Methodology for analysis of intertextuality: technical aspect

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Abstract
This article is dedicated to the problem of insufficient providing with software of working with intextextemes. A relational database has been created and a software application has been developed to implement a simple and effective process of intertextuality research, including the identification of correlations between different intertexteme characteristics.

Keywords 1
Intertexteme, intertextuality, database, software, transformation

1. Introduction

Today modern society is increasingly characterized as an open information society, where information plays a major role. The development of information technology and the formation of the Internet has radically influenced the traditional mass communication. D. Rushkoff in his work «Media Virus» noted that «as individuals, we all get under the influence of the infosphere every time we come in contact with communication technologies, such as television, computer networks, magazines, video games, faxes, radio shows, CDs or videotapes» [12].

The functioning of culture in the information society reflects the concept «information culture». It characterizes the sphere of culture that is associated with the information aspect of people's lives. One of the main characteristics of information culture is intertextuality as a multifaceted connection of one text with others, their correlation with each other, the dialogic interaction of texts. According to O. K. Ryabinina, «applying of the intertextuality theory is especially important in the conditions of information space rapid development in Ukrainian society. Intertextuality is a means of transmitting information in the form of a «foreign word» that is decoded if the background knowledge of the author and recipients is related. Means of intertextuality determines the multilevel construction of texts» [1]. Following the well-known philologist N. Piege Gro, we understand intertextuality as «a device by which one text is overwritten on another text», and intertext as «the totality of texts reflected in this work, regardless of whether it is related to the work or included in it» [10].

Possessing a certain communicative and discursive specificity, the Internet space is a convenient platform for the development of various types of intertextuality. Researcher of computer-mediated discourse T. N. Kolokoltseva identifies the most explicit manifestations of intertextuality on the Internet:

- formation of global textual (and intertextual) space of virtual character;
- sharp increase in the degree of texts openness and the ability to quickly automatically detect explicit intertextual relations;
- presence of electronic hypertextuality as an immanent feature of the Internet environment;
- increasing the importance of the category of dialogueness in Internet communication;
- changing the role of intertext figures, in particular, increasing the proportion and the number of citation functions;
- expansion of the communicative space of precedence and a sharp increase in the number of references to precedent phenomena [5].

The communicative space of the Internet has become a kind of environment that generates genres, which contributes to the more intensive development of genre studies in general and the emergence of new genres typical only of this information environment, and the emergence of theory of digital genre studies, which aims to describe and structure all diversity of Internet genres and methods of their classification [9].

In view of the lack of study of the intertextuality category in the context of computer-mediated discourse, it is reviewed on the examples of individual genres. Thus, intertextuality and its features of implementation in memes on the example of Internet memes were studied by S. Kanashina [6]. In this article previously uninvestigated aspect of the functioning of intertextuality in the context of computer-mediated communication is examined, specifically the intertextual nature of Internet memes. While sharing cultural texts, Internet users make use of and create social memory through becoming engaged in an active dialogue with previous cultural texts and with potential audiences. Intertextuality (both within and across cultures) should thus be highlighted as a central feature that lies at the crossroads of the medium, the people and the message [2].

One of the fundamental characteristics of Internet discourse is intertextuality in the blogosphere. The analysis of such hybrid genres as blogging and tweeting is relevant from the point of view of intertextuality. The social network Twitter is seen as a sphere that has intertextuality features. Intertextuality in the blogosphere is manifested through reposts and retweets. Studies of intertextuality of this genre are revealed in the work of O. Povetieva [7].

Mega-important manifestation of intertextuality in the Internet environment is hypertextuality, which is embodied in the form of electronic hypertext. Hypertext is «a way of communication in society that is focused on numerous streams of different types of information that cannot be fully perceived and assimilated by the subject» [15]. For Landow computer hypertext is phenomenon of «fundamental intertextuality» [13]. This affirmation has its basis in real textual part inside the word hypertext, and basics of intertextuality. If content of the Internet is analyzed, intertextuality can cover all media forms which Internet users can ask. If we look at only one webpage, intertextuality is relation between page's content, users habits and organization of website made by programmer and designer, and in personalized websites – proactive user [3].

In recent years, instant messaging services (IM) have become widespread. IM totalizes a large share of social interaction in the form of a database, and introduces evident intertextuality to sundry social practices [8].

One of the most common forms of intertextuality in Internet discourse is a direct quotation. «Traditionally, a quotation is defined as a literal reproduction of a pretext fragment, separated from other statements by formal marking <…> with obligatory reference to the relevant source page» [14].

So, as the analysis shows, there is variety of Internet genres (for example, Internet-blog, forum, chat, post etc.), each of them has certain features related to the method of entering intertextemes into the text, their quantitative and qualitative parameters. It is necessary to pay attention to the frequency of using transformed intertextemes in the studied texts, which greatly complicates the formalization of search procedures.

2. Technical tools for the process of intertextuality research

Analysis of intertextuality is mainly manually for the reason that there is currently no automated system for analyzing intertextemes. For developing automated applications it is necessary to create a database of intertextemes, which in its turn will allow us to describe the models of intertextemes and ways of their transformation etc., what determines the scientific novelty of the study.

The object of this article is developing a software application to implement a simple and effective process of intertextuality research, including the identification of correlations between different intertextemes characteristics. For this research modern information technologies were applied, which allows to process a considerable amount of factual material of the investigated language phenomenon. Material for factual base was collected using the Alphateka content analysis system [16].

The database is created with the help of SQL Server, which is one of the most popular database management systems. MS SQL uses a relational model to organize the databases. The relational model stores the data as tables, each row of which is a separate object, and the columns store the attributes of

this object. The primary key is used to identify each row in the table. One or more columns may serve as primary key. The keys can be used to make relationships between two tables. The following entities are built in our database: «Intertexteme», «Origin», «Marker», «Type», «Style», «Context», «Author», «Language». «Intertexteme» is an entity designed to store information about an intertexteme and it contains relationships that reflect the basic intertexteme characteristics. «Origin» is an entity that gives information about the intertexteme origin language. Entity «Marker» shows the marker of each intertexteme. «Type» is an entity that indicates the type of intertexteme. Entity «Style» informs you about the style of the text in which the intertexteme is used. «Context» is an entity that shows fragment of the text in which the intertexteme is used, as well as the text genre and genre variety. «Author» is an entity that provides information about the author of each intertexteme and his gender identity. Entity «Language» shows the language from which the intertexteme is borrowed and the language of presenting. Following relationships were built between these entities: «Intertexteme — Origin», «Intertexteme — Marker», «Intertexteme — Type», «Intertexteme — Style», «Intertexteme — Context», «Intertexteme — Author», «Intertexteme — Language» (Fig.1. Model of relational database).
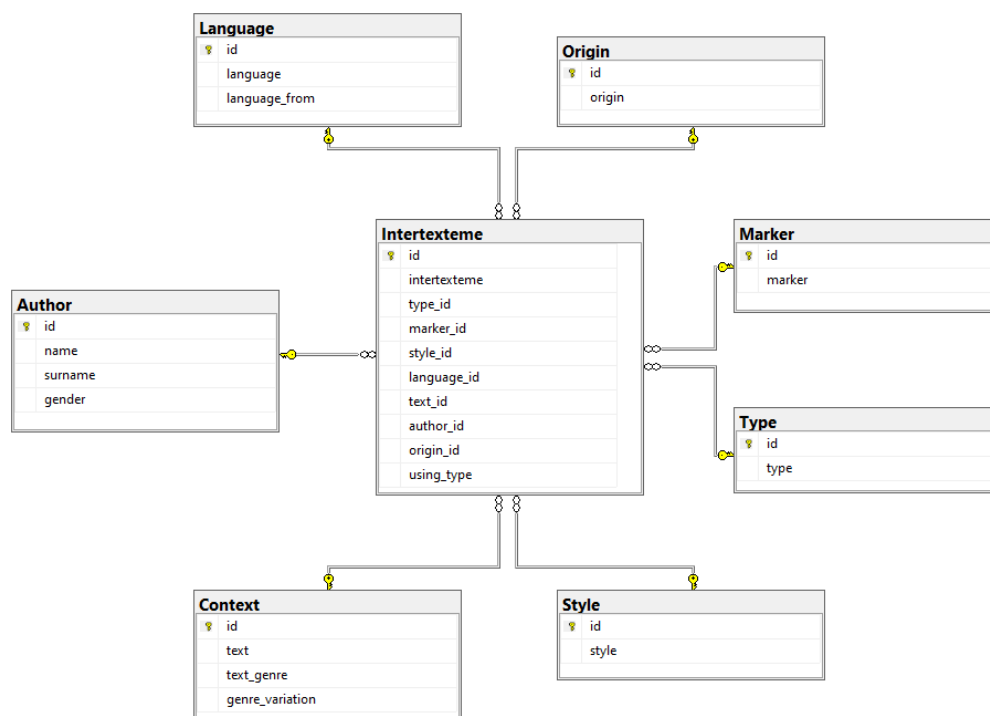

Figure 1: Model of relational database

A software application based on ASP .NET Core MVC web framework was implemented to interact with the database.

ASP .NET Core MVC is Microsoft's latest web framework for .NET developers [11]. It is the next version of the now-familiar MVC Framework and aspires to cross boundaries by enabling cross-platform development and deployment [11]. It leverages a wide assortment of open source libraries and is itself built as open source software [11]. ASP .NET Core MVC helps developers to separate concerns like business logic, routing, services, and views and provides new systems for configuration and extensibility [11]. It uses the C# programming language and the Razor view engine [11].

Model is a data that are necessary for correct visualization of the user interaction with the site. The main task of models is to represent the structure and logic of the data used by the program. Typically, all entities are implemented in separate models that describe the structure of each entity. Views in ASP.NET Core MVC are files that form program appearance. Files contain HTML markup that alternates with model parts, which are necessary to display the user interface. Controller is a central element in ASP.NET Core MVC architecture. The controller is used as a container for interrelated sets

of incoming request handlers. When requested, the routing system selects the appropriate controller to process the request and transmits the request data to it. The controller processes these data and sends back the processing result.

The developed software has the following functions:

1. Viewing records of intertexteme characteristics, for example: information about author, context, language of origin etc. This function is enhanced by the following additional options:

- creating new records;
- editing records;
- deleting records;
- viewing additional information.

2. Viewing records with all information about intertexteme based on the previously entered characteristics. This function is enhanced by the same additional options, as the previous one (Fig.2. Software application). The buttons «Create New» which is reflected in a subheading of the table, as well as «Edit», «Delete» and «Detail» which are placed near each record are responsible for these options in the program.

Home Intertextemes Context Marker Origin Language Context style Intertexteme type Author Statistics

Intertextemes list

Create New

Context	Marker	Intertexteme	Origin	Borrowing language	Presenting language	Context style	Context genre	Genre variety	Type of intertexteme	Author	Original or transformation	
Як говорив Гіппократ: «Медицина - це воістину найблагородніше зі всіх мистецтв», - наголосив Сергій Надал.	як говорив	Медицина - це воістину найблагородніше зі всіх мистецтв	грецьке	грецька	українська	публіцистичний	стаття	канонічний	цитата	Гіппократ	переклад	Edit | Details | Delete
Як кажуть китайці: «Не роби великих кроків бо штани порвуться. Зроби краще кілька маленьких».	як кажуть	Не роби великих кроків бо штани порвуться. Зроби краще кілька маленьких	китайське	китайська	українська	публіцистичний	стаття	канонічний	цитата	немає	переклад	Edit | Details | Delete
Як кажуть в Україні, «дядьку, робіть щось одне».	як кажуть	дядьку, робіть щось одне	українське	українська	українська	публіцистичний	стаття	канонічний	цитата	немає	оригінал	Edit | Details | Delete

Figure 2: Software application

3. A filter for displaying to the user a list of intertextemes by one or several parameters specified by him. The filter includes all characteristics of intertextemes in the form of text fields and drop-down lists. In Context and Intertexteme fields, the search by part of a phrase is implemented. Other parameters with a limited set of values are presented in the form of drop-down lists (Fig.3. Filter for intertextemes list).

Context	Marker	Intertexteme	Origin	Borrowing language	Presenting language	Context style	Context genre	Genre variety	Type of intertexteme	Author	Original or transformation	
Як кажуть китайці: «Не роби великих кроків бо штани порвуться. Зроби краще кілька маленьких».	як кажуть	Не роби великих кроків бо штани порвуться. Зроби краще кілька маленьких	китайське	китайська	українська	публіцистичний	стаття	канонічний	цитата	немає	переклад	Edit | Details | Delete
Як кажуть в Україні, «дядьку, робіть щось одне».	як кажуть	дядьку, робіть щось одне	українське	українська	українська	публіцистичний	стаття	канонічний	цитата	немає	оригінал	Edit | Details | Delete

Figure 3: Filter for intertextemes list

4. Demonstration of intertextemes quantitative characteristics in the form of various diagrams (Fig.4. Diagram of statistics of using various intertexteme markers).
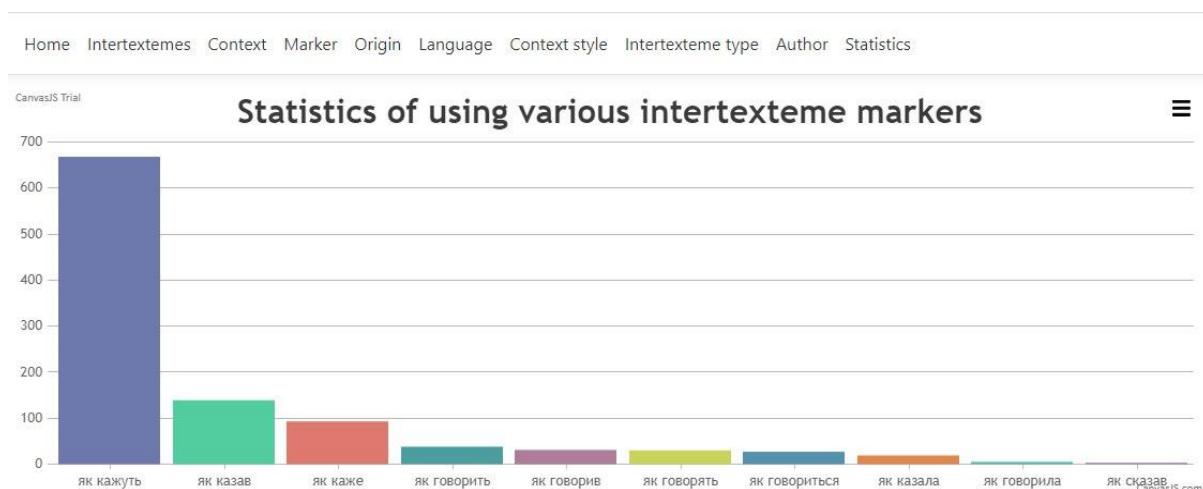

Figure 4: Diagram of statistics of using various intextexteme markers

2.1. Linguistic peculiarities of intertexteme analysis

The database and the program provide the full characteristics complex of the intertextual phenomena of the analyzed array of texts. The data, as it has been mentioned before, were collected using the Alphateka content analysis system and amount 1053 units. 871 different intertextemes were detected.

For example, the following intertextemes are the most frequent in the investigated materials: *«дві великі різниці»* (lit. 'two big differences') (relative frequency – 8%, appears in the database with markers **як каже** ('as (smb) says') *Мій мінестроне у порівнянні з її стравою - то (як каже один мій знайомий) дві великі різниці :-)* ('My minestrone compared to her dish is (as one of my acquaintances says) two big differences :-)') (Facebook post)) and **як кажуть** ('as (smb/they) say') *День незалежності вдома і День незалежності за межами країни, як кажуть в Одесі – «дві великі різниці»* ('Independence Day at home and Independence Day abroad, as they say in Odessa – «two big differences»') (Facebook post); *А це, як кажуть в Одесі, дві великі різниці* ('And that, as they say in Odessa, is two big differences') (Facebook post); *А як кажуть в Одесі - це дві великі різниці* ('And as they say in Odessa, there are two big differences') (Facebook post); *Бюджет-2019 схвалений у першому читанні і бюджет-2019, який буде голосуватись у другому як кажуть в Одесі, дві великі різниці* ('Budget-2019 approved in the first session and budget-2019 that will be voted for in the second session is, as they say in Odessa, two big differences') (Facebook post); *Хоча й те, й інші – дві великі різниці, як кажуть в Одесі* ('However, both are two big differences, as they say in Odessa') (article from site) [17]; *Так ось - це, як кажуть в Одесі, дві великі різниці* ('So here, as they say in Odessa, are two big differences') (Facebook post); *Є хазяї життя олігархи, але вони будують не країну для людей, а свої статки на обкраданні цих людей, а це, як кажуть одесити, дві великі різниці* ('There are masters of the life oligarchs, but they do not build a country for the people, they build their income by robbing these people, and this is, as odessites say, two big differences') (article from site) [18]; *«без коментарів»* ('no comments') (3%, appears with markers **як говориться** ('as it is said') *Як говориться — без коментарів* ('As it is said – no comments') (blog on the Internet)) and **як кажуть** ('as (smb/they) say') *Як кажуть, без коментарів, тільки факти для роздумів...* ('As they say, no comments, only facts for thought…') (Facebook post); *Тут, як кажуть без коментарів* ('Here, as they say, no comments') (Facebook post); *Ось прийшло в личку. Як кажуть, без коментарів...* ('That came in a direct message. As they say, no comments...') (Facebook post); *«відчуйте різницю»* ('feel the difference') (3%, appears with marker **як кажуть** ('as (smb/they) say') *Як кажуть, відчуйте різницю* ('As they say, feel the difference') (article from site) [19]; *Як кажуть*

- відчуйте різницю! ('As they say - feel the difference!') (article from site) [20]; *«...Як кажуть відчуйте різницю»*, — *написав у Twitter користувач під ніком Фосфорна Горлівка* ('«…As they say, feel the difference», - the user under the nickname Phosphoric Horlivka wrote on Twitter') (article from site) [21]).

We come across citations of specific authors among the researched material (for example: *Як казав Наполеон, великі батальйони завжди праві* ('As Napoleon said, big battalions are always right') (article from site) [22]; *Але як казав відомий політик: «Маємо те, що маємо»* ('But as a famous politician said: «We have what we have»') (the phrase belongs to Leonid Kravchuk) (article from site) [23], *«Адже, як казав Михайло Ломоносов, «народ, який не знає свого минулого, не має майбутнього »»*, – *резюмував Геннадій Чекіта* ('«After all, as Mikhail Lomonosov said, «a nation that does not know its past has no future»», - Gennady Chekita summed up') (article from site) [24], *Як казав Тарас Григорович: «Славних прадідів великих правнуки погані»* ('As Taras Hryhorovych said: «bad great-grandchildren of glorious great forefathers»') (article from site) [25]). Furthermore, Internet users resort to quoting characters of feature films, without clearly indicating the author of the statement (for example: *Ситуація в країні, нажаль, далека від наближення спокою. Як говорив класик: «Стабильности нет»* ('Unfortunately, the situation in the country is far from approaching peace. As the classic said: «There is no stability»') (quote by Nikolai Mikhailovich, the character from the movie «Moscow does not believe in tears») (article from site) [26], *Не його дружини чи доньки, бо, як казав герой мого улюбленого фільму, «крім жінок і дітей»*, *а життя самого вбивці* ('Not his wife or daughter, because, as the character of my favorite movie said, «except for women and children», but the life of the killer') (quote by Leon, the character from the movie «Leon») (article from site) [27].

It is important to note that in many cases intertextemes are not accompanied in the text by any marker, in particular an indication of authorship, but such information is important for analysis. For example, *«...Та кожен фініш – це по суті старт. Для когось це вільне падіння, але для мене це вільне плавання»* ('… But every finish is actually a start. For someone it's free fall, but for me it's free swimming') (Ostap Drozdov). In this extract the author uses lines of Lina Kostenko, in no way marking someone else's authorship, in view of the wide popularity of these poems. Similarly in the sentence *«Що ж, пане Зеленський, ви йдете вірною дорогою»* ('Well, Mr. Zelensky, you are on the right path') (Bogdan Butkevich) an allusion to the famous expression of V. I. Lenin «You are on the right path, comrades!» is used [28].

In lines *«На жаль, за останні 5 років не було зроблено головного для успіху нашого національного проекту - рішучих економічних реформ. Ті, що були зроблені - це крок вперед і два назад»* ('Unfortunately, in the last 5 years, the main thing for the success of our national project - decisive economic reforms - has not been done. Those that have been done are a step forward and two steps back') (Bogdan Butkevich) the author uses a phrase from the title of V. I. Lenin's book «A step forward, two steps back (Crisis in our party)». Also the expression can be known from the song «School of dances of Solomon Plaar» [29].

Factual material analysis shows that, for the most part, intertextemes are borrowed from other languages and are used by Internet users in both original language (for example, intertexteme *«не солоно хлебавши»* (lit. 'slurping not salty') (*Словом, московський предстоятель повертається додому, як кажуть в Росії, «не солоно хлебавши»* ('In short, the Moscow primate returns home, as they say in Russia, «slurping not salty»') (article from site) [30]), that is Russian phraseological unit and is used in the original language; intertexteme *«it takes two to tango»* (*Але, як кажуть американці, it takes two to tango* ('But, as the Americans say, it takes two to tango') (Facebook post)), that is English phraseological unit and is used in the original language), and target language (as examples are the intertexteme *«гора народила мишу»* ('the mountain has brought forth a mouse') (*Але, на жаль, як кажуть, гора народила мишу* ('But unfortunately, as they say, the mountain has brought forth a mouse') (article from site) [31]), which is a translation of Greek origin proverb, and the intertexteme *«благими намірами вистелена дорога в пекло»* (lit. 'The road to hell is paved with good intentions') (*Як кажуть, благими намірами вистелена дорога в пекло* ('As they say, the road to hell is paved with good intentions') (blog from site) [32])).

Transliterated intertextemes also come up (for example, *«пад паарєбрікам»* ('under the kerbside') (*Сьогодні під будинком я случайно обнаружив невеличкий п'ятисантиметровий кущик коноплі, що росте прямо з тріщини в асфальті попід бордюром, чи як кажуть обізяни - пад паарєбрікам*

('Today under the house I accidentally found a small five-centimeter bush of hemp growing straight from the crack in the asphalt below the curb, or as the monkeys say - under the kerbside') (Facebook post)); *«покупатєль»* ('buyer') (*Отак, покупатєль, як кажуть* ('So, the buyer, as they say') (Facebook post)); *Вєрнай дарогай ідьотє, таваріщі - сказав би дєдушка Лєнін Слугам народу* ('You are on the right path, comrades - grandfather Lenin would say to the Servants of People') (Facebook post); *Бо, як учив дєдушка Лєнін: «са всєх іскуств для нас наиважнєйшим єсть кіно. С Зєлєнскім в главнай ролі»* ('Because, as grandfather Lenin taught: «Of all the arts, cinema is the most important for us. With Zelensky in the lead role»') (Facebook post)).

In many cases, such transliterated intertextemes may not be accompanied by intertextuality markers, which, as it was noted above, complicates search automation. The introduction of transliterated units into the text increases its expressiveness and emotionally expressive value. For example: *Я ж не проти «Схід і Захід разом», зовсім ні. Я просто навчений історією, чим це все закінчиться. Мір може бути лише русскім. Не тому що патріоти слабкі. А тому що їх банально менше. Територію моєї країни населяє насєлєніє. Його я й вітаю. Ето празднік со слєзамі на глазах* ('I'm not against «East and West together», not at all. I'm just taught by the history how it will all end. The world can only be Russian. Not because patriots are weak. But because they are banally fewer. The territory of my country is inhabited by the population. I greet it. This is a holiday with tears in the eyes') (Ostap Drozdov) [33]. This text fragment demonstrates the saturation of Internet journalism with intertextemes: the text contains the Maidan slogan *«Схід і Захід разом»* ('East and West together'), transformation of collocation *русскій мір* ('Russian world'), transliterated extract from the famous Soviet song *«Ето празднік со слєзамі на глазах»* ('This is a holiday with tears in the eyes'). Automated detection of transliterated intertextemes in the texts has some difficulties, since in this case it is impossible to use already existing collections of aphorisms, quotations, phraseological dictionaries of one or another language. In addition, each user transliterates such units in his own discretion, which also makes it impossible to predict the intertexteme writing.

Transformed intertextemes, that means modifications of fixed collocation, make significant difficulties for automated processing of lingual material. Scientists O. Ovrutsky and N. Nepiyvoda attribute such transformed fixed expressions to the word-play, which is «one of the powerful means of attracting attention and memorizing» [4]. On the Internet, and especially in the media, these transformations are used to achieve additional expression and actualization of the deep statement meaning. A number of transformed intertextemes were identified during the lingual material analysis. Most often, transformations are to increase the componental composition of the unit. For example, the following transformations of the studied units occur:

- addition of structural constituents (**Язик до Києва доведе** (lit. 'A tongue will bring (you) to Kyiv'): *Прикушений язик до Києва не доведе* ('A bitten tongue will not bring (you) to Kyiv') (post on the forum) [34], *«Язик» до Києва не доведе* ('A «tongue» will not bring (you) to Kyiv') (article from site) [35], *Лихий язик до Києва не доведе, або Чому на державному рівні не ведеться пропаганда державної мови* ('An evil tongue will not bring (you) to Kyiv, or Why the state language is not promulgated at the state level') (article from site) [36];

- substitution of structural constituents (**Вовків боятися — в ліс не ходити** ('To fear wolves is not to go in the forest'): *Стандартів боятися — у ЄС не ходити* ('To fear standards is not to go to the EU') (article from site) [37]; **Жити не хлібом єдиним** (lit. 'To live not only by bread'): *Не «кешбеком» єдиним: нове про «акцизні» штрафи в Законі № 129* ('Not only by «cashback»: new about «excise» fines in the Law № 129') (article from site) [38]; *Не НАТО єдиним* ('Not only by NATO') (article from site) [39]; **Що дальше в ліс, то більше дров** (lit. 'The further into the forest, the more firewood'): *Дівчата пам'ятайте: чим далі в ліс - тим менша вірогідність, що на шашлики!* ('Girls, remember: the further into the forest - the less likely it is for barbecue!') (Facebook post); *Чим далі в ліс – тим більше політики* ('The further into the forest - the more politics') (article from site) [40], *Чим далі в ліс, тим більший «компроміс»... або Колабораціонізм партії «Основа»* ('The further into the forest, the greater is the «compromise»… or the Collaborationism of the «Osnova» party') (article from site) [41]; **Прийшов, побачив, переміг** ('Came, saw, conquered'): *Прийшов, побачив... Наслідив* ('Came, saw... Left marks') (article from site) [42], *Прийшов, побачив і пішов... у відпустку* ('Came, saw and went... on vacation') (article from site) [43], *Прийшов, побачив, розтрощив…* ('Came, saw, smashed…') (article from site) [44].

- contamination (**Наступати на граблі** (lit. 'Step on the rake'): ***Дикі танці на граблях*** ('Wild dancing on a rake') (article from site) [45]; ***Гопак на граблях***, *або Про деякі міфи сучасної політології* ('Hopak on a rake, or About some myths of modern political science') (article from site) [46]).

We also observe examples of the so-called phraseological allusion in the studied texts: *Але треба бути дуже наївним політиком (або прикидатися таким), щоб не бачити: розміри **московського «пряника»** завжди будуть більшими. А тому слід поєднувати «**пряники**» (в тому числі й фінансування за допомогою спеціальних програм і фондів) із «**батогами**» для тих, хто порушує чинне законодавство і готовий продатися за сочевичну юшку у вигляді чималих сум на банківських рахунках і вільний вихід на російський ринок* ('But you have to be a very naive politician (or pretend to be), so as not to see: the size of Moscow's «gingerbread» will always be larger. Therefore, it is worthwhile to combine «gingerbread» (including funding by means of special programs and funds) with «whips» for those who violate current legislation and are ready to sell themselves for lentil soup in the form of considerable sums in bank accounts and free access to the Russian market') (Sergey Grabovsky) [47]. This is the allusion to the expression *батіг та пряник / виховання методом батога та пряника* ('whip and gingerbread / education by whip and gingerbread').

Analysis of such intertextemes that are used transformed and without markers significantly complicates automatic search and marking-up, for example in linguistic corpuses. In view of the above, it is planned to identify the intertexteme components that are to be replaced during the transformation, for example; nominative components of intertextemes, which get a definition during the transformation, etc., which will greatly facilitate their identification during the analysis of natural language information.

3. Conclusions

It is important to identify correlations between different characteristics of intertextemes in order to clearly understand the intertexteme usage, in particular in Ukrainian Internet segment, as well as to improve and upgrade the database and the software.

Thus, in order to understand the nature of intertextemes, their functions in the text and the dynamics of their use, the following characteristics are important: intertextuality marker (on the one hand, intertextuality markers can be used to formalize search procedures, and on the other hand, they indicate to whom the speaker attributes authorship of the intertexteme, etc.); information about the intertexteme origin and the language in which it is transmitted in the Ukrainian text, that is important for linguoculturological analysis; markers about the stylistic affiliation and genre of the text in which the intertexteme is used, they provide valuable information for identification specific characteristics of one or another style/genre; description of intertextemes transformations is important for lexicographic practice, analysis of language game mechanisms, etc. in Ukrainian network texts.

In the future, it is planned to add the following characteristics to the project: authorization for two main roles of typical users (user and administrator) with the partition of available program functionality.

Also, it is planned to implement the intertextemes searching function in arbitrary Internet texts on the basis of the available software. For this task, due to the large amount of texts, it was decided to use the Knuth-Morris-Pratt Algorithm, which searches a substring in a string. The running time of an algorithm depends linearly on the size of input data, which means that it is impossible to develop an asymptotically more efficient algorithm. The asymptotic complexity of the algorithm is $O(N + M)$, where N is the length of the intertexteme, M is the length of the text.

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