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GENERATIVE APPROACH OF SENTENCE STRUCTURE ANALYSIS

This article is devoted to genitive approach of sentence structure analysis. When describing the syntax of a sentence systematically, the starting point is the concept of a sentence model. It is the sentence model that allows you to inventory the multifacetedness of specific sentences of the language in the form of a list of syntactic structures, which is one of the most important tasks of syntax. This work is performed on the methodological basis of generative grammar with the involvement of tools developed within this paradigm. Generative linguistics increased the requirements for the explicitness of linguistic description, paid attention to objects of syntax inaccessible to observation, the existence of which is determined indirectly, contributed to the development of a detailed descriptive apparatus in syntax. The popularity of this paradigm testifies to the wide possibilities of applying its provisions in syntactic searches, in the studios of many scientists. Increasing interest in the theory of syntactic changes, their separation from grammatical changes, is not least caused by the achievements of generative grammar, which made it possible to look at familiar things from a new point of view and obtain interesting results, taking into account the achievements of the Chomskian revolution. According to the generative approach, syntax contains basic and transformational subcomponents. The base is a system of elementary rules, presumably similar for different languages, from which a limited number of deep structures – sentence prototypes – are derived. The paper adopts a working definition of the surface structure of a sentence as a level of syntactic representation, which explains the surface arrangement of sentence constituents. The depth structure of the sentence is the level of syntactic representation of the sentence, which encodes predicate-argument relations, as well as the role characteristics of the arguments of the verb. Our study will primarily take into account the surface structure of the sentence, since we are primarily interested in the structural organization of the sentence as manifested at the observable level of SS.

Key words: *generative grammar, generative linguistics, generativism, grammatical structures.*

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ГЕНЕРАТИВНИЙ ПІДХІД АНАЛІЗУ СТРУКТУРИ РЕЧЕННЯ

Стаття присвячена генеративному аналізу структури речення. При системному описі синтаксису речення відповідає поняття моделі речення. Саме модель речення дозволяє інвентаризувати багатоманітність конкретних речень мови у вигляді списку синтаксичних структур, що становить одне з найважливіших завдань синтаксису. Ця праця виконується на методологічній основі генеративної граматики із залученням розробленого в межах цієї парадигми інструментарію. Генеративна лінгвістика підвищила вимоги до експліцитності лінгвістичного опису, звернула увагу на об'єкти синтаксису неприступні до спостереження, існування яких визначається опосередковано, сприяла розробці детального описового апарату в синтаксисі. Популярність цієї парадигми свідчить на користь широких можливостей застосування її положень у синтаксичних пошуках, у студіях багатьох учених. Посилення інтересу до теорії власне синтаксичних змін, їх виокремлення із граматичних не в останню чергу спричинені досягненнями генеративної граматики, що дозволило подивитися на знайомі речі під новим кутом зору й отримати цікаві результати з урахуванням надбань 'хомськiанської революції'. Згідно з генеративним підходом, синтаксис містить базовий і трансформаційний субкомпоненти. База – система елементарних правил, імовірно близьких для різних мов, з яких виводиться обмежена кількість глибинних структур – прототипів речень. У роботі приймається робоче визначення поверхневої структури речення як рівня синтаксичної репрезентації, який експлікує поверхневе розташування конститuentів речення. Глибина структура речення – рівень синтаксичної репрезентації речення, який кодує предикатно-аргументні відношення, а також рольові характеристики аргументів дієслова. Наше дослідження першочергово братиме до уваги поверхневу структуру речення, оскільки нас цікавить насамперед структурна організація речення, маніфестованого на рівні SS, приступному для спостереження.

Ключові слова: генеративна граMATика, генеративна лінгвістика, генеративізм, граматичні структури.

Formulation of the problem. Chomsky's work *Syntactic Structures* (1957) is considered one of the most significant contributions to theoretical linguistics in the second half of the 20th century: the work had a huge impact on the development of language science around the world. The perception of certain ideas of the generative grammar (generativism) theory created by Chomsky is felt even in areas of linguistics that do not accept its main provisions and come out with sharp criticism of this theory.

For many decades, linguistics studied the lexical, morphological and syntactic structure of the language and described its basic units. In classical linguistics, this work was usually carried out through a comparative-historical analysis of written languages, due to which linguistics for a long time remained a discipline far from the study of real processes of trans-

formation of thought into language, and vice versa (Chomsky N., 1978).

Only in the first quarter of the 20th century a number of researchers for the first time clearly expressed the opinion that linguistics should stop being limited to the comparative-historical study of written languages and turn to the functional analysis of living language that is used to generalize and convey messages, and that in one form or another it should approach the study of what exactly how the speaker's thought is transformed into an utterance, and how the utterance perceived by the listener is transformed into an opinion.

N. Chomsky made a significant contribution to the teaching of grammatical structures and was one of the founders of modern transformational linguistics. The starting point for his works was the idea

of independent laws of syntactic structures. The phrase proposed by N. Chomsky, which confirmed the exceptional importance of syntactic structures for the functioning of language, consisted of a number of completely meaningful words: “colorless green ideas are fast asleep”. Despite the fact that each of these words contradicted the others in terms of meaning, the general formal correctness of the whole construction remained unquestionable. The technique used by N. Chomsky is one of the methods of formal analysis of the grammatical structure of phrases, regardless of their meaning. He showed that with the help of such a technique it is possible to single out the syntactic structures that make up the basic scheme of phrases.

In constructions, N. Chomsky singled out the subject group (NR), the predicate group (VP) and subordinate structures that are part of them. He labeled these regular grammatical structures as “surface syntactic structures of the language”, noting that these “surface syntactic structures” are specific for each language.

Generative grammar is one of the main directions of modern linguistics. It originated in the USA in the 1950s. and still has great authority, is actively developing not only in North America, but also in many European countries, in South Korea, Japan, and India. This trend got its name “Chomskian linguistics” or “Chomskianism” after N. Chomsky, with whom not only the birth of generative grammar, but also its development over the last few decades is inextricably linked (Chomsky N., 1978, Tarasiuk A., 2020:27-28).

By generative grammar, Chomsky simply understands a system of rules that explicitly and in a certain way assigns structural descriptions to sentences. It is obvious that every speaker has mastered generative grammar, which reflects his knowledge of his language. This does not mean that he is aware of the rules of grammar, or that he is capable of realizing them, or that his judgments about the intuitive knowledge of the language are correct. Any interesting generative grammar will deal, for the most part, with thought processes largely outside actual or even potential awareness; moreover, it is quite obvious that the speaker’s thoughts and judgments about his behavior and his competence may be wrong. So, generative grammar tries to determine exactly what a speaker really knows, not what he can say about his knowledge. Similarly, the theory of visual perception tries to explain how exactly a person really sees and what mechanisms determine this phenomenon, rather than statements about what and how he sees, although these statements can be useful and, in fact, irrefutable evidence for such a theory.

The discussion that began after the appearance of the main works of N. Chomsky showed how urgent the search for deeper syntactic and semantic structures is, and that the transition from thought to extended speech is more difficult than it was imagined by psychologists and linguists who approached this problem at the beginning century. The research program formulated by Chomsky, which aims to explain a person’s ability to master a language, had the following observations as a starting point:

1. There can be an infinite number of grammatically correct sentences in any natural language. Therefore, mastering a language cannot be reduced to simply memorizing all the correct sentences of that language (just as the grammar of a language cannot be a description of all fixed sentences of that language).

2. The child quickly learns the grammar of his native language, that is, he becomes able to distinguish a grammatically correct sentence of this language from an incorrect one.

These two observations contradict each other. N. Chomsky tried to explain this contradiction. A child who has mastered the grammar of his native language (in most cases, this process is completed before the age of five) correctly determines which sentences are grammatically correct, despite the fact that he has not heard most of them before. Even with great experience in language communication, many sentences that a child has ever heard in the language of adults are finite, in contrast to the grammatically correct sentences of this language. It is also impossible to assume that all the sentences, the incorrectness of which is recorded by the child, were previously spoken by him or other children in his presence and corrected by adults. The number of incorrect sentences that can be made from the words of any language is also, apparently, infinite, while the incorrect sentences, once corrected by adults in the child’s language, form a finite, closed infinity (Chomsky N., 1978, Tarasiuk A., 2020:27-28).

Chomsky believes that the speed with which children learn to speak cannot be explained on the basis of a “learning theory” that explains the acquisition of cognitive structures through experience, but assumes the existence of an innate predisposition of the intellect, an innate universal grammar that provides patterns of rules that the child recognizes in language samples provided by the environment. Critics point out that Chomsky ignores the reality and importance of imitation in the child’s learning process.

Recent versions of N. Chomsky’s theory (such as the “Minimalist Program”) contain claims about universal grammar. According to his belief, the grammatical principles underlying languages are

innate and immutable, and the differences between the world's languages can be explained in terms of parametric settings of the brain, which can be compared to switches. Based on this point of view, a child only needs to learn lexical units (that is, words) and morphemes in order to learn a language, as well as determine the necessary parameter values, which is done on the basis of several key examples.

This approach, according to Chomsky, explains the surprising speed with which children learn languages, the similar stages of language learning by a child regardless of the specific language, and the types of characteristic errors that children who acquire their mother tongue make, while others seem logical errors do not occur. According to Chomsky, the non-occurrence or occurrence of such errors indicates the method used: general (innate) or dependent on a specific language.

From the second half of the 50s of the XX century most linguistic theories were developed as theories of syntax. What is the concept of "syntax" in modern linguistics can be said in the words of J. Lyons. The syntax of the language, according to the scientist, is a certain number of rules that unite and explain the distribution of word forms in sentences. This characteristic assumes that each word form belongs to one or more classes of forms. Form classes should not be confused with parts of speech (noun, verb, adjective, etc.), because parts of speech are token classes (eg: "boy", "run") and not word form classes (eg: "boy, boys", "runs, run").

Generative grammar goes far beyond traditional grammar, which does not provide itself with exact and complete rules, but only illustrates the regularities of sentence structure with the help of examples and counterexamples without precisely defining the limits within which these rules are valid. There are many types of generative grammars, but two of them dominate today: 1) a grammar that distinguishes deep and surface structures; 2) grammar that doesn't (Chomsky N., 1978, Tarasiuk A., 2020:27-28, Ptashnichenko A., 2014:147-153).

The deep structure is the source, the one that determines the semantic content of the sentence. Surface structure is the physical form of actual statements in the form of audio language, written texts, etc.

It is believed that the deep structure in formal terms is common to all languages, although it may be implemented differently in different languages. The transformational rules that transform deep structures into surface structures are also different in different languages. Among the transformational rules there are those that make it possible to form questions, orders, etc.

According to Chomsky, grammatical theory, if it seeks to be adequate to real experience, should explain not only the facts of language, but also the linguistic intuition of the speaker. In this regard, the new linguistic theory is both a description and an explanation of language competence, that is, the type of grammatical knowledge inherent in a particular person. But in this case, a departure beyond the boundaries of linguistics into the sphere of philosophy and psychology is clearly outlined. Chomsky himself does not deny this.

N. Chomsky's concept is essentially psychological. He connects the problems of language with the problems of human knowledge and at the same time believes that through the study of language one can get to know human nature more deeply. In this connection, he mentions the position of R. Descartes about the innateness of thinking structures, including language competence. Innate structures are concepts that are not acquired through experience, learning, but are born together with a person and exist in each individual in potency. they can also be understood as an innate ability to acquire language. The scientist notes that the innateness of language structures is evidenced by the fact that mastery of a language does not depend primarily on a person's mental abilities.

Chomsky believed that the study of language opens a perspective for the study of human mental processes, therefore it should occupy a central place in general psychology. As we can see, N. Chomsky proposed many original and bold ideas that found both sincere supporters and fierce opponents. His teachings received such a resonance that scientific circles began to talk about a "Chomskian revolution" in linguistics. After the publication of N. Chomsky's works, linguistics changed. It again became anthropocentric, its connection with psychology strengthened. Language began to be studied from the point of view of the speaker, not the listener, as it was before (the analytical approach to language was replaced by a synthetic one: from meaning to text) (Chomsky N., 1978).

Generative linguistics did not solve all the problems of linguistics. Moreover, it revealed many weaknesses: a prioriness in the selection of initial syntactic units, underestimation of the role of pragmatic factors, low ability to describe languages with different structures, etc. However, many provisions of the concept of generativism were used by the most modern linguistic paradigm – cognitive linguistics. The influence of generative linguistics on the creation of the "meaning – text" model of the Russian linguist I. O. Melchuk is also noticeable. The terminological apparatus of generative linguistics

entered the scientific circulation of modern linguistics (surface structure, deep structure, transformation, language competence, generative grammar, etc.).

In the second half of the 1960s, transformational and generative grammar emerged, and descriptivism gave way to generativism.

Generativism or generative linguistics, is a direction in linguistics that is characterized by the declaration of the priority of the deductive approach to the study of language over the inductive one, the interpretation of language as a phenomenon of the human psyche, and the development of formal models of the processes of generation language constructions.

Analysis of recent research and publications.

The founder of generativism is the American linguist (born in Ukraine) Noam Chomsky (born in 1928). He was a student of Z. Harris and began his scientific activity as a descriptivist. Z. Harris himself felt the limitations of the method of distribution and analysis by immediate components, therefore, together with Chomsky, he began to develop the method of transformational analysis. In the key of transformational grammar, N. Chomsky wrote his first book, *Syntax Structures* (1957). The author in many ways went beyond the limits of descriptivism, presenting ideas that became the basis of a new linguistic paradigm. Scientists believe that the birth of generativism is precisely the year 1957 – the year of publication of *Syntactic Structures*. What was new in this book was the researcher’s appeal to syntax (descriptivists did not study syntax), the desire to create a general theory of language, taking into account the intuition of the native speaker in research. Chomsky saw the task of linguistics in modeling the speaker’s activity.

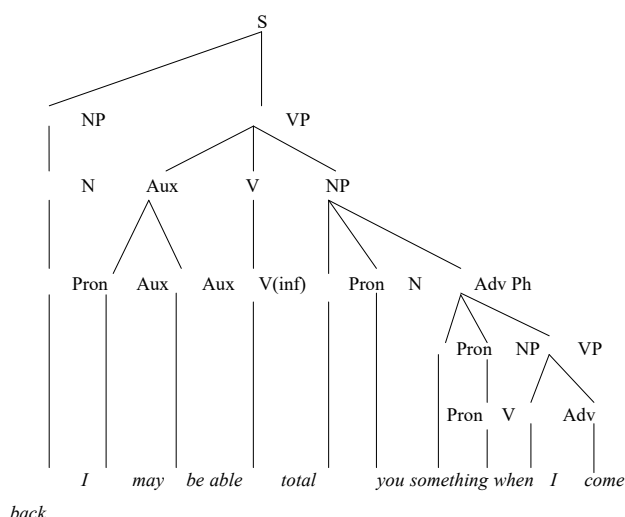
The philosophical basis of Chomsky’s concept was the teachings of R. Descartes (Cartesius). This is evidenced not only by some provisions set forth in “*Syntax Structures*” that resonate with Descartes’ ideas, but also by his later work “*Cartesian Linguistics*”, which by its name indicates a connection with Descartes’ teachings. In addition, intuition, which Chomsky pays so much attention to, was the main premise of the Cartesian rationalist method (Chomsky N., 1978, Miram G., 1998)

Setting objectives. Presenting main material.

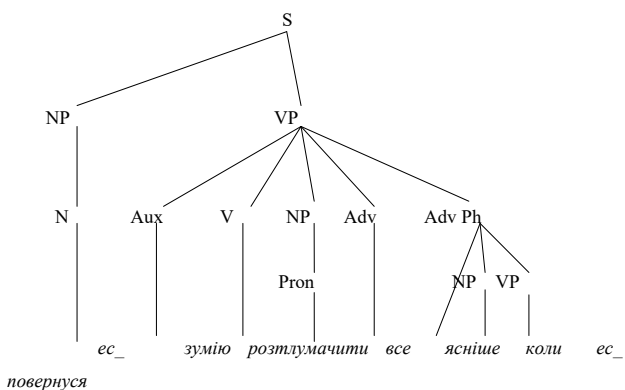
(1) *I may be able to tell you something when I come back* (J. R. T., 2001:93).

Коли повернуся, зумію все розтлумачити ясніше (Морозов., 2007:14).

Sentence (1) is subjunctive, temporal. Schemes 1 and 2 show how the subordinate part of the original sentence S2[when I come back] moves into the final part: S[S1[I may be able to tell you something]



Scheme 1. Sentence tree diagram of the original work



Scheme 2. Diagram-tree of the second sentence

S2[when I come back]] and when translated S[S2 [When I return] S1[I will be able to explain everything more clearly]]. That is, there is a transformation of permutation or, as it is also called, a transformation of movement. In addition, the tense form of the verb “come” (Present Simple) when translated changes to the future tense, “I will return”. The norm of the English language does not allow the use of the future tense (Future) in subordinate clauses of time and condition. The Ukrainian language does not have such a restriction on the use of the future tense in such subjunctives. Therefore, the translation was carried out taking into account the norms and rules of the language of the second work. The periphrastic construction “may be able to”, which is translated as “зумію” attracts attention. Moreover, the modal verb “may” is not reproduced in the secondary work, instead, the lack of an equivalent in the translation gives the translated sentence greater categoricalness.

Conclusions and suggestions. The English language differs from the Ukrainian language in the same way as the nation. Each language of the world

is specific and contains an arsenal of tools peculiar only to it. This specificity is due to lingual and extralingual factors. Languages are classified according to genealogical and typological criteria. They have specific features at all levels of the linguistic hierarchy: phonetic, morphological, lexical, and ultimately syntactic. Linguistic factors also include trends in the development of an individual language. Thus, the English language throughout its development demonstrates a strong tendency towards analysis,

simplification of morphology and dependence on a fixed order of words. The Ukrainian language, in turn, is characterized by a rich morphology, and therefore semantic connections are transmitted due to inflections. The word order is relatively free. The extralingual factors that affect the contours of the language include, first of all, the geographical location of native speakers, language constants, culture and traditions, and the economic development of the country.

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