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**PEDAGOGICAL GRAMMAR  
AS THE FRAMEWORK OF RESEARCH  
IN TEACHING FOREIGN LANGUAGES  
PART 2. NATIVE LANGUAGE ACQUISITION:  
GENERAL BACKGROUND**

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The paper deals with the problems of the native language acquisition, focusing on the notions of ‘cognitive organizer’, ‘language acquisition device’ and ‘language universals’, as well as their role in language acquisition. The analysis allowed concluding that the ‘cognitive organizer’ concept partially coincides with the notion of ‘language acquisition device’. The author argues in favour of the term ‘cognitive organizer’, as it is not limited to language acquisition only, but embraces the individual’s intellectual development in general. Chomsky’s arguments concerning the language acquisition device operation are reviewed, as well as the problems related to the language acquisition device model interpretation. The article analyses two versions of the Language Universals theory: formal and substantive universals within Chomsky’s model and the three-level system of universals in Greenberg’s approach. The author finds them to be predominantly non-contradictory, but rather complementary. The notion of innate universals is analysed based on the ‘marked vs unmarked rules’ opposition. The two models of the Innate Universal Grammar Theory (maturationism and constructivism) are reviewed. Arguments in favour of each of them are analysed. Basing on the analysis, the author concludes that some data could be interpreted as the ones supporting the maturational model. On the other hand, it is difficult to reject the idea of restructuring, which virtually penetrates the entire native language acquisition process, provided the restructuring is seen as a permanent reorganization of the child’s grammar mechanisms. The author argues in favour of the further research directed at the establishment of the degree of similarity between the native language acquisition, on the one hand, and the foreign language acquisition – on the other. The data obtained in such research should be taken into account in the process of Pedagogical Grammar development.

**Key words:** cognitive organizer, grammar acquisition, language acquisition device, language universals, native language acquisition, pedagogical grammar.

**Черноватий Л.М. Педагогічна граматики як фреймове поняття для досліджень у галузі методики навчання іноземних мов. Частина 2. Засвоєння рідної мови: загальна характеристика.** Наведено результати аналізу досліджень у галузі засвоєння граматики англійської мови як рідної. Розглянуто зміст понять «когнітивний організатор», «пристрій для засвоєння мови» та «мовні універсалії». Визначено їхню роль у засвоєнні граматики рідної мови. Окреслено зміст подальших досліджень, спрямованих на встановлення ступеня схожості між процесами засвоєння граматики рідної та іноземної мов із метою їх урахування при розробці педагогічної граматики іноземної мови.

**Ключові слова:** засвоєння граматики, засвоєння рідної мови, когнітивний організатор, мовні універсалії, педагогічна граматики, пристрій для засвоєння мови.

**Черноватый Л.Н. Педагогическая грамматика как фреймовое понятие для исследований в области методики обучения иностранным языкам. Часть 2. Усвоение родного языка: общая характеристика.** Приводятся результаты анализа исследований в области усвоения грамматики английского языка как родного. Рассмотрены понятия «когнитивный организатор», «устройство для усвоения языка» и «языковые универсалии». Определена их роль в усвоении грамматики родного языка. Очерчено содержание дальнейших исследований, направленных на установления степени сходства между процессами усвоения грамматики родного и иностранного языков с целью их учета в ходе разработки педагогической грамматики иностранного языка.

**Ключевые слова:** когнитивный организатор, педагогическая грамматика, усвоение грамматики, усвоение родного языка, устройство для усвоения языка, языковые универсалии.

**Introduction to the series.** Numerous research in teaching foreign languages, specifically in the development of grammar competence, often seem to lack a common framework to integrate them into a single block with uniform approaches, terminology and criteria. It accounts for the **current importance** of the issue under consideration.

The **object** of this paper is the comparative aspect of the native (NLA) and foreign languages acquisition (FLA) with the **subject** being the characteristics of the NLA. The **aim** of this study is to analyse the latter with the purpose of accumulating the data for its further comparison with the FLA. This is the second (see [4]) in a series of articles focusing on

the Pedagogical Grammar (PG) issue where the author, basing on the research data, is planning to discuss the various aspects of the problem.

As it was mentioned in our first article of the series [4], the development of an efficient PG should be based on an adequate FLA psycholinguistic model. Such PG has to take into account the regularities of the speech grammar mechanisms development in general and the foreign language grammar mechanisms in particular, specifically in the aspects where the previously mentioned development in NLA and FLA is different. Thus, in this article we are going to review some aspects of the NLA, specifically the notions of the 'cognitive organizer' and 'language universals', which would be used for the comparison with the FLA in our further analysis (see also [1]).

*Cognitive organizer.* The NLA is based on the child's active interaction with the language environment. The input information proceeds from the latter into the child's mind where it is processed by a hypothetical device, which within this paper is labelled as a 'cognitive organizer' (CO) [12]. The CO is a component of the child's inherent information processing system, which is essentially responsible for the gradual (subconscious) NLA. It is assumed that the CO, basing on the available linguistic input, identifies the underlying principles of the latter, and stores its assumptions (hypothetic rules) in the corresponding brain areas. Analysing the continuous flow of the incoming new information, the CO keeps fine-tuning the system of inner rules, gradually transforming it into an adult grammar system. The CO concept partially coincides with the notion of LAD (language acquisition device) suggested by Noam Chomsky [5] who viewed the LAD as a genetically inherited mechanism.

Basing on the observation of other people's communicative acts, LAD forms hypotheses and checks them using the input information to construct the individual's speech generation mechanism. This construction process does not require any special efforts on the part of the child and is as inevitable as his/her perception of the outer world's objects. In Chomsky's view, LAD is intended exclusively for language acquisition (as opposed to other types of activity), and it essentially predicts the intuitive grammar structure. It means that certain grammar principles are presumed to be innate and do not have to be acquired.

According to Chomsky [5; 6], language constitutes a highly integrated system of rules that serves as the basis of communication. The individual

has to interiorize this system. Consequently, in the framework of this theory, language acquisition happens due to the child's inner mechanisms operation, as the child is presumed to possess a special device for such purpose. This device's operational range is believed to be limited to language acquisition only; it is independent of and not necessarily similar to any other aspects of the individual's competence. Chomsky believes the situations of communication serve as a mere LAD catalyser, since the full range of information required for its operation cannot be induced from the aforementioned situations only. One of the proofs in favour of his theory is the extreme complexity of the language as an abstract system of rules. In Chomsky's opinion, it is impossible to acquire it within a relatively short period without prior innate knowledge.

Chomsky's hypothesis has been extensively analysed and consequently some problems of its interpretation have been formulated as well. Specifically, the nature of the knowledge contained in the LAD is not clear. Moreover, this theory is unable to formulate predictions and thus the research within its framework does not check its validity, interpreting the facts observed in the child's speech instead. Second, it is not clear why it is expected that certain functions or structures must emerge earlier than the others do, and why everything should proceed in the predetermined sequence. It is this sequence that most of the research within the theory has focused on. If the late-acquired language components are not innate, then it contradicts the theory, according to which LAD should include all the necessary information. On the other hand, if LAD does not contain ready knowledge, but is a mechanism to formulate and check hypotheses based on the observed language facts, then the different individuals' acquisition sequence should be dissimilar as their input is not the same. Many would also object to the secondary role the communicative situation plays in the NLA. It is hard to imagine how the child can induce a language rule without coming across numerous instances of its situational use.

Another contradictory aspect of the theory under consideration is Chomsky's separation of language acquisition devices from the general cognitive mechanisms constituting the basis of intellectual development. Thus, LAD is viewed as the appliance intended exclusively for the language information processing. Finally, if we accept Chomsky's assumption that LAD's functioning progressively deteriorates (after 12 years of age), we have to admit that on reaching that age language

acquisition should be impossible, at least along the guidelines the children use. The critical age hypothesis is doubtful for the reasons that will be discussed in our further publications, while the comparative adults' and children's strategies in NLA and FLA require additional research.

To this end, it is not essential whether the information-processing device is intended for language acquisition only, as Chomsky believes, or it also deals with any other information. That is why, though we shall analyse the CO operation exclusively in relation to language acquisition, we do not exclude the possibility that it may also process other types of information.

According to the LAD hypothesis, its principles of operation allow the child to acquire any human language. In Chomsky's view, it can only be explained by language universals.

*Language universals.* A Universal Grammar, i.e. the total range of language universals, is interpreted as the set of principles (relevant for all the world's languages) and parameters, which vary (within clear specific limits) depending on the language [13: 278]. It is believed that universal principles belong to the deep structure of the language and are components of the individual's genetic code, i.e. they are innate.

The evidence in favour of the language universals existence is usually of a logical nature. One example may be the creativity of the language [6]. It is assumed that if the language acquisition were based on mere memorization of the sentences the child perceives, its rate would be much slower than the actual one. Moreover, most of the sentences generated by the child had never and could never be perceived by him/her. Besides, the speech perceived by the child does not contain all the information necessary for the adult grammar composition. Thus, the CO could not have processed the information absent in the input, and consequently it could not have induced its underlying rules. Nevertheless, the child discriminates between acceptable and non-acceptable sentences, which may be seen as the proof that such rules are innate (see the experiment in [17]).

The concept of Universal Grammar includes two approaches that may be viewed as mutually complementary. The first one [5] distinguishes two types of universals: formal and substantive. The former specify the grammar form, i.e. the list of its constituents, types of rules and their interrelations. The latter are related to the content of the rules, such as the categories and levels of the *X-bar* theory, which defines the character and the type of syntactic categories inherent to any language. The main

idea of the theory is as follows: each of the members of the basic lexical categories is always the main one within a corresponding phrase, e.g. Noun – in the Noun Phrase, Verb – in the Verb Phrase etc.

Actually, the *X-bar* theory concerns the hierarchical organization of the syntactic structure, which is regarded as a language universal. One of the main notions in Chomsky's Universal Grammar model is the structural dependence principle, according to which the language command is based on the sentence structural relations command, but not on the ability of word combination and recombination within a sentence.

The concept of Language Universals is complemented by Greenberg's approach [9], grounded on the idea of implicational universals that allow predicting certain features basing on the presence of any other feature. Greenberg's universals are distributed among three levels: word-order related universals (e.g. 'Languages with dominant VSO (V – verb, S – subject, O – object) order are always prepositional'), syntactic universals (e.g. 'If the nominal object always precedes the verb, then verb forms subordinate to the main verb also precede it') and morphological universals (e.g. 'If a language is exclusively suffixing, it is postpositional; if it is exclusively prefixing, it is prepositional') [9].

The grammar system of any language includes both the language universals (which constitute its nucleus) and the rules outside the said universals. The latter are specific-language related. According to the hypothesis under consideration, the nucleus is acquired through the language universals mechanism, while the other rules – without it. The nucleus rules are not marked and the remaining rules are. In some authors' view [6; 8], unmarked rules acquisition require less efforts, even when based on the simple speech perception.

Examples of unmarked rules include the option to omit the subject expressed by a personal pronoun, which is normative in the languages with well-developed inflexion system (e.g. Ukrainian: 'Їду додому' – *I am going home*). In spite of the fact that in English this category is marked (i.e. requires the subject – see the example above), research [10] shows that children acquiring English as their native language have a tendency to omit subjects in their speech despite the fact that they could not have observed such forms in their language environment. The author assumes then that the children are born with the unmarked element and that explains their errors in this aspect.

Another example of an innate universal is the agreement of the verb with the noun, but not vice versa. According to the available research [14], children never attempt to agree nouns with verbs though this rule cannot be induced from mere observation.

Some authors [11: 178] assume that linguistic universals are not limited to the language, but are actually much broader involving deeper cognitive categories where the linguistic subcategories are merely constituents.

*Universal grammar and NLA.* Nativism, i.e. the theory of innate Universal Grammar principles, may be subdivided into two models – *maturationalism* and *constructivism*.

According to the maturational approach [6], the Universal Grammar principles are present in the child's mind from the very beginning, but they are not all immediately available. The access to them is based on the step-by-step principle, related to the brain maturation. For instance, it is predicted that the sound articulation ability would be acquired stage-by-stage and would depend on the biological pre-programme. The latter defines, for example, the consonant sound acquisition, irrespective of the language environment, in the following sequence: 1) *b, m, n, f, w, h*; 2) *p, d, g, k, y, l, t*; 3) *v, s, z, sh, zh*; 4) *ch, r*; 5) *j* [3].

The maturational theory admits a limited restructuring of the child's language mechanisms in grammar acquisition. First, the restructuring is permitted concerning the structures, which are rare (or absent) in the child's linguistic environment (e.g. *That he is late is possible*). In this case, the corresponding universals just do not work. Second, some universal principles mature late, and their acquisition depends on the corresponding structures' availability in the child's linguistic environment. Some research data may be interpreted as the corroboration of this hypothesis [11: 71].

Constructivism, whose origins may be traced to Piaget's Stage Theory of Cognitive Development [15], views language acquisition as a gradual construction of the grammar system in the child's mind, where the new elements are being included into the existing structure. This inclusion may call for the system restructuring, provided the nature of the new elements requires it. Constructivism focuses on the gradualness and continuity of each stage in relation to the previous one. The principle of gradualness prohibits revolutionary changes of the child's internal grammar system, allowing only evolutionary modifications. The constructivist hypothesis in this aspect may be formulated as follows: the child's grammar at any point

of transition from the lower level ( $L$ ) to a higher level ( $L+I$ ) includes all  $L$ -elements plus all the new  $L+I$ -components [11: 72]. For example, in the process of transition from the single word utterances to the first two-word combinations the child goes through a number of stages, each of which preserves all the features of the previous one while adding an insignificant element of novelty. However, taken together, all those stages contribute to the said transition. Similar picture is observed in the transition to the three-word utterances, which is carried out according to the formula 'one word + two words = three words' (*baby ...eat cookie ...baby eat cookie*) [16].

Such regularities, which are characteristic of all language acquisition stages, allowed to formulate the law of cumulative development: any child, who is capable of using the  $x+y$  combination, is also capable of using  $x$  and  $y$  separately. However, it does not mean that any child, who is capable of using  $x$  and  $y$  separately, is also capable of using the  $x+y$  combination [2].

The interim blank forms used by the child indicate the processes going on in the child's brain, and they may be viewed as evidence in favour of the maturational hypothesis concerning some language universals. For example, some research [7] shows that at the two-word stage of their linguistic development children use the so-called stable phonetic forms. Those are sounds or sound-combinations, which do not have any correspondences in the acquired language, and they do not mean anything. However, they are systematically used mainly in front of nouns (which could be regarded as a pro-article) or verbs (it could be a pro-subject). In any case, the emergence of such forms may be an indication of the child's ideas concerning the need for some elements in specific positions.

Basing on the analysis given above, we may conclude that some data could be interpreted as the ones supporting the maturational model. On the other hand, it is difficult to reject the idea of restructuring, which virtually penetrates the entire NLA process, provided the restructuring is seen as a permanent reorganization of the child's grammar mechanisms. Actually the phenomenon of restructuring is admitted (with some reservations) even by the proponents of the maturational hypothesis. If the said restructuring is happening (at least partially) under the influence of language universals, that should be reflected in a certain similarity between the NLA by different people. Moreover, as the universals by definition should extend to the entire language, the said similarity should be characteristic of all its levels. This assumption requires an additional analysis, which is the *prospect* of our further research.



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