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THE EXPLICITNESS OF THE DEEP STRUCTURE OF MEANING IN PROGNOSTIC STRATEGIES

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Abstract

The article proposes a model for the complex analysis of formant surface structures in the process of understanding the deep content of units with complex semantics. In the study of the representation of morphological actants in the situation of inputting concomitant overtones of meaning at the vocabulary level, an integrated approach is used, which combines the theory of priming and the basic concepts of noematic analysis within the framework of philological phenomenological hermeneutics. Priming in the study correlates with predictive strategies as ″action patterns″ in the distribution of hierarchically structured deep meaning. The article presents the results of the analysis of the experiment on the verbalization of connotative morphological components at the level of lexical input within the framework of explication of meaning shades using the example of German and Dutch units of complicated semantics. This approach contributes to the establishment of regularities for the implementation of a clearly defined Root-Priming, where the prerequisites of basic morphemes are targeted in non-transparent, unintelligible conditions. Analysis of the experimental data on spelling and morphological priming showed that simple units that have identical initial graphic or phonetic constructions and are used in cases of nomination of situations of neo-crisis will have a further priming effect on them that does not depend on the state of the variable segments. The constitutional implementation of priming is characterized by the re-implementation of phonograph components. Each priming includes processes reflecting the intentional activation of the value of a complicated unit and free association.

Keywords: Mental lexicon, priming effect, prognostic strategies, deep structure, philological phenomenological hermeneutics, overtones of meaning.

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1. Introduction

The question of semantic overtones representation and the deep structure of utterances in speech production has been developed for several years, both in theoretical linguistics in the works of A. Spencer (Spencer, 1991), as well as in computer linguistics and applied computer science (Felix, Kanngießer, & Rickheit 1990) This problem has also been addressed in psycholinguistics (Günther, 1989). Although these disciplines pursued different goals, they share a common base of research. In this article, we want to consider various psycholinguistic models in terms of the relationship between the deep structure of word forms within formal indicators (orthographic / phonological) and markers of connotative overtones of the semantic hierarchy (including the distribution of meaning / meaning components) and their lexical way of representation. In fact, we are not limited to the theory of formal word discrimination, but we introduce the latest developments in the field of philological phenomenological hermeneutics into the framework of research. Indeed, with the very possibility of constructing semantic overtones (Bredikhin, 2013).

2. Problem Statement

By the beginning of the 1970s, the definition of lexical composition and its structuring were central to the speech recognition. Over time, sometimes fundamentally different models of meaning recognizing and implementation of meanings shades were developed (Carr, & Pollatsek, 1985), which, however, are based on one common position: the process of recognizing deep structures includes many different lexical components of operating with lexical units, which encoded and processed specific lexical and morphological information. In general, there are differences between lexical access (Forster, 1981) or input level (Seidenberg, & McClelland, 1989), in the framework of the philological phenomenological hermeneutics of the distributional aspect, the components of the deep content and the lexical level of inference, for us an objectifying aspect. At the lexical level of access or input, formal signs of lexemes play a decisive role, i.e. spelling and phonological information is encoded. Access to the presentation form or analysis of the formal characteristics of an external stimulus is a prerequisite for selecting lexical components, which contain information associated with the internal content of a word (a generalized multi-faceted meaning construct). They include, among other things, the general meaning of token or structural information about the possibilities of using it in different syntactic contexts (for example, category of a word, structure of an argument). At the output level, in the process of speech recognition, phonological and articulation features are important, which define and label the pronunciation features of the lexeme. At present, based on the model of basic lexical structures, numerous assumptions have been made regarding the processing and representation of morphologically and semantically complex statements, however, none of the previously proposed techniques can solve the problem of identifying and analyzing the deep structures in their verbal explication.

3. Research Questions

Currently, within the framework of the study of sense-generating mechanisms of explication of the deep content, the most popular are the psycholinguistic, cognitive models and the concept of the Root-Priming Effect. All psycholinguistic models that emanate from their position that the underlying structures

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play one of the defining roles in recognizing isolated words (lexemes out of context) usually differ in one - at which level of mental vocabulary the connotative information is processed and encoded.

Some theories are based on the postulate on the coding of a concomitant morphological (surface) structure at the input lexicon level. An important feature of these models is that the processing of the formal characteristics of a visually presented sequence of graphic elements or a linearly represented sequence of sounds includes morphological decomposition mechanisms that isolate the root morpheme. The spelling representation, which is considered in further analysis, is encoded either in the form of a root morpheme (Taft, 1991) or it is believed that full forms of a word are spelled in parallel with surface morphologically segmented coding (Booij & Marle, 1992). However, in isolation, these theories cannot explain the synergy of the explication mechanisms of deep structures in live speech, and therefore leave more questions.

Each representation of morphological structures as components of the deep inner content is already predetermined to the level of the input of the lexicon, which is immanently given to the ″scheme of action″ familiar to each representative of the linguocultural community. These models assume that each form of a word is considered as an independent speech unit. The representation of various variants of a single deep structure with the same basic morpheme (invariant) is considered as a paradigmatic hierarchy (Feldman, 1991). Belonging to the root in the paradigm of shaping, thus, implements the lexical principle of organization.

An important component of decomposition theories is the assumption that the frequency of exposure of one or another word form is directly related to the degree of implementation of the priming effect, i.e. the deep structure of word forms with a high frequency of use lends itself to freer distribution (at the level of noematic reflection) than these of word forms with less frequent occurrences, primarily due to the bright representation and high level of the incoming signal in the lexical paradigmatics. Consequently, the postulate on the action of the root coding morpheme at the surface spelling / phonetic access level is based mainly on studies that show that the frequency of occurrence of a sequence of graphic symbols / acoustic units that corresponds to the root morpheme has a special status in the process of false identification of pseudo-tokens and morphologically complex words. Nevertheless, even researchers who adhere to this point of view cannot reach a common opinion (Bergman, Hudson, & Eling, 1988). Thus, the question of the mechanisms of objectification / distribution of the deep content of a complex utterance remains unresolved. We will try to consider the problems of input-prospecting and decoding of complicated statements in this article, as well as to offer a contaminated model of decoding of deep structures in their explication.

4. Purpose of the Study

The main goal of our work is to analyze interpretive possibilities in the process of recoding within the framework of the Root-priming-effect, which allows identify related words in the explication of the deep structure of meaning, which easily allows you to determine similarities at the orthographic / phonetic and semantic levels.

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5. Research Methods

The experimental procedure for identifying the Root-priming effect has the following structure – these are two sequences of graphic or phonetic symbols (preliminary and target) are presented sequentially in the process of measuring the reaction time needed to realize that a particular sequence belongs to the system of the native language. For example, an associative experiment of the threshold perception of a word form with the affix -ed in English and measuring the speed of awareness of the inflectional morpheme to the category of time and subsequently deriving the main form (call), which is reduced compared to the input form (for example, English showed – show).

Studies based on morphological components consider the root-priming effect as the priming condition – the condition of the threshold prospective perception and decoding (Grainger, Cole, & Segui 1991). With the help of marking the speech production, the nuclear component of the lexical meaning is distinguished, and the process of recognizing the lexical meaning can be measured in time. The root-priming effect is manifested not only in short-term or long-term priming conditions (threshold perception), but also in the sequential or simultaneous perception of several nuclear values, i.e. with a number of intertwining incentives Schriefers, Friederici, & Graetz, 1992) or separation of the perception of lexical meaning in time intervals from minute to hour (Murrell & Morton, 1974).

Each long-term root-priming effect is considered at the early stage of the decaying activation process, which consists in a formal analysis of external stimuli. The results of the long-term priming paradigms are also related to the main tenets of the theory, which determines the representations of the surface morphological structures of the content components in the mental lexicon. Full forms are immanently encoded in lexical representations that link the corresponding base morphemes. This postulate has been repeatedly confirmed by various studies, according to which regularly inflected word forms are formed within the framework of a strong Priming effect with irregular inflected or derivable word forms, respectively, in a weak Priming effect (Stanners, Neiser, Heroon, & Hall, 1979).

The original questions of hierarchically structured overtones of meaning representation during the processing of a natural human language can be answered by a contaminated harmonious model combining the basic principles of the priming theory and philological-phenomenological hermeneutics, because the surface morphological structure is not independent of formal features or semantics and noematic of the word in live speech. It should be noted that in the process of real speech there is no analysis of the real hermeneutic understanding. The semantic construction of the form does not always correspond to the noematic hierarchy of meaning; it is for this that the inclusion of the meaning of the hermeneutic-noematic method into the corresponding theory of constants of meaning and generation is necessary. This can cause both a reduction and an increase in the latent response time for the prime / target pair, which contains the same root morphemes, which can be explained in terms of activating similar orforgraphic-phonetic characteristics or related ideas about the inherently given connotative meanings in the context of Noem – dominant and noam-cultural-foundations. This fact is common for morphologically related word forms and, naturally, transmits external factors with the proximity of meaning overtones within similar orthographic / phonetic surface structures, since this is the main task of building a universal model of speech perception and decoding, as well as defining morphological representatives of lexical components that cover the

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processing and coding of pure spelling meanings (form level) or ideas about semantic information (components max content).

6. Findings

A language has very limited possibilities for exercising adequate control over the influence of conceptual similarity on speech perception processes within the framework of the root-priming effect. In our study, we will try to get closer to this problem by introducing noematically or associatively similar prime / target pairs (for example, doctor – nurse) based on the prognostic expectation strategy as one of the meaning generating / decoding meta units in philological phenomenological hermeneutics. In relation to the root-priming effect within the framework of decoding the nuclear meaning, semantic / associative prediction always has a less significant effect. But it should be emphasized that this conclusion does not have special significance within the framework of phenomenological reflection (conscious decoding of deep content), since the conceptual similarity of stimulating pairs consisting of a rejected form and the corresponding main form, of course, cannot be compared with noematically or associative forms.

Interesting fact in this aspect is also the question of the semantic and morphological representation of complex words in the mental lexicon, having similar characteristics of the surface structure, similar derivational-compositional features, but verbalizing different overtones of meaning due to the representation of different morphological information in the components.

In psycholinguistic model of research, the representation of morphological information was ignored by the morpho-derivational processes, accompanying significant changes in the semantic hierarchy (Miller, & Johnson-Laird ,1976). Only a few works are devoted to the study of semantic and morphological processing and representation of complex word forms, which provides some prerequisites for the construction of a distribution model of the semantic hierarchy. We should mention some differences in the degree of representation and processing speed in the process of reception and decoding of previous ideas about the components and the implementation of prognostics for semantically transparent (for example, English loop – loophole, hole – loophole) and non-transparent (for example, English cock – cocktail, tail – cocktail) units. At the same time, the so-called constitutive-priming effect for both types is largely manifested. Nevertheless, the scale of these effects was significantly lower than in those conditions when the entire composite was presented within the framework of prime or target (for example, the English cocktail – cocktail). During the reaction time, within the framework of statistical error, no evidence of interaction between constitutive priming and semantic transparency is observed.

However, on the basis of this it is impossible to conclude that each noema of the semantic hierarchy is recognized only by the component and morphological analysis of its components, so in the study of almost identical effects, so-called ″pseudocomposites″ appear (for example, English boycott or magpie). It should be noted that a special stimulus is inevitable under the influence of a repetitive - priming paradigm, in which the prime and target are usually spaced apart in a temporary reception. Semantic and spelling / phonetic effects manifest themselves, as a rule, within a very short time, and one should not expect their mandatory presence in every situation under such conditions of representation. The differences observed in such situations in the framework of the long-term effects of repetitive – priming paradigms are due to the participation of episodic mechanisms of packaged storage of ″patterns of action″ at the reception of a

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statement, i.e. leveling the very essence of the ″schemes of action″ and turning them into frame-gestalt structures, which does not allow to draw full conclusions about the key points of lexical processes in the representation of morphological information.

The analysis of the prime role of transparent and non-transparent units in the Dutch, with the simultaneous representation of the components of these composites, is also very productive. The degree of complexity and the time interval in decoding semantic overtones demonstrates the closest interaction between the prime-type and the component: at the reception of a transparent composite, for example, Dutch kerkorgel (Germ. Kirchenorgel) (church organ), there is a high degree of representation of the priming effects of the second component (orgel), which, if I may say so, is the semantic head of the deep structure of the composite, i.e. has a greater semantic and derivational compositional load than the first component (Kerk). The priming effect for the first and second component of non-transparent lexemes, for example, Dutch drankorgel (drunkard) do not differ from each other. To some extent, the overall constitutive priming effect depends on the spelling / phonetic proximity, and cannot be determined on the basis of any other data. It is important to note the fact that constitutive priming is manifested depending on the semantic complexity of the unit.

Some units have complex forms within their paradigm, which, due to their formal semantic complexity, modify the depth structure based on the change of places of nuclear and peripheral components, which sometimes makes it impossible to predict the morphological and lexical (etymological) values of the prefix and the modified meaning of the basic verb (for example, German aufwecken) is a general generalized meaning, or such, the meaning of which in the statement is impossible to distribute tit, having a predetermined base value verb (e.g., German einwecken).

When presenting primes with the content of base morphemes as a target, with a non-masked, non-boundary conditions, a distinct root-priming effect is realized. Compared to control conditions in which semantically and spelling / phonetically dissimilar units precede the basic construct, both transparent and non-complex complicated units lead to a significant reduction in response time and a decrease in cognitive effort spent on decoding a generalized meaning, due to the reduction of steps in the process of distributing meaning. However, there is a significant difference in the degree of reduction of the steps of phenomenological reflection in these two conditions, since in transparent units, prime-reality (pre-awareness) has a greater effect than in conditions with non-transparent ones.

However, even these data cannot provide a clear interpretation of the mechanisms underlying the representation processes of individual overtones of the hierarchy. The above results can be attributed to root segmentation, based on surface morphological structures that are modulated by subsequent semantic and noematic processing. They can also be explained from the point of view of the activation of lexical processes, which are reflected in the time delay in the process of reaction to individual elements of the representation (the basic verb is transparent and non-transparent phrasal verbs).

Masking of the prime can be carried out by means of threshold perception options, in particular, early processing of formal mechanisms for recognizing the deep structure. Therefore, research and analysis of the same sets of components with disguised priming conditions should facilitate the correct choice between alternative approaches in the distribution of the semantic structure. During the final decision on o-

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meaning, we apply more and more new ″schemes of action″, we look for every priming effect that will correspond to the sample under non-masked conditions.

In addition, orthographically/phonetically similar prime/target – combinations (for example, German abmessen – essen – messen), which do not cause a reduction in response time and have no delay compared to the control conditions, are of particular interest in the aspect of the distribution of the explicated deep meaning. All these results refute psycholinguistic models, according to which, during the marking procedure, processes that affect changes in response time and are associated with the analysis of formal features are identified.

Taking into account the fact that semantic or associative priming effects are detected in the masked priming conditions, it can be concluded that the semantic complication of the amphibole of the semantic construction has an effect on root-priming under the masked conditions, and this fact allows us to conclude that activation processes are more likely to be related to representations of content features than with spelling-phonetic and morphological surface structures.

The analysis of experimental data within the framework of spelling and morphological priming reveals that in simple forms with identical initial graphic / phonetic combinations, when solving the task of nominating a situation of neo-crisis, a subsequent priming effect will be observed that does not depend on the surface morphological status of the variable segments. The analysis of the root-priming effect of complex units reflects the involvement of the spelling / phonetic level of input during deflation decisions at the level of lexical components, which is confirmed by empirical data, and the effect of semantic transparency is recognized, especially when implementing nominative tasks.

This tendency manifests itself in various language systems and cannot be explained solely by the special status of the root morpheme at the level of input of surface morphological information. It is also obvious that the similarities in the graphic / phonetic characteristics of the base component and the transparent or non-transparent units are not enough to cause a comparable reduction in the time for generating / decoding nominal components in both conditions. Since there is no difference in response time between similar (abmessen – essen) and different prime / target pairs, we believe that the nomination of targets during the pre-input of lexical information can later facilitate the task if the prime is presented earlier and component presented approximately equal number of similar graphemes / phonemes. Here, the decisive role is played by the coincidence of the initial position of the letters / sounds in the word.

Perhaps the difference between the analysis of the mechanisms for decoding deep structures based on the hermeneutic-noematic method and the research by G. A. Miller is that the classical psycholinguistic experiments do not pay enough attention to the semantic transparency of the units. There are a number of complicated hierarchical structures that contain both transparent and non-content components of value (for example, abtreiben in the meaning of ″einem manövrierungfähigen Boot″ or with components of the generalized sense of ″Schwangerschaftsabbruch″). Hermeneutic-noematic analysis of empirical material shows that only constructions with non-transparent components of values produce a lower priming effect than the transparent ones. Sometimes units with non-public generalized meanings behave as transparent, which is also confirmed in the process of nominating the Dutch language material, where this factor explicitly varies.

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The application of the philological phenomenological hermeneutics makes it possible to identify quite clear parallels with the primacy of the lexical principle of organizing an effect in the formation of a decoded depth structure based on the primary input, and therefore the representation of the basic component reveals the semantic proximity of the complicated link to the lexical input of the corresponding form. At the same time, there is no clear evidence of this phenomenon within the framework of the morphological decomposition theory, according to which the root-priming effect is mainly based on the material of morphologically-coded phonetic / orthographic input units, and the effect is modulated by subsequent semantic processing.

Within the framework of hermeneutic-noematic analysis, we conducted an experiment in which transparent and non-transparent units are combined with associatively close target lexemes in Dutch language material, which build an association either in the first or in the second element. Compared to the control conditions, we found a total significant decrease in latency (the use of noematic reflection, which manifests itself in a shorter time interval during reception – decoding target) in the process of perception and strengthening the degree of attraction of phenomenological (conscious) reflection for targeted lexemes that had transparent and non-transparent constructions with associatively close priming. Both experiments carried out prove that constitutive-priming returns to re-passing surface representation of the components, which is not possible with associative priming. In addition, it is obvious that not only processes that reflect the activation of similarity between the generalized common value of the construct and associations are involved in the observed effects. These data suggest that the value of the components will be processed without engaging in an analysis of the surface morphological structure.

7. Conclusion

Thus, studies on the processing of complex structures, which differ in terms of semantic complexity, suggest that the introduction of prime / target pairs into a hypothetical mental lexicon includes parallel effects of morphologically complex word forms and individual components of full-valued morphemes, along with this can be traced as an immediate (in transparent forms) and mediated (in non-transparent) communication of verbal representations, which determines common semantic features and possible morpho -semantic compatibility of components. In addition, it is possible to draw a conclusion about the closest, indissoluble interrelation of various structural and noematic components of both simple and complicated complexes in various languages of the German group. The noematic structure (generalized generalized meaning) of linguistic units, both with complicated and direct input of information, is not a countable, elementary set of noematic components, but their syncretic inseparable unity, where each structural component has not a clearly fixed place, but is dynamic unit of a mobile, constantly transforming structure.

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