

Universal Grammar and Interlanguage Development

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Abstract: Interlanguage Theory was first proposed by Selinker. It refers to the bridging language between the source language and target language constructed by the second language learners, which is a constantly dynamic moving toward the target language. Chomsky's Universal Grammar (UG) has played an important role in explaining the native language acquisition. This paper, on the basis of UG's impact on the native language, focuses on UG's influence on the interlanguage development.

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1 Introduction about UG

Universal grammar (or abbreviated as UG), proposed by Noam Chomsky, refers to highly abstract principles of grammar that constrain the form of any specific grammar, which has been more specifically stated in his Government and Binding Theory (GB Theory). Binding is concerned with the relation between NP, which refers to the same person or thing in a sentence. Governing concerns dependencies between linguistic elements where one element governs another. There are two essential factors needed to be discussed first about UG, namely, its innateness in children's minds as well as applicability in all languages.

In terms of the innateness of UG, it is believed that children are born with some universal grammars and without such principles it would be impossible for a child to learn the grammar of his mother tongue. How can this be true? It lies in that there is a mismatch between input and output. That is to say, provided that there is a black box in a child's mind, there

might be something that comes out of the black box that did not go in. As a matter of fact, without any learning of pedagogical grammar, children could utterance understandable sentences with complicated and sometimes even ungrammatical input. How does this happen? Obviously, the answer to this question could not be found from input because the rules of any grammar are highly abstract and do not reflect the surface properties of the language and such insufficient input could never enables children to discover certain rules. Therefore, it could be supposed that something must exist in the black box, which could transform disordered language input into sequential output. Such device is called "language acquisition device" (LAD) and is said to be innate and universal to all the language learners because it could not be taught. So the innateness of UG would be convincing.

In relation to the applicability to all languages of UG, it claims that any speaker knows a set of principles that could be applied to all languages and also a set of parameters that can vary from one language to another. According to this theory, acquiring a language means applying the principles of UG grammar to a particular language.

2 How the knowledge of UG affects the development of language acquisition

It is known that LAD is universal and innate to human beings and such device is also called 'universal grammar'. What Chomsky expected to find is a 'highly structured theory of UG based on fundamental principles that sharply restrict the class of attainable grammars and narrowly constrain their forms, but with parameters that have to be fixed by experience.' It is claimed that when acquiring first language, children's initial universal grammar consists of two parts, that is, fixed principles and open or 'unset' parameters.

Progressively, open parameters will be fixed through experience for a particular language and in this way children's core grammar comes into being. Therefore, a new-born child is may be open to any language and the external environment to which he is exposed determines the language that he will acquire^[1].

For universals exist inherently in children's mind and need not be acquired, during the course of first language acquisition, what children need to do is reduced to master those idiosyncratic, language-particular properties of the target language, on the basis of his linguistic experience (*i.e.* the speech he hears around him). Those parts of language out of the control of UG are considered not to belong to the core grammar and called periphery grammar. In comparison to the core grammar, the peripheral rules are more marked so that they are difficult to learn. Core rules, as opposed, are more unmarked, 'natural' or 'basic' so that they could be acquired easily. To put it another way, how language is acquired, in the light of Chomsky's theory, is 'given by a specification of UG along with an account of the ways in which principles interact with experience to yield a particular language: UG is a theory of the 'initial state' of the language faculty, prior to any linguistic experience.'(Chomsky, Knowledge (1986a) pp.3-4)

3 How the knowledge of UG affects interlanguage development

3.1 Introduction about interlanguage

Interlanguage is defined as a type of language produced by second-and foreign-language learners who are in the process of learning a language, which differs from both the learner's mother tongue and the target language. It is believed that interlanguage is transitional language arising in the process of acquisition. In essence, it is the evolutionary and approximative system with regularity. However, it is widely considered that the second language learner could never reach a high and advanced level the same as the native speaker does. Why? It could be illustrated as follows.

3.2 UG affects SLA in different ways as it does in the first language

To begin with, on the basis of different initial state, universal grammar will have different influence on the first language acquisition from what it does on the second language acquisition. L1 learners begin to learn their mother tongue with a blank mind, which is

called a zero state (S₀), including universal grammar and 'open' parameters. With the set of the parameter to a particular language and the formation of the core grammar, the L1 acquisition is increasingly developed into a steady state (S_s). By contrast, L2 learners start learning a second language with a background of their first language, namely an initial state (S_i), 'which contains one grammar, complete with principles and actual parameter settings'. In comparison to the steady state of the L1 learners, L2 learners will reach a terminal state in the end (S_t)^[2].

Therefore, under the influence of L1 background, it is widely believed that L2 learners could never achieve their target language identically with what the L1 learners did in their steady state. As a result, interlanguage is just native like rather than local and pure target language forever, which may be partly due to different starting state, and partly lie in that L2 learners usually begin to acquire second language much older than L1 learners do. With respect to Critical Period Hypothesis, age is of great importance in terms of language acquisition. Supposed a L1 learner is deprived of being exposed to language environment in his teenager, he would never speak a language as fluently as a native speaker does ultimately. Similarly, the influence of the age factor on the first language acquisition definitely has something in common with that on the second language acquisition. In other words, the younger L2 learners start acquiring second language, the better they will achieve it in their terminal state. To sum up, apart from the effect of UG, other factors could also affect SLA, such as age, L1 background and so on.

3.3 How L2 learners have to reset parameters under the influence of UG

3.3.1 Markedness theory

It has been controversial for a long time whether UG method could be used in L2 learning. In relation to accessibility of the UG in SLA, there are three major hypotheses, namely, no-access hypothesis, partial-access hypothesis and full-access hypothesis.

As far as the author is concerned, the last hypothesis, namely, partial-access, to some degree, is more believable. It is believed by many researchers that L2 learners can reset the target language parameters after knowing the binding theory and having the knowledge of universal grammar. Then, how L2 learners could reset their parameters of the target language under the

impact of UG?

The previous discussion show that the role of UG in SLA is more complicated or intricate than it does in the L1 acquisition, which lies in that L2 learners are under the influence of two kinds of knowledge, i.e. linguistic universal and the specific grammar of his L1. Furthermore, learners have to know which part belongs to the core grammar and which to the periphery grammar. The role of UG in the SLA may be explained through the study of Chomsky's markedness theory, which is connected with core and periphery grammar.

Under the influence of the universal grammar, the parameter to a particular language could be set and in this way the core grammar results. In Chomsky's markedness theory, core rules are unmarked; that is, they accord with the general tendencies of language. In contrast, periphery rules are marked; that is, they are exceptional in some way. To some extent, we could equate the term 'unmarked' with 'regular', 'normal' or 'usual', whereas 'marked' with 'irregular', 'abnormal' or 'exceptional'. However, marked and unmarked rules are at the opposite extremes of a continuum, which means rules could be more or less marked.

Words such as 'big', 'long' and 'fast' are unmarked in relation to 'small', 'short' and 'slow', because the former could occur in both declarative and interrogative sentences whereas the latter could only occur in interrogative sentences. So, sentence like 'How slow can he run' is considered to be wrong.

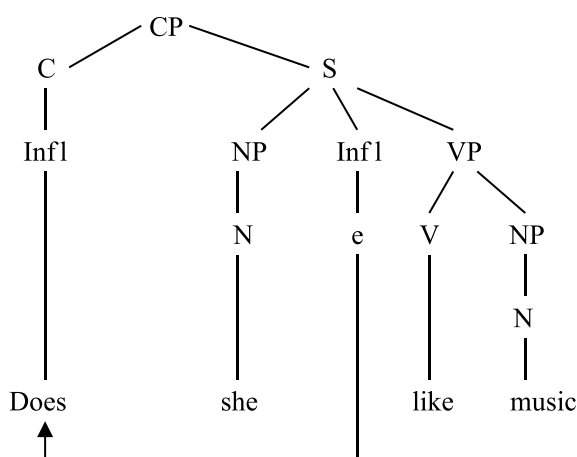
To take several sentences as follows for better

illustration:

- 1) I like music.
- 2) She likes music.
- 3) You like music?
- 4) Do you like music?
- 5) Does she like music?
- 6) Why do you like music?
- 7) Could you tell me why you like music?

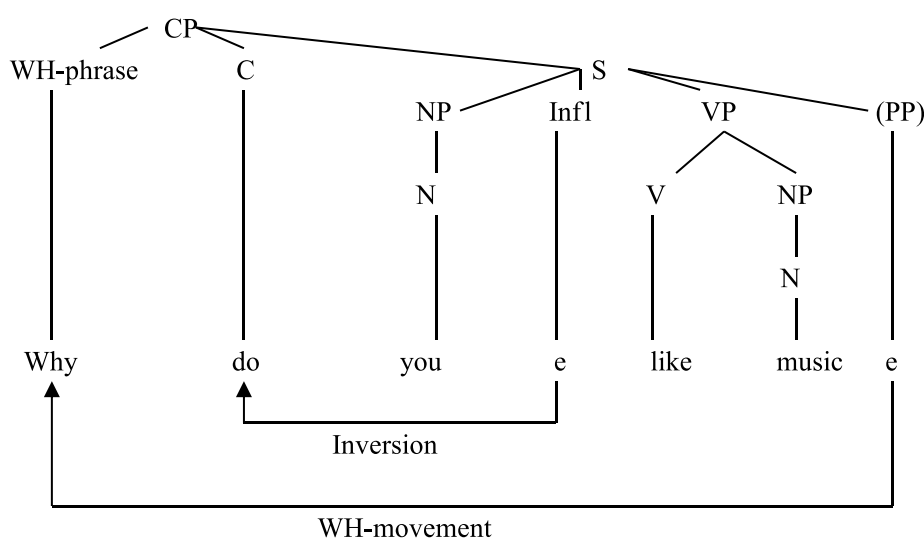
Obviously sentences 1), 2) are more unmarked than following sentences on the grounds that they are all compatible with such sentence order as 'subjective +predicate +objective', which is governed by universal grammar and applicable to all languages. For instance, Chinese learners of L2 English will find no difficulties in acquiring such sentences with 'normal' or 'usual' sentence order. In other words, only with instinctive feeling for that language, we could make sure those sentences are right. Therefore, these unmarked sentences are considered be acquired first by L2 learners on the basis of universal grammar^[3].

On the contrary sentences from 4) to 7) are all concerned with periphery grammar, which is not consistent with universal grammar, are comparatively more marked and difficult to learn than 1) and 2). When it comes to 4) and 5), both of them deal with the principle concerning Aug-movement, while 6) and 7), in relation to WH-movement. Striving to make the two principles more clear, two tree diagrams concerning 5) and 6) are shown as follows: Surface structure of sentence 5) 'Does she like music?'



The symbol e is marked for 'empty' and termed as trace.

Surface structure of sentence 6) ‘Why do you like music?’



By further analysis it could be concluded that without any verbal changes regarding third person singular, sentence 1) is more unmarked and easy, consequently would be learned earlier than sentence 2), so does sentence 3) in relation to sentence 4). Similarly, the embedded sentence 7), with regard to 6), is much more marked.

In Chinese when making question sentences, whether simple or special, the sentence order will be the same as that in the declarative sentence, just adding auxiliaries ‘ma’ at the end of the sentence or ‘weishenme’ in certain grammatical place. It is such differences between two languages that it more difficult for Chinese to learn the formation of question sentences with so much ‘abnormal’ and ‘usual’ rules concerning reflection movement or WH-movement.

It could be concluded that L2 learners acquire less marked structured before more marked. That is to say accessibility hierarchy really exists and could predict the acquisition order. Furthermore, it is proposed by Chomsky that an unmarked rule is one that require no or minimal ‘triggering’ from the environment.

3.3.2 Other factor concerning interlanguage development—Frequency

Although interlanlguage development is largely decided by UG in terms of markedness theory, there are other essential factors which also have impact on the SIA, that is, frequency and L1 transfer.

To take the previous sentence 3) ‘You like music?’ for instance again. It is more unmarked than 4), *i.e.* ‘Do you like music?’, because of the ‘normal’ sentence order identical with that in Chinese. According to the markedness theory, the more unmarked a sentence is,

the earlier it will be learned. However, as a matter of fact, it is found that 3) will be learnt later than 4) for its infrequency in input. Research suggests that learners are more likely to acquire a frequent but marked structure before an infrequent but unmarked structure than vice versa.

3.3.3 Transfer

Apart from frequency, another relevant factor, *i.e.* L1 transfer, is worth a detailed study. It has been proposed that learners are much more likely to transfer unmarked structures from their L1 instead of the marked ones.

Transfer is defined as the carrying over of learned behavior from one situation to another, namely, the effect of one language on the learning of another, consists of two opposite types, positive transfer and negative transfer. Positive transfer is one that makes learning easier, and may occur when both the native language and the target language have the same form. By contrast, negative transfer, also known as interference, refers to the use of a native language pattern or rule that leads to an error or inappropriate form in the target language.

(1)Positive transfer

In terms of positive transfer, Chinese learners of L2 Japanese will be good examples to illustrate it. It is well known that a majority of characters in Japanese came from China as early in the Tang dynasty. These Japanese characters show a strong resemblance to Chinese characters both in writing and meanings in many cases. A good example is found in following sentence:

Japanese: “今日は私の誕生日で、たくさんの友

達が来た、それでとても嬉しいです。”

English (literally translated): ‘Because that today was my birthday and many friends came, I was very happy.’

With Chinese background, learners have easy access to the general meaning of this sentence. Explicitly, these Japanese characters *i.e.* “今日, 誕生日, 友達, 嬉”, have shown the basic meaning of the sentence by themselves except for different pronunciations as “きょう, たんじょうび, ともだち, うれ”.

Accordingly, it goes without saying that these resemblances or similarities between Chinese and Japanese characters are premises of positive transfer. So it is easier for Japanese learners with L1 Chinese to transfer such similar character forms from their L1 to L2. Contrarily, English-speaking learners of L2 Japanese, without any previous knowledge about characters, definitely will have no priority over Chinese learners in learning L2 Japanese. However, when it comes to French learning, English-speaking learners would have the advantage of Chinese learners on the basis that both English and French belong to Indo-European family and bear similarities in various degrees^[4].

(2) Negative transfer

With regard to negative transfer, the author would like to take previous sentences for example again. When asked to transform a sentence like 1) to a question with ‘why’, many Chinese learners of poor level may do as follows:

- * ‘You why like music?’ or
- * ‘Why you like music?’

Definitely, the two sentences are wrong resulted from negative transfer, that is, under the influence of the question sentence order in Chinese (subject +predicative +object). While in English, according to the principle of WH-movement, a WH-word should be moved to the beginning of a sentence first, then an auxiliary verb is followed by it, and the rest part of the sentence is placed last in accordance with its original sentence order. Therefore, it is the usage of marked principles belong to periphery grammar that give rise to such negative transfer.

These two examples predict that ‘the study of one language may provide crucial evidence concerning the structure of some other language’ (Chomsky, knowledge (1986a) pp.3-4). ‘Given that we are interested in developing a universal theory of a language, then the resultant theory has to be compatible with all known facts about all languages. Hence, a grammar of one language based on a particular theoretical framework

will have to be discarded if facts from another language turn out to be incompatible with the assumed theoretical framework.’ To make it more specific, the learner always falls back on his L1 knowledge when the L2 rule is obscure or marked. As discussed previously, WH-movement being more marked to Chinese learners, when they want to express such question sentences with English, they are most likely to return to their L1 concerning such unmarked knowledge. In consequence, they transferred question sentence order in Chinese into English and made such an error.

4 Conclusion

In summary, the markedness theory has provided a new viewing angle to us in terms of the relationship between UG and interlanguage development. Under the influence of both UG and L1 background, L2 learners tend to acquire those unmarked rules dominated by UG first and then the marked ones. In relation to those marked or ‘unusual’ rules governed by periphery grammar of the target language, L2 learners are apt to fall back on their L1, especially concerning unmarked knowledge, and transfer them into the new situation. Sometimes these unmarked rules could be applicable whether in L1 or in target language, and in this case the positive transfer occurs. However, sometimes they seem to be ineffective free from the original situation, and in this condition so-called negative transfer results^[5].

Thanks to universal grammars and Government and Binding Theory proposed by Noam Chomsky, on the basis of analyzing differences between L1 and L2, L2 learners will have a clear mind of what differences could lead to learning difficulties while others do not. In other words, which parts of parameters need to be transferred from L1 to the target language and which parts of them need to be re-established. It could be concluded that UG plays an important role in SLA. With some knowledge of UG, L2 learners may have an easy access to second language.

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