

Study on the Role of Universal Grammar in Second Language Acquisition Andassess

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Abstract: Grammar is a part of human language system. Human beings learn and use language through grammar. However, how a language is acquired by human beings is a mystery. To decipher it, Noam Chomsky proposed the theory of Universal Grammar (UG). UG can be considered as a part of the innate language faculty, which can determine what is or is not a possible grammar in advance (Parodi, 2012). Both Jespersen and Chomsky explained the UG theory. This article briefly discusses the relationship between Jespersen's UG and Chomsky's UG. It discusses how the UG theory has been used to explain the FLA, to judge whether SLA process is guided by UG, and proves the importance of UG in SLA.

Keywords: Chomsky's UG, UG in FLA, UG in SLA

1. Introduction

The grammar of natural languages can be understood as the pieces of knowledge human beings have of their languages (I use 'of' but not 'on' here to indicate that even language speakers can produce correct utterances, they may not be able to explain the underlying linguistic process leading to them). These bits of knowledge help them understand and produce the utterances of their languages, and to identify words, sentences, and sounds, and combinations of them belong to their languages or not. Therefore, language speakers not only can understand the meaning of expressions but also can judge whether forms of these expressions consistent with grammar regulations of their languages[1-2].

2. UG

Universal grammar is Chomsky's theory of language acquisition for children. It is the unique language knowledge in the human brain. It is a natural gift and an initial state. In his 1986 book several issues in syntactic theory, Chomsky first proposed the difference between performance and competence, and he wanted to propose a universal grammar that would be sufficient for interpretation. Language ability is the existence inside the human brain, the human nature has the ability to learn a certain language, this is called "The language acquisition mechanism". Chomsky believes that because of the existence of the "Language acquisition mechanism", for all normal children as long as exposed to language materials, language can be acquired within a certain time. Based on this phenomenon, Chomsky theorizes that the initial state of the human brain contains a common feature of all human languages, called "Universal Grammar."

UG or "Linguistic universals". UG mainly answers the question of why first language acquisition is successful in an environment with little external input. This shows that universal grammar constitutes the initial state of language learners' conditions, characteristics, and other things. To be specific speaking, UG is a system of conditions, rules, and principles that all human languages must-have. It represents the most basic thing in human language and has nothing to do with the living environment or race, and there's no difference.UG is not a grammar that is recognized commonly by us, but a set of conditions.

UG mainly studies the ability of language knowledge, how to acquire language knowledge, how to use language knowledge, and so on. There are many principles in universal grammar: projective principle, case theory, and parametric principle theory, among which the core theory is parametric principle theory. UG comprises of two sections: Principles and parameters. The so-called universal principle refers to the language information is in the human cerebrum, oblivious, born. While not all languages have these standards, no language would violate them. Parameter theory reflects the contrasts between various

languages, they have at least two qualities, the contrasts between various dialects are reflected in various boundary esteems (Liu Runqing 2002). Chomsky uses “PG = a UG” to represent and formalize the parametric model of universal grammar (UG is universal grammar, PG is individual grammar, a is a parameter). As an exemplification, some linguistic phenomena are common to all languages and are referred to as principles, while others are specific to certain languages and are referred to as parameters. For example, English and Chinese form wh- interrogatives, or wh- parameters, in different ways: English is a wh- moved language, while Chinese is a non-wh- moved language. Either a language considers the presence of specific boundaries or it doesn't take into consideration the presence of specific boundaries. Thus youngsters can obtain language with a modest quantity of exposure to language material and can set parameters as effectively as they can turn a switch. For instance, when children obtain WH-, they just need to set the parameters as open, which means to move wh-words, while Chinese learners just need to set the parameters as close, which means not to move wh-words. Various languages have different parameters, and the core language structure can be obtained by determining the parameters. Contrasts in language are not contrasts in structure, but rather contrasts in parameters. According to Chomsky's theory of jurisdictional constraints, UG consists of two systems. One is a system of rules and the other is a system of principles. The system of principles consists of several subsystems, each of which contains general principles common to all languages as well as language-specific parameters that are permitted to show up inside the extent of the principles[3-4].

Chomsky's analysis of normal children's language learning shows that kids with or without the same input, even with poor incitement, will eventually master their own language. For instance, after birth, Japanese children are placed in the United States to grow up and eventually learn English, not Japanese. Chomsky asserts that the human ability to become familiar with specific sorts of Language is inborn, which is "the Language Acquisition Device". The reason that human beings are able to learn a language is that they have a rich and effective widespread syntax, which is a natural feature of intelligence. On the cornerstone that the child is only exposed to the actual material, his intelligence comprises an arrangement of rules that empowers the child to speak new sentences and comprehend sentences that he has never heard before (Vivian Cook & Mark Newson 2000). Chomsky believes that it is amazing that an organism born with no knowledge of the basic properties of language can learn the structure of language. The process of language acquisition by children is the process of parameter determination. UG is the motivation behind why individuals can gain proficiency with a specific language, which clarifies the rationale of language acquisition well. It can be said that there is a cozy connection between UG and LA.

3. The relationship between Jespersen's UG and Chomsky's UG

First, Jespersen distinguished syntactic categories from ideational categories. He argued that these distinctions in syntactic categories vary from language to language and are not universal. For example, not all languages have a subjunctive mood, not all languages have comparative levels, and so on. Unlike syntactic categories, Jespersen argued that “There are supra-linguistic categories that have nothing to do with the fact that existing languages are more or less accidental; they are universal in that they can be applied to all languages” (Jespersen, 1924). He called these extra-linguistic categories “notion” or “notional categories”. And in Jespersen's view, syntactic categories were internal to language and vary from language to language. But the category of thought was “sublingual”, “Psychological”, “A phenomenon which must be expressed in life” (Jespersen, 1924), and “A basic thought common to all mankind” (Jespersen, 1924). All languages must express them in a variety of ways, which naturally gives rise to some universal principles. For example, all languages distinguish between relative abstract concepts and relatively concrete concepts (that is, between nouns and adjectives) and between relational specific concepts and relational indefinite concepts (that is, between subject and predicate). Since the 19th century, with the rise of historical-comparative linguistics, languages had come to be known more clearly. “Although we can never hope to attain what the grammarians of the ancient philosophers regarded as a universal grammar, we can get the closest approach to UG that modern linguistics allows” (Jespersen, 1924). UG advocated by Jespersen was the result of the systematic search for the universal idea behind all languages.

For Jespersen, UG aimed to explore the basic ideas and principles behind grammatical phenomena and how they were expressed in different languages. Ideas and related principles were universal in human psychology. Exploring such a universal grammar could give us “A deeper understanding of the most intrinsic and essential things of human language and human thought.”

Chomsky was deeply influenced by Jespersen's thought of UG. Chomsky said he was following the

research scheme outlined by Jespersen to discover UG. On subsequent occasions, Chomsky reiterated this view (Chomsky, 1986:21-22, 1995:3, 1997:15; Cela-Conde & Marty, 1998:34). However, there is a big difference between Chomsky's UG and Jespersen's UG. Jespersen's UG is to find out the hidden ideas behind the complicated linguistic phenomena, which embody the commonness of human psychology. Chomsky's universal grammar (CHOMSKY, 1986; 1995; 2000) is made up of abstract grammatical principles and parameters. Chomsky argues that children are born with these grammatical principles and parameters. When a child is stimulated by a language, the parameters are assigned, and then the innate grammatical principles and these assigned parameters derive the specific grammatical rules of the language. In this way, children can easily acquire the grammatical rules of a language and do not need a lot of language stimulation. An example of the grammatical principle of Chomsky's UG is the adjacency condition: The range of movement cannot exceed a threshold node, which is NP or IP. According to Chomsky, children do not need to be taught that these sentences are not grammatically correct because they are born with the principle of adjacency. The principles of grammar that Chomsky seeks, such as adjacency, are innate things about grammar that reflect the innate limitations of the human brain's construction of sentences. In contrast, Jespersen's UG contains ideas, which reflect universal human psychology. In conclusion, Chomsky's UG is at the grammatical level, and Jespersen's UG is at the semantic level, which is very different[5-7].

4. UG in FLA

Before turning to the SLA, it should be useful to have a concise prologue to how UG functions in FLA. One thing that needs to be initially clarified is that the ultimate achievement of FLA is definitely the grown-up adaptation of that specific language. To achieve it, children should expose to their L1 and receive adequate input. However, the linguistic data that children are exposed to are both under- and over-informative (Parodi, 2012). It is under-informative because not every conceivable word, structures, and articulations can be addressed in what children capture. It is over-informative because the input like false starts, repetitions, and speech errors may be deluding the objective language. UG offers a system of classifications and activities to mitigate the impacts of the under- and over-informative input (neediness of the improvement).

This system can compel the inquiry or theory space in where syntactic portrayals are planned, and, subsequently, managing both understanding and creation. Therefore, the initial state of FLA is UG matched with the openness to semantic experience. The developmental process of FLA is guided by UG, which invariably shapes the child's grammar being a possible human grammar, so that makes the child intelligible for others. UG guidance accounts for the fast rate of acquisition and for the similarity of developmental stages across individuals learning the same language and across different languages.

There is the establishment of the general parameters of FLA. There is an important parametric principle in UG. The language acquisition device can be seen as a principle. The parameters are language-specific. Any language learning must go through three steps: language input → language acquisition apparatus → language output. Before children speak, they have heard many words from adults. These words and sentences are the parameters that help children build their own grammatical rules. Since second language learners have a first language grammar that contains universal grammatical principles, it is not possible to acquire a foreign language with a limited number of sentences, as a child does. In foreign language acquisition, more and richer linguistic material needs to be provided to modify the grammar previously produced by the mother tongue.

Foreign language learners are likely to be more dependent on contextual connections and less relatively independent than children's native language learning. Students who study only in the classroom have a relatively difficult, albeit longer, period of foreign language learning. However, students who study abroad learn foreign languages relatively easily due to a large amount of language material and situational immersion. More importantly, output outweighs input in both first and second languages.

In first language acquisition, there is no one to explain the rules of the language or ungrammatical sentences and the child eventually understands and speaks an infinite number of new sentences. In SLA, although the system of rules is explained in advance, however, environmental constraints leave students with few opportunities to speak and limit their language learning. Therefore, in foreign language teaching, students should try to provide an all-foreign language environment so that they can acquire information in the foreign language more effectively and within a limited time frame.

5. UG in SLA

In the last section, we discussed how the UG theory has been used to explain the FLA, now I would like to turn to SLA, to discuss whether the SLA process is guided by UG as the FLA is, and if so, what is the status of the UG in SLA.

5.1 Availability of UG in SLA

Chomsky's theory of UG addresses the "Logical problem of language acquisition", that is, how children succeed in learning their native language without the stimulation of their mother tongue. It also attributes this phenomenon to human genetics, which is the human brain is born with a language acquisition mechanism or universal grammar. Since this "Logic problem" also exists in the process of SLA, the Second Language Learners' language competence cannot be attributed to the learners' own psychological and cognitive factors, the quality and quantity of language input, while ignoring the influence of the original language. Innate language acquisition mechanisms or UG also assume a part in second language learning. The accessibility of UG has always been the key to the study of SLA. There are three different views on whether there is a real connection between Universal Grammar and second language acquisition. A number of different positions on whether L2 learners still have access to the principles and parameters of UG are represented in the literature. Mitchell and Myles (2004) discussed three theoretical positions in their comprehensive review, that is, no access, full access, and partial access. The position of no access states that the critical period plays a vital role in language acquisition[8-9].

UG, thus, will be no longer available after that period (White, 1989). Therefore, adult L2 learners have to seek out other underlying learning mechanisms to acquire the target language in a similar way as they learn any other aspect of knowledge.

Proponents of full access position assume that if L2 learners obtain unconscious knowledge of the target language which is beyond the input and cannot be acquired based on the general learning strategies of the L1, we can suggest that UG must be involved. That is to say, all the parameters of UG are still available and can be reset. One ideal possibility is, FLA and SLA are identical with respect to the operation of UG, and UG explains the acquisition of complex linguistic knowledge in both contexts (White, 1990). Supporters of the partial access hypothesis believe that UG is still available but that the L2 learner's access to it is mediated by L1 knowledge. White (1990) claims that the L2 learners may at least initially employ principles and parameter setting from the L1 as an interim way to deal with the L2 data. However, parameter resetting to the L2 value is in principle possible. In other words, once some other different parameter settings occur in L2, learners need to use other learning mechanisms and problem-solving strategies to acquire the target language (White, 1990). In sum, to investigate the role of UG in SLA, in other words, is to investigate whether the UG constrain the development of SLA.

5.2 Evidence of UG constraints in SLA

As I mentioned above, L1 is constrained by UG. The question which arises here is: will these constraints also hold in the L2? To answer this question, it should be helpful to compare the SLA with three stages of FLA, that is, initial, developmental and final stages. With the respect to the initial stage, L1 consists of UG with exposure to the linguistic data. L2 learners' L1 is already present, which represents UG as it is instantiated in that particular language. However, the target of L2 learners is to go beyond that instantiation, which only transfer from their L1 is not enough, since L2 learners may also face challenges of fossilization. Therefore, they need to acquire phenomena that are not part of the L1. We can say that in the initial stage, SLA is partially constrained by UG. Next, does UG constrain the developmental process of L2?

This question was the center of debate on UG in the 1980s (White, 1985; Clahsen and Muysken, 1986, 1989; Bley-Broman, Felix, and Ioup, 1988). That is to ask whether it is possible to construct a grammar beyond that of the L1, which is directly related to that of parameter resetting. In other words, whether it is possible to modify the parametric specification of one's own language, and the outcome should be a natural grammar or a 'wild' one. It is common that L2 learners show effects of transfer from their L1 at the developmental stages. For instance, Chinese English L2 learners leave out articles in English, since there is no article in their L1. Initially, transfer effects were taken as evidence that UG is no access in SLA (Clahsen and Muysken, 1989, as cited by Parodi, 2012). Later it was realized that whatever is transferred from L1 must by definition also be UG constrained since the L1 is UG constrained.

5.3 The significance of UG in SLA

UG offers new perspectives on our understanding of language. It provides a new grammatical frame and reference point to describe the deep structure of learner's language, such as quantifier scope, WH shift, argument shift and nesting of the verb phrase, and so on. More importantly, it attempts to explain the logic of language acquisition from the perspective of immanence. The internalism, modularity, and genetics of generative grammar break down the behaviorism and environmental determinism in second language acquisition and make people re-understand the nature of language and language acquisition, and attach importance to the innate and subjective roles of the human being. Many textbook designers and teachers still believe in a behaviorist and cognitivist view of knowledge and skills and do not recognize the various relationships inherent in language structure and the innovative nature of language. The UG-SLA study is a good explanation of the grammatical representation of the mediated language, and it provides a limit to the scope of the learner's assumptions about the mediated language, allowing us to reconceptualize the commonalities between languages, and the place of the mother tongue in second language acquisition. Comparing differences between languages in terms of deep structures makes teachers pay more attention to new parameters in second languages.

It has led to a redefinition of the role of transferability and to an analysis of transferability in terms of the markedness of language. In terms of research methodology, UG provides a set of falsifiable hypotheses for the study of SLA, which makes the study of second language acquisition based on empirical evidence. UG-SLA study analyses and explores the theoretical framework of SLA so that SLA research is placed within an "explanation" theoretical framework rather than falling into the quagmire of aimless empiricism.

6. Conclusion

SLA is an extremely complex cognitive psychological process. It is also the product of the interaction of human internal and external conditions. The theory of UG, which is based on the logic of children's first language acquisition, has given new vitality to the study of SLA and provided a unique theoretical basis for us to explain the logic of SLA. Although researchers hold widely divergent views on the accessibility of UG in SLA, the three-sex hypothesis not only enriches the meaning of UG but also explains the theory around the accessibility of UG in SLA, there are a number of logical possibilities for the role of SLA. Therefore, the study of SLA in the framework of universal grammar is bound to be more and more in-depth. As a second language researcher, it is necessary to realize the advantages and limitations of UG and its theoretical framework. UG is a kind of linguistic competence. UG still influences the whole process of SLA. The acquisition of core grammar plays an important role in SLA. On the other hand, SLA relies on the acquisition of processing strategies and information processing strategies on the surface of language and other cognitive abilities. Therefore, neither UG theory nor cognitive processing theory can explain SLA phenomenon alone.

References

- [1] Chomsky, N. (1977). *Reflections on language*. London: Temple Smith.
- [2] Chomsky, N. *Knowledge of Language: Its Nature, Origin, and Use [M]*. London: Praeger, 1986.
- [3] Cela-Conde, C. J. & G. Marty. *Noam Chomsky's minimalist program and the philosophy of mind: An interview [J]*. *Syntax*, 1998(1): 19-36.
- [4] Ellis, R. (2009). *The study of second language acquisition*. Oxford: Oxford University Press.
- [5] Hawkins, R. (2001). *The theoretical significance of Universal Grammar in second language acquisition*. *Second Language Research*, 17(4), 345-367.
- [6] Jespersen, O. *The Philosophy of Grammar [M]*. London: Allen and Unwin, 1924.
- [7] Parodi, T. (2012). *Universal grammar and second language acquisition*. *The Encyclopedia of Applied Linguistics*.
- [8] White, L. (1989). *Universal grammar and second language acquisition*. Amsterdam: John Benjamins.
- [9] Whong, M. (2013). *Universal grammar and the second language classroom*. Dordrecht: Springer Netherlands.