INFORMATION TECHNOLOGY\_

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METHODS OF IDENTIFICATION OF DESTRUCTIVE SUGHESTIVE INFORMATION-PSYCHOLOGICAL OPERATIONS IN THE INFORMATION SOCIAL SPACE

BELIKOVA TV\_

Approaches are offered to identify destructive suggestive effects on the human subconsciousness in text messages in the context of information-psychological confrontation. Detection of destructive influences is suggested to be carried out on the basis of a semantic differential, phonetic and sound-and-color analysis of words and text documents. The implementation of these methods makes it possible to evaluate the emotional impact of individual words and the phonetic structure of texts on the subconscious of a person. Key words: suggestion; subconscious; impact; information and psychological impact; phonetic meaning.

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The analysis of military conflicts of the beginning of the 21st century testifies to the emergence of new forms and methods of armed struggle between states for the achievement of appropriate political goals and the resolution of interstate contradictions. The so-called "hybrid wars" came to replace the classical forms of armed struggle. They are of a hidden nature and are conducted, mainly, in the political, economic, information and other spheres. The essence of such wars is the shift of the center of efforts from the physical destruction of the enemy in the framework of a large-scale war to use the so-called "soft power" means against the enemy country for the purpose of disintegration, changing its leadership and incorporating it into its sphere of influence. An integral part of "hybrid wars" are information and information-psychological operations, which are conducted to manipulate the mass consciousness with the use of all kinds of information and psychological influences, including the impact on the subconscious of man. Today the concept of "manipulation of consciousness" implies the introduction of ideas, thoughts and ideas into consciousness by disseminating information specially prepared in form and content. The very manipulation of consciousness has spread widely not only and not so much in the military sphere, but also in politics and

economy (advertising and services). Manipulation of consciousness is also used in the system of education and preschool education of children. It can have both positive and negative consequences and be directed at the conscious and subconscious sphere of man. Since manipulation is a kind of spiritual and psychological impact, the target of which is the psyche of the human person, then to achieve success, manipulation must remain unnoticed. Success is guaranteed when the manipulation object believes that everything that is happening is natural and inevitable, and the very fact of manipulation is not reflected in its memory. Such an impact on the subconscious requires considerable skill and knowledge. Since the manipulation of public consciousness has become a technology, there are professional workers who own this technology or some part of it, which refer to people not as individuals, but as objects, a special kind of things. With the increase in the amount of information circulating in the information space, a large number of specialists and automation of processes are required to implement such suggestive influences and counteractions to increase efficiency and increase the scope of application.

Hence, an actual scientific and applied problem is the automated detection in the textual information of suggestive effects on the human subconscious, the neutralization of such negative influences and the compilation of information materials with a given type of suggestive influence.

Analysis of recent research and publications

For the analysis of textual information, a number of approaches and methods [1-6] implemented on the basis of software analysis tools and linguistic processing of texts have been developed and are still being developed [7]. Most methods implement approaches to the analysis of the semantic structure of the text and its logical segmentation [1-4]:

- The statistical approach for analysis allows you to obtain information about the structure of the text only on the basis of the entry of individual words in it, the key ones being those words whose number in the text is higher than the specified number;

- Semantic methods allow to determine the subject content of the test, its thematic focus, as well as the links between individual parts of the text and the text as a whole. Such sentences are considered to be semantically related

or paragraphs that have the same keywords or words with the same meaning;

- Linguistic approaches are based on syntactic and morphological methods. They allow you to bring the text forms of the words of the document to the dictionary forms;

- content analysis allows you to determine the frequency of appearance in the text of certain characteristics that are of interest to the researcher, and also draw some conclusions about the intentions of the creator of this text or the possible reactions of the addressee. These campaigns are implemented in a variety of software [7]. The most popular system TextAnalyst (http://www.analyst.ru), which allows you to build a semantic network of concepts identified in the processed text, with links to the context. There is a function of semantic search for fragments of text, taking into account the semantic links hidden in it with the words of the query. The possibilities of text analysis are presented by constructing a hierarchical theme tree (sub-topics) that are considered in the text, and abstracting the document. An alternative approach to the analysis of textual information was proposed by A.P. Zhuravlev [5, 6]. This approach is based on the definition of the phonetic meaning of the words of the Russian language (the semantic differential). In his works he presented experimental data of the linguistic theory of the meaningfulness of the sound form in the Russian language.

Realizing the approaches of detecting and analyzing the phonetic meanings of words using the semantic differential, one can analyze text documents and speeches, determine their direction and adjust according to the given influence characteristics [8]. In general, the implementation of technology for the analysis of texts and speeches makes it possible to assess the "degree of preparedness" for effective perception and the hidden direction of information-psychological influence.

This approach was implemented in the Russian software complex VAAL

(http://www.vaal.ru), which allows to predict the effect of unconscious influence of texts on a mass audience, analyze texts from the point of view of such influence, compose texts with a given vector of influence, and reveal the individual psychological qualities of the authors of the text. One of the biggest drawbacks of the BAAL system is the lack of a description of its mathematical base and the prohibition of delivery for export and for the commercial use of this product in full. Therefore, you must create your own information.

onno-analytical system of complex analysis of text documents, allowing to determine the degree of suggestive influence on the human subconscious.

In [8-10], in a formalized form, the system of information-psychological confrontation is considered and a theoretical approach is proposed to the creation of a system for the complex analysis of the impact of information on the subconscious of man. This theoretical approach allows you to define in the text of the document segments of the text that correspond to certain topics, as well as highlight the key components of them with a suggestive focus of the text as a whole. In [11, 12], some separate methods for identifying suggestive influences on the human subconscious were suggested, which are integral elements of the system of complex analysis. The purpose of the study is to develop methods for identifying destructive suggestive effects on the human subconscious in individual words and text messages in the context of information-psychological confrontation on the basis of the semantic differential, phonetic and sound-and-color analysis. Statement of the main material Methods for identifying suggestion are focused on the analysis of words, which gives an idea of ​​how it is perceived by a person. But they can be adapted to analyze the whole text. The first approach is to analyze each word separately and determine the mean value for all words. The disadvantage is that each individual word is analyzed, and the final result is not related to a number of worthwhile words. And this suggests that any text composed of this set of words will have the same value.

Therefore, it is necessary to somehow fix the words of the text in the order in which they were placed by the author, and nothing else. This will give a unique evaluation for just such an ordered set of words.

Therefore, the second approach presupposes for such an explicit fixation or the dependence of words the reduction of this set of individual words into a single, indivisible line and the analysis of this resulting line as a single word. Each of these approaches has its pluses and minuses, so it is worth considering both options. In this case, the analysis, during which the whole text is analyzed, will be called static.

Let's consider the approach to the static analysis of the text by words. It involves the following stages:

1) since the analysis is made by words, the analyzed text in this case must be broken down into separate words;

2) each word separately should be analyzed by the method of identifying the suggestive effect, which is chosen for the analysis of the text: a semantic differential, phonetic or sound-and-color analysis;

3) after receiving all the estimates for each word, an average score for all results is derived by calculating the arithmetic mean. Thus, we have an estimate, which is the average value, for each word from which the text is composed.

Next, consider the approach where the text analysis is performed as a single unit consisting of the following steps:

1) all the analyzed text is translated into one indissoluble string, as a very long word, by reclining spaces, punctuation marks, translating numbers into a text form of writing. Thus, the end of one word is associated with the beginning of the next;

2) the received line is analyzed by the required method (semantic differential, phonetic or sound-and-color analysis) by analogy with the analysis of one word. This will give a unique evaluation for such a sequence of words in a text document.

Proceeding from the fact that a static analysis of the whole text gives us an idea of ​​what impact it will have on a person with a full read, it follows that we get some average indicators for all parts of this text. It can not be said that each of the parts of the text individually has the same impact indicator as the whole text. We can assume that the text is constructed in such a way that each part of it has its own distinctive effect on the subconscious. This becomes an important fact when a person reads or hears only a single part of the text. In this case, the static analysis of the entire text will not be informative, because only one paragraph can have a strong impact, while most of the text will be neutral, which will eventually distort the results of the analysis. Dynamic analysis can be a more effective solution to this problem. Dynamic analysis involves splitting the text into parts and analyzing each of them separately. Thus, it is possible to trace the dynamics of the change in the suggestive effect on a person from the beginning to the end of the text or

to evaluate only a specific part of it. Such an analysis can also show which parts of the text make sense to cut, and which ones to leave if necessary to shorten the text. This approach can be used by advertising companies, reducing the airtime of advertising, but not cutting its necessary impact on the subconscious. As a rule, most texts consist of paragraphs, as an intermediate unit between the phrase and the chapter, which in turn serves to group the homogeneous units of presentation. Therefore, we can conclude that the dynamics are better tracked by paragraphs, since they usually express some general idea. But it also happens that the text is not broken into paragraphs or they do not satisfy our notion of the size of a single block for analysis. In this case, the text can be divided into certain pre-installed blocks of text. This can be as a breakdown by the number of characters per block or words, sentences. The downside of such a breakdown is that blocks of text can break the parts of the text or sentence related to the common thought.

The text analysis by the dynamic method assumes the following sequence of stages:

1) the source text must be divided into certain blocks of text that need to be analyzed. It is more convenient and most expedient to break into paragraphs;

2) it is necessary to determine which block of text will be analyzed;

3) since this approach is inherently static, except that not all the text is statically analyzed, but the selected part of it, then at this stage one of the variants of the static approach to the analysis of the selected fragment is applied;

4) if necessary, you can return to step 2 of the algorithm and select another section of the text for reanalysis. Thus, based on the dynamic method, one can give an idea of ​​what suggestive influences each part of the text possesses.

As statistics show, about half of people do not finish reading the books to the end. The reason for this can be either lack of time, or lack of interest, or the absence of certain emotions that were expected during the reading. This sets us the task of determining how it is possible to construct the text so that it arouses interest from the reader and does not push it away during the reading. For this kind of task, the dynamic method of analysis seems to be well suited, it will give an idea of ​​each section of the text. But if you take into account the fact that reading the text from

beginning, a person does not perceive every passage or paragraph as an unrelated fragment, but as it binds the information that he received now, with the one that was a paragraph earlier. It can be concluded that as you master each of the subsequent information received will complement the existing information. This means that when analyzing the next part of the text, it is also necessary to take into account its previous parts, since each subsequent segment will complement the general picture of the representation or influence on the person's consciousness.

The approach to the dynamic analysis of the text by the cumulative result assumes the following basic stages:

1) the source text must be divided into certain blocks of text, which will allow you to analyze the accumulated information, moving consecutively on the blocks, as if the person were reading the text. It is more convenient and most expedient to break into paragraphs;

2) this approach implies that the person, starting to read the text, moves from the starting point of reading further in the text, thereby completing the information about the read. Therefore, it is necessary to determine this very beginning, from which it is necessary to analyze and accumulate information. For this it is suggested to select a block of text to be analyzed first. This is not necessarily the beginning of the text, because a person can start reading and not from the very beginning, but, for example, from the second chapter;

3) this approach, although different from the dynamic one, analyzes blocks of text by accumulating them, but all the accumulated text is still analyzed using a static method. As with the dynamic approach, you can apply one of the options for static analysis by word or line. The algorithm will not change from this;

4) to determine which suggestive effect the next section of the text will have with the previously accumulated previous ones, it is necessary to add to the accumulated blocks of text the next and return to point 3 of the algorithm by performing a second analysis with the newly accumulated information.

The method of analyzing texts on the basis of the semantic differential with a cumulative result involves the following stages:

1) the source code is divided into the required blocks;

2) the first block of text is determined, from which the accumulation of information will be made;

3) the selected block of text is represented as a single word;

4) for each letter of the word the coefficient is calculated by the formula:

Ki = Pmax / Pi

where k; is the coefficient of sound in the word; Pmax is the maximum frequency of sound in a given word; Pi - tabular value of the frequency of the sound bOOk;

5) the obtained coefficients are corrected depending on the visibility of the letters in the word:

- for the first sound it is necessary to increase the factor by 4 times:

K1 = 4k; = 4 Pmax/Pi,

11 P,

- for impact sound it is necessary to increase the coefficient by 2 times:

R

k = 2k. = 2 max.

kd = 2k1 = 2 p;

M

6) the phonetic significance for each sound is increased on the basis of multiplying each phonetic value of the sound letter by the corresponding coefficient;

7) the value of the semantic differential is calculated by the formula:

F -

Ifiki

i-1 n

Z ki

i-1

where D is the phonetic component of the word; ^ -phonetic value of cutaneous sound (letter) of a word; k, is the coefficient for each sound (letter); n - the number of sounds (letters) in the word;

8) after analyzing all blocks of accumulated text, you need to calculate their average value. The result will be the value of the semantic differential of the accumulated text;

9) if necessary, you can add another block of text to the already accumulated text, go to step 3 and continue the analysis.

Method of phonetic analysis of the semantic component of the cumulative total

The method of phonetic analysis of the semantic component of the text with a cumulative result assumes the following stages:

1) the source code is divided into the required blocks;

2) the first block of text from which the accumulation will be made is determined;

3) the accumulated text is analyzed by the method of phonetic analysis of the semantic component by words. For this, the phonetic value for each word from the accumulated text is determined;

4) for each letter of the word, the total number of sound bugs and the number of each sound-letter are counted. This is necessary for determining the frequency of occurrence of each sound letter in a word. On the basis of the obtained data, the frequency is determined by dividing the number of occurrences of a sound letter by the total number of sound letters in a word;

5) the deviation of the frequency of sound letters from the norm is determined;

6) the contribution of each sound letter is calculated in the general tone of the text;

7) the final step in calculating the phonetic significance of the word is the total value of the contributions of each sound letter to the overall tone of the text;

8) after analyzing all words of the accumulated text, it is necessary to calculate the average value for all word values. The result is the phonetic value of the accumulated text;

9) if necessary, you can add another block of text to the already accumulated text and repeat the analysis.

conclusions

The developed methods can be used to identify destructive suggestive information and psychological effects on the human subconscious. With their help you can:

- evaluate the emotional impact of individual words on the subconscious of a person;

- evaluate the emotional impact of the phonetic structure of texts on the subconscious of a person;

- to assess the level of aggressiveness of texts on the basis of an analysis of the positive and negative impact of individual words on the meaningful meaning of the text as a whole.

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Belikova Tatyana Vyacheslavovna, the applicant of the Cherkassy State Technological University. Scientific interests: coding, semantic image processing. Address: Ukraine, Cherkasy, bul. Shevchenko, 460. E-mail: baran-nik\_v\_v @ mail. en.

Belikova Tatiana Vyacheslavovna, post graduate student, Cherkassy State Technological University. Scientific interests: coding, semantic image processing. Address: Ukraine, Cherkasy, bul. Shevchenko, 460. E-mail: barannik\_v\_v@mail.ru

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