID-19 daily.

In spring 2020 – the first wave of the pandemic – Latvia was among the countries with a low number of COVID-19 sufferers (SPKC, 2020, December12); however, when the second wave hit in autumn 2020, as well as in winter 2021, the situation in Latvia was dire (SPKC, 2021, February 2). Due to the rapidly growing infection rate, a state of emergency was declared in health care, followed by a curfew around the turn of the year (Skaties/Leta, 2021, November 18), restricting the mobility and other activities of the population even more.

The pandemic restrictions that required that most economically active citizens to stay at home led to an increase in the consumption of digital news media and local news usage online (Kim, Wang, & Malthouse, 2021). In 2021, 87% of the population of Latvia used Internet news portals, during the pandemic their use exceeded the use of television (81%) for the first time (Latvijas Fakti, 2021). To enable the public to constantly follow the information of the Covid-19 pandemic, the largest news portals delfi.lv. tvnet.lv and apollo.lv, which offer information in Latvian and Russian, announced that they are cancelling pay walls for news related to the pandemic. The society used social media, as well as commenting options provided by digital news media sites, to voice their opinion and discuss the latest information about the pandemic.

For the most part, COVID-19 news is characterised by negative connotations, as they inform about people dying, hazards of the disease, issues in the healthcare system, restrictions that change people's lives, and the inconsistency of decisions taken by the government managing the pandemic crisis. The COVID-19 news causes fear of illness, exacerbates insecurities about the economic situation (Zalc & Maillard, 2020), increases stress. These are just a few reasons for the frustration and anger evident in the media users' reaction to the pandemic news; the users direct their verbal aggression at news topics, individuals featured most prominently in the news (Rožukalne, Kleinberga & Grūzītis, 2021), as well as other commenters. The modes of audience participation offered by digital media to react to online news content characterize a process that Mark Deuze (2020) calls mass self-communication, when audience members create a communication network that connects many sources and many recipients. In this process, the reaction to the news (commenting, offering

a different perspective, etc.) can happen both synchronously with current events represented in the news and asynchronously, when the reaction of news users (the view of what is reflected in the news) is influenced by other commentators and the opinions expressed in the comments.

Given that the pandemic processes create contradictory and polarized opinions in the society, to explain the data of our research data on online news sites audience discussions in comments' environment, we use two theoretical approaches of mass communication, the second order media effect (Valkenburg & Peter, 2013), which explains the formation of attitudes over a longer period (Igartua, Ortega-Mohedano & Arcila-Calderón, 2020), and the concept of the digital public sphere (Papacharissi, 2002; Papacharissi, 2015; Rauchfleisch, 2017, Wahl – Jorgensen, 2019).

In this study, we define audience participation as a form of audience activity in which the reaction to news is not limited to cognitive, emotional, or affective engagement (Broersma, 2019), but leads to purposeful action, as a result of which audience members simultaneously create comments (opinions) and content (Kammer, 2013) (words), with the help of which they try to influence the discussion about the actualities of the pandemic.

To grasp and discuss the volatile reality of the pandemic, people had to not only learn new words and concepts pertaining to the virus and its prevention processes, but often to create them as well; the language was quick to adapt.

What occurred in Latvian was similar to English, as evidenced by the *Oxford Languages report Words of an Unprecedented Year*, 2020 brought an unprecedented sense of immediacy and urgency to the work of lexicographers. Yet what is exceptional in our own lived experience often has parallels in history: the English language is studded with words from previous plagues and pandemics, mass social disruption, and an abundance of expressions that fulfil humanity's perennial need to describe an often-inhospitable world. Though what was genuinely unprecedented this year was the hyper-speed at which the English-speaking world amassed a new collective vocabulary relating to the coronavirus, and how quickly it became, in many instances, a core part of the language (Words of an Unprecedented Year, 2020).

Did the pandemic news impact not only the media content, the commenters' attitude, and the mood of the society, but the Latvian language used in the comments as well? How were the new words integrated in conversations taking place in the digital environment focusing on current events? Did the growing verbal aggressiveness and emotional attitude towards pandemic news evidenced in the content of the comments during the pandemic (Eisele et al., 2021; Rožukalne, Kleinberga & Grūzītis, 2021) and marked with IIA manage to spark a more active, diverse, pandemic-related linguistic creativity among digital media users?

When evaluating the content of comments left by the news portal users, the following hypothesis was put forth for the purposes of this research: the events happening around the commenters serve as an impulse to also create new words to voice their opinion regarding various aspects of the pandemic in the comments. The

second hypothesis concerns the aggressiveness of users leaving comments on news items, as well as their application of swear words, discriminatory terms, and emotionally expressive words to voice their aggressiveness by making them part of their aggressive communication. We hypothesised that if the level of verbal aggressiveness in news media comments increases during a pandemic, then the proportion of words describing the pandemic also increases.

The main objective of this study is to find out if verbal aggressiveness of news commentators fosters COVID19 pandemic-related linguistic creativity.

When finding interrelations between the level of aggressiveness of commenters and the pandemic realities related words used in comments, the following research questions were proposed:

RQ. 1. How do COVID-19 pandemic-related word use affect commenters' levels of aggressiveness (quantitatively)?

RQ. 2. What linguistic creativity techniques characterize the pandemic-related words used in news site comments?

2.   LITERATURE REVIEW

Our interdisciplinary research, which focuses on finding interrelations in the content of comments made by audience representatives, uses several theoretical frameworks. The behaviour of people commenting digital news is analysed as part of participatory culture and an opportunity to broaden media functions (Deuze et al., 2007; Jenkins, 2006), highlighting the changes in digital communication during crisis, including the global pandemic (Walby, 2021). In the context of this research verbal aggressiveness is viewed as communication characteristic to the digital public sphere (McDermott, 2018; Weber, 2014,) that permanently accompanies in digital media discussions on controversial issues and may reflect the mood of the society or its groups (Mutz & Soss, 1997; Naab et al., 2018) during a particular period. Commenting in our research is classified as one of the manifestations of audience activity (Spirodou, 2018; Weber, 2014), relating to content creation and defining one's attitude towards current events (Coe et al., 2014; Lee & Jae, 2010). In terms of evaluating the characteristics and mood of the communication (namely, aggressiveness in the context of our research), however, qualitative assessment of the usage of language and particular words is highly important.

Word-formation theory was used to interpret the data evaluated in the research from the linguistic point of view, analysing word-formation patterns. Attention was paid mostly to the syntactic word-formation pattern, as the analysed neologisms found in the comments are compounds, coined by using this word-formation pattern. In addition, the paper makes use of sociolinguistic findings concerning linguistic creativity during the times of crisis. Global shocks and events activate

the language system, as they lead to the creation of new words and constructions, demonstrating the flexibility and viability of language, as well as its capability to adapt to any circumstances (Strautmane & Lauga, 2021, February 11). The pandemic and the related socio-political crises urge the society to read and think more; therefore, special attention is paid to the organic ability of the language to react. Neologisms are considered as a good provocation that can prompt part of society not only to look for new words, but also express their opinion at the same time (Hirša, 2006), thus using their own opinion to actively shape public opinion.

2.1.   Internet comments and the digital public sphere

Commenting on news and other information as an involvement of the audience in discussions on significant socio-political issues is one of the most important phenomena of mediated communication encountered by societies all over the world. In an online communication environment, commenting takes place almost simultaneously with the news publication. Comments are a way to express the audience's activity related to the received message or other members of the audience, and comments are a part of participatory culture (Deuze et al., 2007; Jenkins, 2006) which has changed the behaviour of media audience.

Among researchers, the various forms of audience participation in the digital environment are considered one of the most significant phenomena caused by the digitization of news. Audience involvement, immediate reaction to the content, the possibility to create both audience comment, and audience content (Kammer, 2013) has changed the relationship between the media and the audience, as it challenges the unidirectional (Rowe, 2015) information flow from sender to receiver and has largely been replaced by multi-directional information flow (Kammer, 2013). Although from the point of view of scholars, audience comments as a form of participation have always been seen as an opportunity to improve discussions on socially important issues, however, studies of the content and effects of comments show a contradictory picture, in which the authors of comments are characterized as those who do not represent society and whose incivility causes other participants to leave the discussion (Coe, Kenski & Rains, 2014), at the same time, the opportunity offered by digital technologies to participate in discussions is emphasized. Discussions and comments as a form of participation help the news to change the perception of media content and to see the issues represented by the media in a different perspective (Jahng, 2018; Thorson et al., 2010). Researchers emphasize that audience participation affects the editorial decisions of journalists, the other users as well, thus, in the evaluation of the media ecosystem, more attention is paid to the manifestations of "audience logic" (Schrøder, 2017).

Commenters react both anonymously and openly, and comment on all aspects related to news: the content, quality of journalism, other commenters' reactions, also the use of language. Comments help to quickly understand the interpretation

of a news story, they could be called as shortcuts between the content and opinion formation (Ruiz et al., 2011). Comments on news portals show both the attention devoted to news (Kalogeropoulos, 2017; Yang, 2008), and the topics most important for the audience, as well as the level of audience's participation (Juarez Miro, 2020; Massip et al., 2018).

The opportunities to react to media content have changed the power relationships between the media information and its receiver as it increases the audience's role in the public information creation process. Comments give millions of media users an opportunity to share their thoughts and express their personality (Barnes et al., 2018), give opinions and show emotions (Rožukalne, 2018), have fun (Spyridou, 2018), participate in discussions. Commenting helps the audience to interpret journalist-created content, establish their social identity, engage in 'gate watching' as opposed to journalist 'gatekeeping' as Aske Kammer (2013) has described the involvement in discussions or meta-discussions. Comment writing is impacted by the commenters' knowledge about the topic discussed in the news and their understanding of the opportunity to contribute to the specific discussion (Soffer, 2019).

Audience's comments broaden the functions of a medium and can develop discussions (Massip et al., 2018; Weber, 2013, 952) on issues important for the society. Giving news media users an opportunity to freely contribute to the thought exchange, online media comment environment characterizes the modern digital public sphere. It is somewhat similar to and different from Jürgen Habermas' (1989) public sphere definition where representatives of various groups of society meet and discuss socio-political issues with the aim to impact decision-making. In contrast to Habermas' public sphere (Rauchfleisch, 2017, Wohl-Jorgensen, 2019) digital public sphere is characterized as fragmented (Dahlberg, 2007), varied, heterogeneous in audience, content, and technological possibilities. It includes a larger number and greater variety of participants. Representatives of different groups interact in the digital public sphere; socially important and personal information mix, and their quality and audience's level of participation is determined by the development of technological tools (Ruiz, et al., 2011).

When discussing the structural transformation of the rational discussion-based public sphere, scholars emphasize digital public sphere openness and accessibility, characterised by decentralized communication, in which emotions and affective reactions play an increasingly important role (Wahl-Jorgensen, 2019), reducing the possibility of constructive discussion (Papacharissi, 2015). Recognizing the potential of the digital public sphere for society to get to know a wider spectrum of opinions and to give the opportunity to hear previously unknown voices (Bennett & Segeberg, 2012; Dahlgren, 2005), researchers have expressed doubts about the diversity of debates in the digital environment, because people can avoid opposing views. In addition, quality of discussions is limited by conflicts between discussion participants (Papacharissi, 2002), and verbal attacks, incivility and aggressive communication which may encourage potential discussants to avoid participating in the discussion.

2.2. Verbal aggressiveness in the digital environment

Shortly after the creation of commenting opportunities, the content and mood of the audience's comments led to revision of previous assumptions that Internet commenters would provide positive contribution in the discussion quality and variety, creating an environment fit for democratic exchange of thoughts. Audience expresses more and more verbal aggressiveness in the online discussions. Its participants want to react to news topics emotionally, often being unable to engage in rational discussion (Kalogeropoulos et al., 2017; McDermott, 2016; Nau, & Stewart, 2014). Instead, users and researchers encountered rudeness, aggression, impoliteness (Ksiazek et al., 2016; Luck & Nardi, 2019), disrespect, defamation, verbal attacks, incivility, discrimination of the people or groups of society mentioned in the news, and disregard to any known or environmentally defined behaviour norms (Coe, Kenski & Rains, 2014; Naab et al., 2018). These processes stalled involvement of more commenters and forced publishers to invest in comment editing, as well as set rules of self-regulation (Miller et al., 2016).

Verbal aggression can be defined as offensive, reproachful, discriminatory, and hateful remarks toward the news content, authors, or other commenters. Hate, discriminatory attitude, hate speech can be executed by expressing negative attitudes toward a topic, individual, or group of society. It can manifest itself in neutral language or in curse words. Verbal aggression is identified by disregard of politeness rules and norms, vulgarity (Naab et al. 2018; Wilhelm et al., 2020).

Verbal aggression can be caused by different values and ideological beliefs of individuals (Su et al., 2018, 3693). If digital media users discuss significant and controversial topics on which there are different views on the society, the aggression can increase.

The user anonymity provided in the online environment harms discussion quality as it diminishes the accountability of participants and increases impoliteness and rudeness. Anonymity creates alienation between the participants of the discussion (Kalogeropoulos et al., 2017; McDermott, 2016). Crisis situations, characterized by anxiety, anger, fear, increase the level of aggression in the digital environment (Rožukalne, 2018), they also contribute to the emergence of new words, as they help to describe the current situation and related feelings more accurately.

2.3. Overview of reasons for word-formation

It is in the lexicon where language changes are revealed most rapidly and most vividly. Society's reaction to insecurity, unexpected situations, sudden crises is firstly appearing in language, expressing its feelings, thoughts, opinions, confusion, or indignation. Emotionally charged situations often lack common and well-known words, thus, the new words and expressions are created (Liepa, 2011, Liepa, 2021).

In this process through linguistic creativity known lexical units are modified, new ones created, and means of existing synonymy are extended.

The usage of neologisms demonstrates previously untapped means of word-formation. The new words make the text livelier and more compelling, attract attention and demonstrate individuals' creative potential in solving communicative needs (Liepa, 2011; Saukāne, 2008).

For the purposes of our research, the definition of neologisms proposed by the linguist Ojārs Bušs (2013) has been chosen; its author stresses that in a narrower sense only those new words or recent borrowings that have been derived from forms existing in one's native language (in this case – Latvian lexical roots and stems) can be considered neologisms. In a broader sense, however, neologisms also include recent borrowings (Bušs, 2013).

In addition, our research includes potential neologisms that denote various stages of language development even more precisely. To define them, the definition of potential neologisms provided by the Latvian National Terminology Portal (n.d.) was used: a potential neologism is 'a recently coined neologism not yet part of the lexical system of a language that has the potential to become part of it [..].' (Latvijas Nacionālais terminoloģijas portāls, n.d.)

For the purposes of this article, neologisms coined during the COVID-19 pandemic have been analysed; for the most part, they are occasional words (Liepa, 2021). As stated by the Latvian National Terminology Portal, an occasional word (also a nonce word) is a 'new word coined mainly for stylistic purposes in the context of a specific literary text or a particular speech situation [..]. For the most part, occasional words are used only by their respective authors and do not become part of the lexical system of a language.' (Latvijas Nacionālais terminoloģijas portāls, n.d.)

3.   RESEARCH METHODS AND DATA

To answer the research questions, put forth, data provided by the Index of the Internet Aggressiveness (IIA), a digital research tool developed at the Faculty of Communications of Rīga Stradiņš University (RSU) were used. The IIA was created for the purpose of analysing user aggressiveness on the Internet, and the aim of the research tool is to record the mood of society in the digital environment, assessing relationships between the content provided and the users' response. The structure of IIA is much broader in comparison to other tools designed for digital content research, as they in most cases reduce the obtained data to categories denoting neutrality, positivity, and negativity. IIA is based on software co-developed by the researchers of the Artificial Intelligence Laboratory of the University of Latvia. IIA is developed using language normalisation (Skadiņa et al., 2010; Garkāje, Zilgalve & Darģis, 2014; van der Goot, Rob & Çetinoğlu, 2020) and machine learning approach for computational analysis of audience comments, it codes and analyses comments left on the biggest news portals of Latvia, namely, delfi.lv, tvnet.lv un apollo.lv.

The mentioned news portals represent the development of digital mass media in Latvia. They were founded more than 20 years ago by technology companies who, wanting to attract a larger audience, developed digital websites as news portals and digital mass media (Rožukalne, 2013). They are the so-called digitally born media outlets, the development of which characterizes the unique situation that, unlike many other countries, legacy media in Latvia missed the transition to the digital environment. Therefore, the mentioned media have always been in the top 3 or top 5 of Latvian digital news media, they attract the largest audience and define the development of digital news media in Latvia, which is characterized by the media system of a small country (1.9 million inhabitants) and the linguistically divided audience of (35% of uses media in Russian) (MPM, 2022).

Three largest internet news sites are currently owned by two Estonian media corporations (delfi.lv is part of Ekspress Grupp, tvnet.lv and apollo.lv are owned by Eesti Media). According to Audience Gemius data (2022, February 15), in 2021 delfi.lv attracted more than 800,000 real users, tvnet.lv - 746,000 real users, apollo.lv - more than 599,000 real users. These media have also determined the development of Internet commenting culture, even creating the term "Delphi commenters", which means rude, uncivil, and aggressive behaviour of commenters. On Internet portals, comments are edited with the help of technology and by manually editing comments whose authors violate the law, e.g., call for violence, promote intolerance, subversion of state power or spread hate speech. Internet comments are also a fertile environment for spreading disinformation and propaganda of third countries, including the activities of Russian Internet trolls (Rožukalne & Sedlenieks, 2017).

To obtain data for the purposes of the IIA index, Rīga Stradiņš University has concluded the contracts with the media organisation, that they give access to the comments' data and encode it according to the goals of the researchers.

The analysis of the users' comments is based on several data groups: keywords, as well as their degree of aggressiveness or 'weight', meaning that words deemed to be very aggressive, averagely aggressive, and mildly aggressive. IIA data are divided into eleven categories: discriminatory words, swear words, words denoting injustice, words inciting violence, aggressive actions, personalities with symbolic links to aggression, associations with violence, aggressiveness related military terms, accusations, aggressiveness related emotions, betrayal. Aggressive words characterising COVID-19 that were selected after carrying out feasibility study of user comments were added to the IIA keyword corpus in September 2020 and classified as swear words.

The current IIA data set comprises around 25.18 million comments and around 1370 articles (Barometrs, 2022). IIA database makes it possible to search for various keywords, analyse their number, contexts and the relation to the news content, and the index makes it possible to determine the Top10 news items that received the most aggressive comments, as well as keywords that determine the aggressiveness level related to the news item.

The research covers two periods during which state of emergency was declared in Latvia due to the pandemic: from March 12, 2020, to June 10, 2020 (henceforth the 1st period) and from November 9, 2020, to April 6, 2021 (henceforth the 2nd period). Three data sets have been used in the research.

To contextualise the usage of pandemic related words and determine whether it is related to the overall level of aggressiveness of the news portal comments, the IIA data on the overall level of aggressiveness of portal users during both periods of state of emergency were compared. To shed light on the mood of the Latvian society, the following IIA quantitative data were used: the average level of aggressiveness throughout the period and each state of emergency period, the overall aggressiveness trend, and the trend according to keyword weights, as well as the number of IIA peaks during each period. To identify trends pertaining to the usage of COVID-19 related keywords and their possible impact on user aggressiveness in the comments, quantitative data pertaining to the use of each word were analysed. As IIA allows to determine the usage frequency of aggressive words included in the index pertaining to Top10 news, the following data have been used to analyse COVID-19 related keywords: baseline level of each COVID-19 related keyword, number of times each keyword has been used in relation to Top10 news (recorded in the corpus), number of news items related to Top 10 keywords.

The third data set consists of quantitative and qualitative analysis of the share of pandemic related neologisms in each period. Neologisms coined by portal users have been analysed and the respective word-formation model has been assessed using the IIA data.

All instances of usages with *kovid-* and *korona-* in the first part of the compound, as well as other frequently used words during the state of emergency (*vaccine, restrictions, pandemic*) have been analysed, applying qualitative content analysis to the IIA data.

This data set comprises pandemic related neologisms analysed by applying qualitative content analysis and determining which neologism word-formation model (syntactic, morphological, or syntactic-morphological) has proven to be the most productive in the comments.

Other elements of linguistic creativity, such as wordplay (phonetic deformations, rhymes) or occasional phraseological units were not included in this research. When assessing neologisms, a second aim was put forth, namely, to evaluate the emotional expressiveness of neologisms.

Pandemic related neologisms were systematised in two groups (qualitative content analysis). The first category included compounds with the word Covid (also Kovid – corresponding to the Latvian pronunciation), where the second component is a word belonging to common vocabulary (for example, *bed, hospital, section, patient, period* etc.), whereas the second category comprised words that, according to the marking denoted in the dictionary of common vocabulary (tezaurs.lv, n.d.), have stylistic expressivity. According to the definition of emotional expressivity provided by the Latvian National Terminology Portal (Latvijas Nacionālais terminoloģijas

portāls, n.d.), emotional expressivity in the context of this research is "the expressiveness added to a language unit (a word, a morpheme, a word form, a phraseological unit, a sentence) by an emotional connotation. Stylistic and emotional expressiveness taken together form additional information" (Latvijas Nacionālais terminoloģijas portāls, n.d.).

4.   RESEARCH RESULTS

4.1.   Level of aggressiveness in news site comments and quantitative use of Covid-19- related words in comments in the 1st and 2nd period of the study

As evidenced by IIA quantitative data (Table 1), the level of verbal aggression during nearly the entire first stage of the pandemic (3.4) is lower than the level on average (3.5). The trend data demonstrate that there were individual peaks of verbal aggression in the first weeks of May and June 2020. However, periods of markedly low level of aggression are much longer. The curve of keyword weight shows that users use mainly mildly or averagely aggressive words (value: 1.9–2.75).

The average level of aggression during the second period of research (Table 1) has increased (3.6), whereas trend data curves show that the aggressiveness during this period mostly exceeded the average value (3.5). Evaluating the trends by keyword weights allows us to conclude that verbal aggressiveness during the 2nd period was stable throughout and mostly mildly or averagely aggressive words were used in the comments (average value: 2–2.5); it corresponds to the average level of two years.

Table 1: General verbal aggressiveness level (1st period and 2nd period). Source: IIA data.

Data	1st period	2nd period	Average level (Jan 2020 – Dec 2021)
Average value of commenters' aggressiveness	3.4	3.6	3.5
Number of peaks, according to trendline (per date)	15	34	-
Trend based on keyword weights	1.9–3.75	2–2.5	1.9 – 2.7

The quantitative data of the IIA peaks shows that there were 15 peaks during the 1st period (3 months), whereas during the 2nd period (5 months) the number of peaks reached 34. During the first period of the pandemic there were individual events that caused short-term (April, May, June) spikes of news portal user aggressiveness; however, when looking at the 2nd period, two things have to be taken into account: firstly, the overall level of aggressiveness was higher, exceeding the average level for a longer period of time, and, secondly, the stable usage of averagely aggressive words in the comments allows to draw a conclusion of the stability of the total level of aggressiveness, i.e. the aggressive sentiment present in the society.

The analysis of aggressive comments left on news items during 10 peaks of each period reveals that in the 1st period 39% of IIA keywords were COVID-19 related, and in the second period the number increased to 47%, meaning that an increase in the level of aggressiveness also leads to an increase of the number of aggressive keywords, as well as the weight of aggression of the words used in the comments.

Quantitative analysis of COVID-19 related keywords (Table 2) (14 new keywords were added to the IIA) reveals similar trends: during the 1st period (Table 2), the usage frequency of each keyword was low, and several words were not identified in the comments. The analysis of the comments on Top10 news items showed that that the words used most often were variants of "covidiot" (90 times) and "covidphobe" (7 times); both express judgement of other people, based on their attitude towards the pandemic. During this period, 82 comments featured dismissive words denoting COVID-19 ("coronaflu" and "coronavirus"); they were used to ridicule the seriousness of the new disease. The commenters used COVID-19 related keywords; however, their usage rate was low in comparison to other words used for expressing aggressiveness (the aggressiveness index does not exceed 1; for most of the words, the baseline level ranges from 0.1 to 0.29). When assessing the proportion of Covid-19 related keywords in the Top 10 most commented news, it can be concluded that these words were used in only one third of the Top10 news selected by the IIA.

Table 2: Analysis of Covid-19 related keywords of IIA in 1st period. Source: IIA data.

Word (Latvian)	Word (English)	Baseline level	Number of uses in comments (various forms) from Top 10	Number of news pieces from Top 10
kovidiots	covidiot 1	0.262	21	10
covidiots	covidiot 2	0.641	139	10
covididiots	covididiot 3	0.368	30	10
covidfobs	covidphobe	0.355	7	4
covidhistērija	covidhysteria	0.11	1	1
covididiotija	covididiotism	0.25	2	1
kovidisms	covidism	0	0	0
kovidmenedžeris	covidmanager	0	0	0
kovidmenedžments	covidmanagement	0	0	0
kovidnieks	covid (vulgar)	0.296	36	10
kovidticīgs	covid believer	0	0	0
kovidšovs	covidshow	0.44	3	2
kroņgripa	coronaflu	0.19	2	1
kroņvīruss	coronavirus	0.275	46	10
Total			**287**	**59**

The situation analysed in the second period of research has changed (Table 3), as words related to COVID-19 have been used to comment Top10 news 5.6 times more often (1634 instances in total). In addition, their baseline level has increased several times as well: it varies on average from 0.3 to 0.94. Although the same words from the keywords list have been used, the usage rate is significantly higher and the context – significantly more aggressive: a form of "covidiot" has been used 1176 times in total, accounting for 72% of Covid-19 related word uses. During this period, "kovidnieks", a vulgar word denoting the virus was used often (221 times); it was used to belittle the dangerous nature of the virus. "Covidshow", which was used only 3 times during the first period, was used 44 times in the second one to denote the anger caused by the pandemic prevention process. The usage of the word "covidphobe" saw a significant increase (63 times as opposed to 7 times during the 1st period); it was used to mock other commenters or people featured on the news who took the danger posed by the virus seriously. The word "covidhysteria" (used to portray the fight against the pandemic as overblown) saw a similar increase (26 times in comparison to a single case during the first period). When evaluating these words in the context of Top10 news, it becomes clear that it is possible to find a COVID-19 related IIA keyword in the comments of nearly every most commented news item. However, the word "covidflu", a characteristic feature of the comments of the first period, was completely absent during the second period.

Table 3: Analysis of COVID-19 related keywords of IIA in 2nd period. Source: IIA data.

Word (Latvian)	Word (English)	Baseline level	Number of uses in comments (various forms) from Top 10	Number of news pieces from Top 10
kovidiots	covidiot 1	0.944	665	10
covidiots	covidiot2	0.603	380	10
covididiots	covididiot 3	0.342	131	10
covidfobs	covidphobe	0.312	63	10
covidhistērija	covidhysteria	0.23	26	10
covididiotija	covididiotism	0.1	1	1
kovidisms	covidism	0.22	2	2
kovidmenedžeris	covidmanager	0	0	0
kovidmenedžments	covidmanagement	0	0	0
kovidnieks	covid (vulgar)	0.396	221	10
kovidticīgs	covid believer	0.216	5	5
kovidšovs	covidshow	0.32	96	10
kroņgripa	coronaflu	0	0	0
kroņvīruss	coronavirus	0.378	44	10
Total			**1634**	**88**

4.2. Quantitative and qualitative analysis of COVID-19 related linguistic neologisms

For the purposes of researching neologisms during both periods of state of emergency in Latvia, the same keywords were chosen, namely, *kovid, korona* (also *covid, corona*), *vaccine, restrictions*, as well as related neologisms – compounds. These words were searched for in the whole corpus of comments left during the specified period; therefore, the data differs from that obtained by qualitative analysis of COVID-19 related keywords added to the IIA aggressive keywords list, meaning that the words analysed further may not be aggressive.

To systematise the selected neologisms, they were counted according to both periods, specifying the number of usage instances, as well as the total number of comments. Afterwards, words used in the first and the second instance of state of emergency were divided into two groups:

- stylistically neutral words that describe the disease, state of emergency, sufferers.
- stylistically expressive word formatives, where the second component has a humorous, ironic, or sarcastic shade of meaning, including words with a deliberately negative connotation.

The emotionally expressive category includes neologisms containing slang (including vulgarisms) as well; they have been marked with an * in the tables presented in the Annexes.

The first research period is shown in Table 4 (detailed data in Annex 1–4): these are words containing *covid-* (*kovid-*), *corona* (also *korona*), *vaccine, restrictions*. However, the last two words have not been used in neologisms, as they have more syllables, making it more difficult to fit them in a compound. Moreover, vaccines were not yet available during the first state of emergency, leading to a smaller number of uses.

As evidenced by the table, the second period of research features an increase of neologisms with *covid-* (*kovid-*). During this period, the translation (*kroṇa-*) of corona (*korona*) in Latvian was also featured more prominently, for example, *coronavirus, coronapandemic*.

The word *vaccine* was not used in coining neologisms; however, it was used in one type of wordplay, namely, in a phonetic deformation. These examples include the words *fakcīna* (6 uses in 6 comments – the English word *fuck* has been used) and *kakcīna* (1 case; the Latvian vulgarism *kaka* has been used in this instance).

The word 'restrictions' was not used to create neologisms in comments.

Table 4: Quantitative data on linguistic creativity. Source: IIA data.

Period of study		Number of words used	Number of users' comments
1st period	words that include "Covid-" (of which kovidiots(i) 7)	354	315
	words that include "corona- "	984	910
	Words that include "vaccine"	827	728
	ierobežojumi (restrictions)	1027	961
2nd period	words that include "Covid-" (of which kovidiots(i) 306)	2075	1710
	words that include "corona- "	490	374
	Translation of corona into Latvian ("kroņa")	33	28
	Words that include "vaccine"	5474	4767
	ierobežojumi (restrictions)	3536	3246

After performing quantitative data analysis, stylistically neutral and stylistically expressive neologisms were systematised using qualitative content analysis (Table 5).

The words describing sufferers and the disease itself are stylistically neutral: *kovidslimnieki (covid sufferers)*, *kovidpacienti (covid patients)*, *kovidupuri (covid victims)*, *kovidpalāta (covid ward)*, *kovidārstēšana (covid treatment)*, *kovidkomplikācijas (covid complications)*, *kovidpandēmija (covid pandemic)* etc. These word formatives are stylistically neutral, as the second component of the compound is part of the common vocabulary (*pacienti* 'patients', *testi* 'tests', *skaitļi* 'numbers)' *pandēmija* 'pandemic' etc.), without any shade of emotionally expressive meaning.

Word formatives indicative of the author's attitude are stylistically expressive. Although some of them feature a word belonging to the common vocabulary as the second component (*propaganda* 'propaganda', *spēles* 'games', *pabalsts* 'benefit', *problēma* 'problem', *ēna* 'shadow', *noliedzēji* 'deniers' etc.), the combination with the international word covid- denoting the virus made the neologism take on an entirely new shade of meaning, along with a turn of thought that is, in a sense, paradoxical and metaphorical.

The following words have not been included in the list of index keywords, although they fit the requirements of the IIA: swear words, discriminatory words, words describing violence.

All neologisms recorded during the first state of emergency (61) are compounds, coined by applying the syntactic word-formation pattern. In addition, they show another important trend: the first component of all the recorded compounds contains an element of international origin (*kovid-*, *korona-*).

The second state of emergency is longer in terms of time, as well as more abundant and varied in terms of new lexemes; one commenter termed this time *kovidmaratons* 'covidmarathon'.

The word *infodēmija* 'infodemic' (*informācija* 'information' + *pandēmija* 'pandemic'), hardly used before, emerged during this period. Three comments featuring four instances of this word were identified; they are not given an individual entry in the table. The usage of 'infodemic' is related to flow of false information concerning COVID-19 (WHO, 2020, February 11).

This period features a relatively large number of emotionally expressive neologisms, including those that conform to the IIA; the process is fuelled by the society splitting into two irreconcilable groups.

The compound *koviddauneļi* (attributing Down syndrome to someone), emerging during this period, deserves to be highlighted, as it is the only compound in our research that has been coined using the syntactic-morphological word-formation pattern.

Table 5: Structure of compounds in the 1st and 2nd study period. Source: IIA data.

Period of study	Compounds (total)	Of which	
		stylistically neutral	stylistically expressive
1st period	61	28	33
Compounds with covid-	34	17	17
Compounds with corona-	27	11	16
2nd period	195	47	148
Compounds with covid-	165	39	126
Compounds with corona-	30	8	22

Individual neologisms identified in the research have been included as occasional phraseologisms not deemed to be aggressive, ironic (in a negative sense) or sarcastic. They feature wordplay that makes use of surnames of politicians.

Unfortunately, during this period vulgar neologisms that fit the IIA emerged as well. This group includes swear words, discriminatory words, as well as words describing violence: *kovidmēsli* 'covidcrap', *kovidfufelis* 'covidsham', *kovidsūdi* 'covidshit', *kovidhuiņa* 'coronadickery', *kovidhujovid* 'covidfuckovid', *kovidfigņa* 'covidbull', *koronajobanā* 'coronafuckery', etc.

During this period, neologisms (compounds) with the component *kroņ-* emerged as well, with *kroņ-* being a translation of "corona" into Latvian (*kronis*).

In addition, during this period the word *pandēmija* 'pandemic' (also *kovidpandēmija* and *covidpandēmija* or *Covid pandemic*) was recorded as well, amounting to 9 uses in 8 comments. *Pandemic* was also included in phonetic transformations, for example, *pandēmija – šmandēmija*; also, *plāndēmija* 'plandemic' (20 uses in 18 comments) and *kovidplāndēmija* (wordplay, phonetic transformation, epenthesis); however, the analysis of phonetic deformations is beyond the scope of this research.

There are also blends, coined using "blending" two words together; for example, 10 comments feature *panikadēmija* (panic + pandemic = panicdemic); also, *fufeldēmija*

(fufelis (a trifle; sham) + pandēmija = fufeldēmija); *pornodēmija* (pornography + pandemic = pornodemic).

Linguist Andrejs Veisbergs describes blending thus: "Blending is yet rare in Latvian and seems to be an imported word-formation pattern. Apart from a few blends which have gained ground in the language, there are relatively many occasional blends which testify to the gradual growth of importance of this word-formation pattern" (Veisbergs, 1997, p. 282).

5.   CONCLUSIONS AND DISCUSSION

The aim of this research was to study the link between the level of verbal aggressiveness present in the comments left on the biggest news portals in Latvia and the linguistic creativity in the context of pandemic related words. Moreover, we went one step beyond, analysing the impact of neologisms on the mood of active commenters operating in the digital environment, in the context of our research – the level of aggressiveness of internet news portal users.

Answers to research questions:

RQ 1. How does COVID-19 pandemic-related word usage affect commenters' levels of aggressiveness (quantitatively)?

The level of aggressiveness of the users of the biggest news portals, as well as several aggressiveness indicators grew slightly during the pandemic. Quantitative analysis of COVID-19 related keywords selected from the IIA demonstrates that the usage of popular words ("covididiot", covidhysteria", "covidshow" etc.) gradually increases during the pandemic. During the 1st research period, the words were featured in comments; however, their use did not significantly impact the IIA level. The keywords were used significantly more to comment news on COVID-19 during the 2nd period of research, yet the quantitative data analysis their usage in the total content of comments did not lead to a significant increase in aggression, meaning that, in comparison to other aggressive keywords, they were used less frequently. Their impact on the IIA is insignificant (less than a third); in other words, the average level of aggressiveness is determined by other words with a higher usage frequency and overall aggressiveness, for example, words that incite violence towards officials or other people.

Based on the frequency of word usage, the quantitative data relating to COVID-19 related neologisms grew during the 2nd period of state of emergency.

Therefore, it can be concluded that COVID-19 related keywords and other neologisms are used and created on a continuous basis and news portal commenters on the Internet use them to express their attitude (Igartua, Ortega-Mohedano & Arcila-Calderón, 2020; Ruiz et al., 2011), including emotional reaction (Wahl-Jorgensen, 2019) towards pandemic related events. Commenters made use of these words to

voice their aggression as well; however, they did not serve as a substitute to other words that are used to express verbal aggressiveness significantly more often and more ardently, meaning that words used during the time of a crises influenced but did not determine the level of aggressiveness of commenters during both states of emergency during the pandemic. Our data shows that while the crisis has an impact on the level of aggressiveness of commenters, the existing nature of communication on the Internet remains important.

Our data characterise the homogeneity and one-sidedness of the discussion in the digital environment, as negative attitudes are cultivated in the comments of the pandemic news with the help of the same words. The conclusions on content of aggressive communication and the increase in aggressiveness when the pandemic situation becomes more complicated in news representation is in line with the opinion of sceptics of the digital public sphere that it is difficult to apply a deliberative perspective to online discussions (Papacharissi, 2002; Papacharissi, 2015).

Another significant conclusion arising from quantitative analysis concerns word usage. COVID-19 related words are mostly swear-words and thus are used to voice commenters' anger and resentment when reacting to events of the pandemic. They undoubtedly serve a prominent function in digital discussions, allowing one to express one's opinion on COVID-19 related news content more clearly.

The word *kovidioti* 'covidiots' was used already in early March 2020 in the United Kingdom, the US, and other places to refer to the panicked shoppers hoarding toilet paper and pasta. After a state of emergency was declared in Latvia, this word was also used to refer to people ignoring the recommendation to stay at home; later it also included conspiracy theorists (regarding the origins of the virus) and people agitating against COVID-19 vaccines when they would be available (*Do you speak corona? A guide to covid-19 slang 2020*).

Using news readers' comments, the second order media effect in this study can be explained due to comments' content that manifested growing aversion to the content of pandemic news and the use of similar words to express and strengthen negative attitudes towards, firstly, pandemic news, and secondly, the pandemic. The proportion of "covidiot" and other words recorded in the IIA data allows to conclude that rude and aggressive communication has been dominating in the Latvian digital public sphere. New words and their usage frequency and dynamics also characterise commenters' mood shifts; however, they are not impactful enough to significantly change the mood and content of the comments over a longer period. Therefore, it can be stated that our data reflect the volatility, fragmentary nature, and presence of emotional assessment in the discussions on COVID-19 related news.

RQ 2. What linguistic creativity techniques characterize the pandemic-related words used in news site comments?

Our research allows us to conclude that the syntactic word-formation pattern was

the most productive during pandemic. It is easily explained: it is quite easy to use, being a flexible means of combining even seemingly incompatible roots into one word. The number of compounds recorded in both periods is soundproof: only one compound was coined by applying the syntactic-morphological word formation pattern, and there were no examples of neologisms using the morphological word-formation pattern.

Compound creation as a productive means of coinage in the literary language was noted already in the 1980s (Bušs, 1982). Modern research concerning the Czech language also confirm it; for example, M. Škrabal and M. Kavka (2021) note that: "As regards truly new lexemes, the simplest way is to create a compound with the first component *korona-* or its truncated version *koro-* (altogether approximately 42% of new entries)" (Škrabal & Kavka, 2021).

When assessing the expressivity of compounds, it can be concluded that the stylistically expressive compounds have a slight edge in the 1st period, while in the 2nd period the expressivity increases along with the news commenters' aggressiveness. Some of the words used confirm the aggressiveness criteria; however, they are few and are mostly a feature of individual participants' communication instead of being widespread throughout the comment corpus. Several neologisms could be considered as metaphors; however, as metaphor identification and analysis were not the objectives of this research, the identified transfers of meaning are unexpected research finding. Metaphor formation during the times of pandemic is promoted by the rich information background. During the 2nd period other types of linguistic creativity, such as wordplay, occasionally modified phraseological units, and proverbs, emerged as well; however, these categories have not been analysed in the article.

The evaluation of COVID-19-time neologisms allows us to conclude that, for the most part, they are occasional words created by individual authors and are highly unlikely to become part of the lexical system.

Our data are consistent with other findings concerning linguistic creativity during the time of the pandemic. Researchers M. Škrabal and M. Kavka (2021), pointed out that it is difficult to predict which of the deluge of new words will become permanently entrenched in the language and which will not. They called the lexicon as the most dynamic level of language, which is like a mycelium for linguistic change, where new words are being recorded to an unprecedented extent (Škrabal & Kavka, 2021). Linguist David Crystal (2020) characterises linguistic creativity in the English language by emphasising that "the basic vocabulary of the virus – social distancing, lockdown, Corona, and so on [..] – has been used ludically to generate a wide range of playful, yet often pointed, expressions". He mentions the new abbreviations, such as BC (Before Covid) and WFH (working from home) and the influence of Brexit which has been usable to create words 'covexit' and 'locksit'. Crystal admits that most of the neologisms are blends – the combination of parts of two old words to make a new one (Crystal, 2020). He has highlighted humour as a means of linguistic expression as ability to laugh "in the face of the enemy" (Crystal, 2020). Our study

data identifies what the other researchers point to a different mood, as evidenced by language changes, that the difficulties of a pandemic in certain groups of society are manifested in verbal aggression tactics expressed in the form of incivility integrated in toxic language (Pascual-Ferrá et al., 2021).

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Annexes

Annex 1. List of words with covid- created and their characteristics (1st period).

Stylistically neutral	Emotionally expressive
covidsufferers (kovidslimnieki)	covidpropaganda (kovidpropaganda)
covidpatients (kovidpacienti)	covidbenefit (kovidpabalsts)
covidtests (kovidtesti)	coviddeniers (kovidnoliedzēji)
covidnumbers (kovidskaitļi)	covidaffair (kovidafēra)
covidstatistics (kovidstatistika)	covidcombating (kovidapkarošana)
covidrestrictions (kovidierobežojumi)	covidgames (kovidspēles)
covidvictims (kovidupuri)	covidcretinism (koviddebilisms)
covidpandemic (kovidpandēmija)	covidpolution (kovidpiesārņojums)
covidcontext (kovidkonteksts)	covidhysterics (kovidhistēriķi)
covidcrisis (kovidkrīze)	covidquotas (kovidkvotas)
covidtreatment (kovidārstēšana)	covidnuclearbomb (kovidatombumba)
covidward (kovidpalāta)	covidproblem (kovidproblēma)
covidpandemic (kovidpandēmija)	covidshadow (living in the covidshadow) (kovidēna (dzīvot kovidēnā))
covidmorbidity (kovidsaslimstība)	covidinstruction (kovidinstrukcija)
covidvirus (kovidvīruss)	covidophobia (kovidofobija)
covidinfection (kovidinfekcija)	covidiot(s) (kovidiots(i)) (7 uses in total)
covidcomplications (kovidkomplikācijas)	covidiocy (kovidiotisms) (1 use in total)

Annex 2. List of words with corona- created and their characteristics (1st period).

Stylistically neutral	Emotionally expressive
coronavirus (koronavīruss)	coronacover (koronaaizsegs)
coronamail (koronapasts)	coronasuperstate (koronaslielvalsts)
coronaquarantine (koronakarantīna)	coronaeagle (koronaērglis)
coronasufferers (koronaslimnieki)	coronahysterics (koronhistērija)
coronatest (koronatests)	coronaspreader (koronaiznēsētājs)
coronawave (koronavilnis)	coronataxes (koronanodokļi)
coronavictim (koronaupuris)	coronavictory (koronasuzvara)
coronastatistics (koronastatistika)	coronacomment (koronakomentārs)
coronamortality (koronamirstība)	coronaparty (koronaballīte)
coronadisease (koronasērga)	*coronashit (koronasūds)
	coronaboost (pneumonia + coronaboost) (koronapiešprice (pneimonija + koronapiešprice))
	coronacargo (about a ship with infected passengers) (koronakrava (par kuģi, kurā ir inficēti pasažieri))
	coronacollapse (koronakrahs)
	coronaslumber (the State Revenue Service is sleeping) (koronamiedziņš (VID guļ))
	the coronablessed (koronaaplaimotie)
	coronastock (new sufferers) (koronakrājums (jauni slimnieki))

Annex 3. List of words with covid- created and their characteristics (2nd period).

Stylistically neutral	Emotionally expressive
covidevent (kovidpasākums)	covidiots (kovidioti)
the covidpositives (kovidpozitīvie)	covidbelievers (kovidticīgie)
covidworld (kovidpasaule)	covidparody (kovidparodija)
covidrestrictions (kovidierobežojumi)	covidtrifles (kovidsīkumi)
covidovercoming (kovidpārvarēšana)	covidaffair (kovidafēra)
covidmasks (kovidmaskas)	covidfraudsters (kovidafēristi)
covidoutbreak (koviduzliesmojums)	covidpass (kovidpase/kovidpass)
covidsufferers (kovidsaslimušie)	coviddeniers (kovidnoliedzēji)
covidvaccines (kovidvakcīnas)	covidshow (kovidšovs)
covidtest (kovidtests)	covidtax (kovidnodoklis)
covidward (kovidnodaļa)	*covidsham (kovidfufelis)
covidtopic (kovidtēma)	covidoppression (kovidspaidi)
covidsituation (kovidsituācija)	covidcouriers (people who import the disease) (kovidkurjeri (kas ieved slimību))
covidtimes (kovidlaiks)	covidmarket (kovidbirža)
coviddeceased (kovidmirušie)	covidproject (kovidprojekts)
the covidvaccinated (kovidvakcinētie)	covidera (kovidēra)
coviddeath (kovidnāve)	covidrecords (kovidrekordi)
covidstems (mutations) (kovidcelmi (mutācijas))	covidmutant (kovidmutants)
covidhotbed (kovidperēklis)	covidpumping (kovidpumpēšana)
covidspread (kovidizplatība)	covidbusiness (kovidbizness)
covidstatistics (kovidstatistika)	covidshadow (living in the covidshadow) (kovidēna (dzīvot kovidēnā))
coviddiagnostics (koviddiagnostika)	covidrhyme (kovidpantiņš)
covidpatients (kovidpacienti)	(viable) covidmolecule ((dzīvotspējīgā) kovidmolukula)
covidcrisis (kovidkrīze)	covidprophets (kovidpravieši)
covidregulations (kovidnoteikumi)	coviddisidents (koviddisidenti)
covidanalyses (kovidanalīzes)	covidmoney (granted) (kovidnauda (piešķirta))
covidwaves (kovidviļņi)	*covidfuckery (kovidhuiņa)
covidtreatment (kovidārstēšana)	*covidshit (kovidcrap)
covidsufferers (kovidslimnieki)	covidthinking (koviddomāšana)
covidspread (kovidzplatība)	covidfans (kovidfani)
covidclinic (kovidklīnika)	covidcow (as a religious symbol) (kovidgovs (kā svētā reliģija))
covidvaccination bureau (kovidvakcinācijas birojs)	covidsheep (kovidaita(s))
coviddiagnosis (koviddiagnoze)	covidperformance (kovidizrāde)
covidsymptoms (kovidsimptomi)	covidbenefit (kovidpabalsts)

Stylistically neutral	Emotionally expressive
covidhospital (kovidslimnīca)	coviddose (koviddoza)
covidprohibitions (kovidaizliegumi)	covidhysteria (kovihistērija)
covidnumbers (kovidcipari)	covidcover (kovidaizsegs)
covidholiday (kovidatvaļinājums)	covidpropaganda (kovidpropaganda)
covidplague (kovidmēris)	covidpromoter (kovidadvokāts)
	covidcatching (kovidsaķeršana)
	covidflag (kovidkarogs)
	after covidkariņš come what may (pēc kovidkariņa (kaut ūdens plūdi))
	covidkariņš on the rocks (a suggestion to move the world ice hockey championship to Slovakia) (kovidkariņš uz sēkļa (rosina PČ hokejā pārcelt uz Slovākiju))
	covidscaremongering (kovidbaidīšana)
	covidsigns (kovidzīmes)
	fincovidnavichok (a new variant in Finland) (finos kovidnavičok (Somijā jauns variants))
	covidfakery (kovidteātris)
	covidgoofs (kovidkuriozi)
	covidhysteria (kovidhistērija)
	the covidhysterics (kovidhistēriķi)
	covidhotbeds (kovidperēkļi)
	covidnews (kovidziņas)
	coviddeniers (kovidnoliedzēji)
	covidtotalitarianism (kovidtotalitārisms)
	covidfarce (kovidfarss)
	covidflag (kovidkarogs)
	covidatheists (kovidateisti)
	covidpause (during the summer (kovidpauze (vasarā))
	covid Memory water (kovid Memory water)
	covidbaloney (kovidmurgi)
	the covidboot mutation (the ban on boot sales during winter) (kovidzābaku mutācija (aizliegums tirgot ziemā zābakus))
	covidmoney (kovidnauda)
	covidjabs (kovidšprices)
	covidlife (koviddzīve)
	covidscaremongering (kovidbaidīšana)
	covid lockdown (kovid lockdown)

Stylistically neutral	Emotionally expressive
	covidfashists (kovidfašisti)
	covidbaloney (kovidmurgs)
	covidbubble (kovidburbulis)
	*covidretard (syntactically morphological) (kovid-daunelis (sintaktiski morfoloģiskais))
	covidpanickers (kovidpanikotāji)
	*covidcorpses (kovidmiroņi)
	covidkiosks (kovidkioski)
	covidiot panickers (kovidioti panikotāji)
	covidparanoia (kovidparanoja)
	covidbusiness (kovidbizness)
	itsy bitsy covidtrain (kovidvilcieniņš)
	covidsect (kovidsekta)
	covidsocialism (kovidsociālisms)
	coviddwarfs (kovidrūķi)
	covidreligion (kovidreliģija)
	*covidfinis (also finisas; the reaction to the number of sufferers in Lithuania) (kovidkirdik (arī kirdikas; reakcija par Lietuvā saslimušo skaitu))
	covidfarce (kovidfarss)
	*covidzombies (kovidnozombētie)
	coVID (a pun on the State Revenue Service or VID) (koVID (vārdu spēle ar Valsts ieņēmumu dienestu))
	covidtrolls (kovidtroļļi)
	covidbunk (kovidpekstiņi)
	covidcommunism measures (kovidkomunisma pasākumi)
	covidpropaganda (kovidpropaganda)
	covidsocks (kovidzeķes)
	covidcalenders (kovidkalendāri)
	pļaviņ'gobzem'ish covidretard (pļaviņ'gob-zem'veidīgais koviddauni)
	covidhive (kovidpūznis)
	covidworshippers (kovidpielūdzēji)
	covidfarce (kovidfarss)
	covidfestival (kovidfestivāls)
	covidrecord (kovidrekords)
	covidabsurd (kovidabsurds)
	covidchurches (kovidbaznīcas)
	covidservers (kovidkalpotāji)

Stylistically neutral	Emotionally expressive
	covidhuts (kovidbūdas)
	covidadepts (kovidadepti)
	the covidroot of it all ((kur aug) kovidkājas)
	covidcommunism (kovidkomunisms)
	covidinfluencer (kovidinfluenceris)
	covidhooey (kovidsviests)
	coviduidiots (meaning that there are no COVID-19 sufferers) (kovidneidioti (ka slimnieku nav))
	covidqueen schminkelviņķele (ķiņķelviņķele – kovidķēniņiene)
	covidfraudster Viņķele (kovidafēriste Viņķele)
	*covidfuckovid (kovidhujovid)
	covidpremium (kovidpiemaksa)
	covidstorm concerts (a reference to the band "Brainstorm") (kovidvētras koncerti (asoc. ar "Prāta vētru"))
	covidfans (kovidfani)
	covidmarathon (kovidmaratons)
	*covidbull (kovidfigņa)
	covidjournalists (kovidžurnālisti)
	covidicon – toilet paper (kovidikona – tualetes papīrs)
	covidgang (kovidbanda)
	covidviruslet (kovidvīrusiņš)
	covidnitwit (kovidmuļķītis)
	covidplandemic (koviplāndēmija)
	covidsect (kovidsekta)
	covidgull (screaming) (kovidkaija (kliedz))
	covidfairytales (kovidpasaciņas)
	covidwimps (kovidnīkuļi)

Annex 4. List of words with corona- created and their characteristics (2nd period).

Stylistically neutral	Emotionally expressive
coronadevelopment (koronattīstība)	coronascaremongering (koronašausmināšana)
coronavirus (koronavīruss)	coronascaremongering (koronašausmināšana)
coronasigns (koronapazīmes)	coronafearmongering (koronabiedēšana)
coronavictims (koronaupuri)	coronaera (koronaēra)
coronarestrictions (koronaierobežojumi)	coronagoody (koronamalacis) coronaparty (koronaparty)
coronatime (koronalaiks)	*coronadickery (koronahuiņa)
coronaevents (koronapasākumi)	coronafakery (koronateātris)
coronatopic (koronatemats)	coronadens (koronapūžņi)
coronastatistics (koronastatistika)	coronaorator (koronaorators)
	coronaexhibitionist (koronaekshibicionists)
	coronascaremonger (koronabaidītājs)
	coronavulgaris (koronavulgaris)
	coronaawakening (koronaatmoda)
	coronahysteria (koronahistērija)
	coronahysterics (koronahistēriķi)
	coronaplandemic (koronaplāndēmija)
	coronadenial (koronanoliegšana)
	*coronakiller (koronakilleris)