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The Possible Future of Generative Grammar in Foreign Language Education

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Abstract

The Theory of Universal Grammar and Generative Grammar has remained largely a linguistic theory and not explored for its practical educational use, especially in foreign language educations for multi-lingual speakers. This article discusses the potential use of the idea of UG in language education: How it will function psychologically as an inspiration; how its research methods and perspectives of syntactic grammar might become a corner stone of designing teaching plans. The article also provides the examples from English, Mandarin and Japanese to explore the possible use of Generative Grammar research methods in constructing sentence structure knowledge, in hope to encourage further exploration by educationists and foreign language instructors to use the knowledge of Generative Grammar researches in daily teaching process.

Keywords

Universal Grammar, Generative Grammar, Foreign Language Education, Language Education, Syntax, Syntactic Structure, Grammar.

1. INTRODUCTION

For the better part of history of foreign language education, the theory of Generative Grammar and the possible Universal Grammar (UG) simply exists: It is there, and that is it. While Noam Chomsky and following linguists have been building their own system of notation in explaining grammar elements for years, developing a relatively solid linguistic foundation to view the differences and similarities between languages, their school of thoughts has only been mentioned as a supplementary material among the a small groups of frontline teachers instructing on foreign languages. The debate over the possibility of employing Chomsky linguistics in practical teaching largely remains a field to be explored, and highly likely a field very worthy of exploring.

In this article, we shall explore the current attempts to use Generative Grammar theories and its research methods by frontline teachers, as well as the potential furtherments of them. The article will discuss the psychological effect of these traditionally Linguistically used studies on students and the more content-based improvements to Foreign Language education made possible through them.

2. ATTEMPTS TO INTRODUCE GENERATIVE GRAMMAR THEORY

As stated, the exploration in borrowing Chomsky Linguistics for Foreign Language Education has been lacking. Numerous reasons can be found behind the currently lack of interests in applying linguistic knowledge in practical language education, and the best argument might be that, on many occasions, there is simply no need for introducing unnecessary contents for foreign language learners. Taking English as an example, the British Council reached over 89000 learners of English in Europe alone last year [1]. These learners would likely have highly

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different needs for English language. Many would not be required to know the grammatical details, as the sensationally correct English expressions would serve their needs perfectly well. In comparison, many would succeed in mastering the language without involving any instruction on the UG theories. In this situation, Occam's razor would cut off the extra burden on the learners by simply supplying them the easiest way to construct English ability. While we continue to seek to improve the current foreign language education system, arguably the methods employed now are productive in many ways.

Yet, introducing Chomsky Linguistics and the theories of UG into foreign language education like English continued to be of an interest for some instructors, especially in the Far East. In 2011, Peng Ye studied the possibly of using the UG theories to construct the Internalized Grammar sense in Chinese students, arguing for the need of changing teaching methodologies in the classroom [2]. It is believed that by introducing linguistic theories to the students, they would take up better interests in English and become more self-motivated. Similarly, in 2012, Shite Kazuyuki and Kawamura Koichi from Tokyo University of Social Welfare conducted their research on Generative Grammar Theories, including the idea of Universal Grammar, in English teaching. During the research, the Japanese perspective English teachers showed a positive, although relatively unobvious, attitude towards the introduction of linguistic knowledge into English education, arguing the possible increase in confidence for both instructors and students [3].

It is no coincidence that eastern English instructors and Educationists take on this discussion more seriously, as the teaching environment they face is simply more challenging. Most European languages are considered to share linguistic roots with English as members of the Indo-European family. Through ages of interactions, strong bounds and links had been established through borrowed expressions, similar written symbols, and shared phonological units as well. These features give advantages during English learning. Differently, eastern languages like modern Chinese or Japanese are fundamentally distinctive from English in every possible way: the lexicons, the syntax structures and the morphologies, the phonologies and even the common rhetorical skills. Chinese is the commonly used umbrella term for numerous languages under Sino-Tibetan family, which has profoundly different sentence structures with Indo-European languages. The historical linguistic link between Japanese and the outer world even remains unclear till this day and the Japanese language would also maintains its highly unique sentence structure as well [4]. In these cases, acquiring English for a Chinese or Japanese speaker would be the process of acquiring an entirely different expressing system using different symbols, different sequence to construct these symbols as well as different morphological ways to create variations of these individual units. It is a challenging and possibly discouraging task for anyone.

3. EXPLORING THE PSYCHOLOGICAL POTENTIAL

The possible existence of a Universal Grammar could thus function as an anchor for the learners. In its core, the Universal Grammar and it surrounding theories had two unique features to offer to the learners: First, as intrinsic as language might be viewed in Chomsky Linguistics, the Universal Grammar and common Origin of Language proposed a possible link between our biological cognitive structure and idealized human languages: A language exists in its grammatically idealized form because its speakers process information in this particular way [5]. Naturally, as all human races share an extremely similar genetical structure in the brain, human languages would accordingly share similarities beyond varying grammar details, phonetic rules, or lexicon bases. Learning a foreign language thus would not be acquiring a completely different set of symbols and rules to construct meaningful sequences: Instead, the

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process of learning would be viewed as acquiring a different way to express the same sentence convoying universal human logics in different forms.

Second, the Generative Grammar Theories used its only system to construct grammars in a mathematical way. By viewing the idealized language as the set of all possible sequence of unit elements, the composition of language becomes more relevant to the reasoning system used in Symbolic Logic, which will be discussed in detail in later part of this article.

Understandably, these two perspectives would have a positive impact on the students in several ways: We already know firmly that effectiveness of study is dependent on both intrinsic and extrinsic expectations from many studies. Minimizing the potential difficulty in the study process helped both the students to set higher intrinsic expectancy and the teachers to set higher extrinsic expectancy, encouraging a self-fulfilling prophecy. Making the contents of learning comparable with the existing knowledge of students would also help by providing visible scaffolding during the learning process. It might also be argued that students would be encouraged to use language more actively as a tool of communication that actually convoys information meaningful for all rather than a complicated code used only to be used, thus helping the build-up of a healthy motivation by avoiding an avoidance goal resisting the process of study [6].

There would be problems: Noticeably, the existence of UG is not a fact but a theory, its way of constructing grammar a method but not the only one. While Chomsky was fairly certain in the existence of Universal Grammar and a possible Original Language. The origin of languages is still a very debatable topic. Framed linguists like Paul Bloom or Steven Pinker hold different ideas in many details against Chomsky [7]. Most importantly, the biological evidence we sought to prove the intrinsic nature of languages and grammars has never been fully established. For example, bio-linguists never manage to identity the specific brain structure responsible for human linguistic abilities, making the link between the shared common human biological structures and the numerous languages existing today rather questionable [8]. Considering the situation, many would hesitate to introduce something possibly wrong to the classroom. It is of no importance: Until proven completely inaccurate, it is a perspective and one that facilitates the students' motivation and self-expectancy. The real question asked should be: Outside the psychological field, is it possible to push the use of UG theory even further?

4. METHODOLOGICAL POTENTIAL

If we fail to apply the actual ways of constructing a grammar in the Generative Grammar theories, the idea of employing UG in the classroom would never become anything more than an inspiring story or innovative perspective, functioning only in the psychological way to encourage the students. To move a step further, on the other hand, would be to construct a curriculum actually based upon the Generative Grammar Theories, possibly with a focus on the grammar ability.

There is meaning in attempting to build such a curriculum: It could be potentially helpful for beginning level learners. As stated by Chomsky, the idealized grammar would be separated from the sensation and actual meanings. In this way, a sentence could be grammatically correct while not convoying any meaningful information. For beginning level learners struggling to acquire a lexicon base large enough to construct meaningful sentences, a learning process based upon UG could be satisfied with this learner constructing at first meaningless sentences, as long as they grammatically correct. The leaner would not be confined by the lack of understanding in proper use of language in social occasion as well; A socially awkward expression might just as well be grammatically correct. These would necessarily remove a great deal of burdens.

The practicability of constructing such a learning process with the particular priority of grammar ability thus should be discussed. Theoretically, this kind of priority would require an

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ability to separate the grammars and other aspects of languages in the process of language acquisition, which in turn depends on the possibility to train a Grammar Sense, the ability to use grammar correctly, out of partial contexts like sensational meanings. In our current language education and its history, it is not entirely unheard of to isolate a particular linguistic ability from others to be focused on: Once again taking English education as an example, the Sound Sense of English is an ability developed through practice and retained afterwards. The process of learning the ability to sound out English words would be acquired and used in a rather isolated environment: First, the Sense of Sound is itself an independent capability. We know this because English speakers read combination of letter out loud when the sequence is phonologically readable, even when it is not actually meaningful. An example could be the word "example" itself: Example is an English word; it is readable and convoys recognizable meaning. On the contrary, "exemple" is not a meaningful word in current English lexicon. When used, this specific sequence of letter does not refer to any universally meaningful information for common English speakers. Yet, it is still technically readable. For experienced English speakers, they could still recognize the pattern and make identical phonological interpretation, just like the word "example". This is the Sense of Sound existing outside the context of words' meaning, following nothing but the phonological rules of English. Second, this ability can be acquired separately from other parts of the language: As a matter of fact, the history of establishing the Sense of Sound through direct interaction with written notation alone is as long as modern English Phonetic Alphabet. It has been held firmly since late 19th century that the oral or spoken form of language is primary and the first part to teach, yet for a long time, it was achieved through repetition after the instructor. Pictures might be used but not the written symbols. In 1886, when Henty Sweet and a group of education reformers established the International Phonetic Association, they emphasized the mew discoveries of phonetics of their age and created the first International Phonetic Alphabet (IPA), which soon became used in developing the ability to read language like English out loud from the learners. This significant extension in the use of materials essentially allowed students to make sound according to the IPA notation at first, and according to the direct letter combination later. IPA notation certainly convoys no sensational, real-life meaning like English words, and later the letter combination students read would not be necessarily the words already learned [9]. Countless have been trained in this fashion and became capable of sounding words before knowing the actually meaning.

Just like phonology, the syntax and morphology of any language would follow certain rules call grammar as well. We can train a particular composition of a language, the ability to read words correctly, out of learners and we can train it independently. The question thus is: Is there a way to train the ability to write grammatically correct sentences just as the ability to sound out phonologically correct words?

The answer to this question is related with the UG theories in two ways: First, a positive answer can be given more easily if the grammars of all the languages function in a universal way. If the grammar is not something independent from sensation or other linguistic rules, or it does not resemble a universal logic, it might be difficult to separate it in the acquisition of this language in the first place. Second, supposed UG theory is true and we could train a language learner to construct grammatically correct sentences without instructing on lexicon or other composing part of the language, we would still need a notation system of written symbols outside the lexicon to represent the different parts of a sentences. In this case, the methodology of studying UG offers the perfect compensation.

4.1. Methodological Potential: An Example

We might find clues from contemporary English grammar education again and discuss how the study of UG might improve it. Here we still use English, Chinese and Japanese as examples;

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and in this process, we shall try to apply the rules of generalizing the grammar of one to the other two, seeking a way to build bridge for perspective learners.

Now according to the syntactic structure theories, we assume for the convince of discussion that modern Mandarin, Japanese and English are idealized terminal languages: Their terminal strings, or sentences in a less accurate form, have a describable set. All the possible sentences ever existed grammatically correctly in these languages thus would be a result of rewriting or derivations from an initial form, according to the syntax rules.

Taking the Simple Sentences, the basic elements of any longer meaningful sequences as an example: According to various sources commonly available for learners, it is commonly believed that English as language has five basic structures for simple sentences [10], Mandarin has five [11] and Japanese is sometimes described as having three [12] basic sentence types and sometimes four [13]. The details are less relevant here as we are not aiming to list the full Syntactic rules of these languages but aiming to have a general understanding of ongoing educations. We first list all these basic structures in English:

SV structure: A sentence of English could compose of a subject and a following intransitive verb as a predicate.

SVP structure: An SV sentence with a linking verb and a following predicative.

SVO structure: An SV sentence with a transitive verb as a predicate and a following object.

SV-IO-DO or SV-o-O structure: A sentence with two objects.

SVO-OC structure: A sentence with an object as well as an object complement.

Figure 1 shows the examples of sentences composed using these structures.

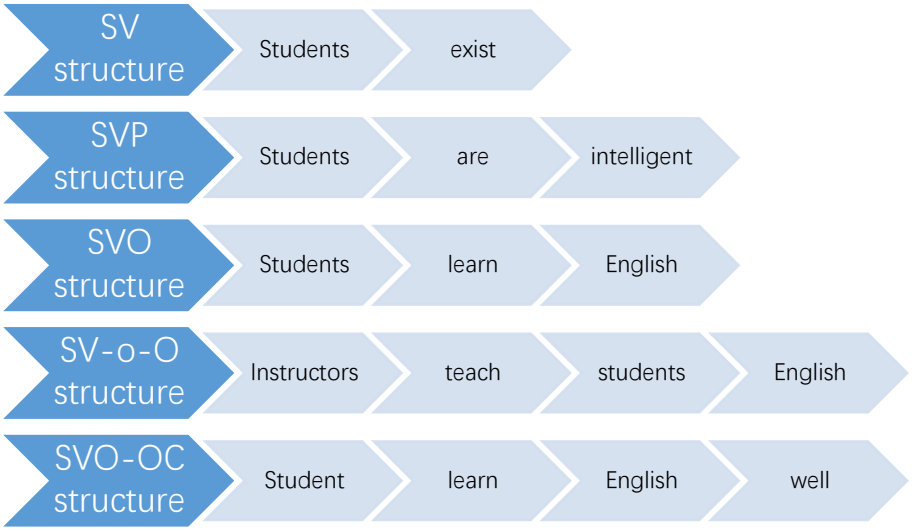

Figure 1. Five Basic Structures of Simple Sentences in English

Now this is a fine system and nowhere as bad as it might look like. Yet, in all possible ways it is still a complicated system and we shall try to thin it following similar process in Syntactic Structure analysis. All simple sentences can be written, in this case, as a NP-VP structure, which will be used as the foundation for any further sequence building; and we now explore the rules of rewriting or deviations in English.

NP-VP: A sequence composes of a Noun phrase and a Verb phrase.

Now in order to obtain the so-called SV sentence, we need the rules to allow the “rewrite” of NP and VP as Nouns and Verbs. So that NP-VP could become a sentence like: Students study.

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Rule one: NP could be rewritten as any morphologically correctly constructed Noun.

Rule two: VP could be rewritten as any morphologically correctly constructed Verb.

These are very basic concepts and here we quickly list several other rules that would enable us to build all sentences under other four different basic structures.

Rule three: VP could be rewritten as a linking verb and a predicative.

Rule Four: VP could be rewritten as a transitive verb and a NP.

Rule Five: NP could be rewritten as two Nouns.

Rule Six: NP could be rewritten as a Noun and an adjective phrase or adverb phrase.

Figure 2 shows this process in a more direct measure.

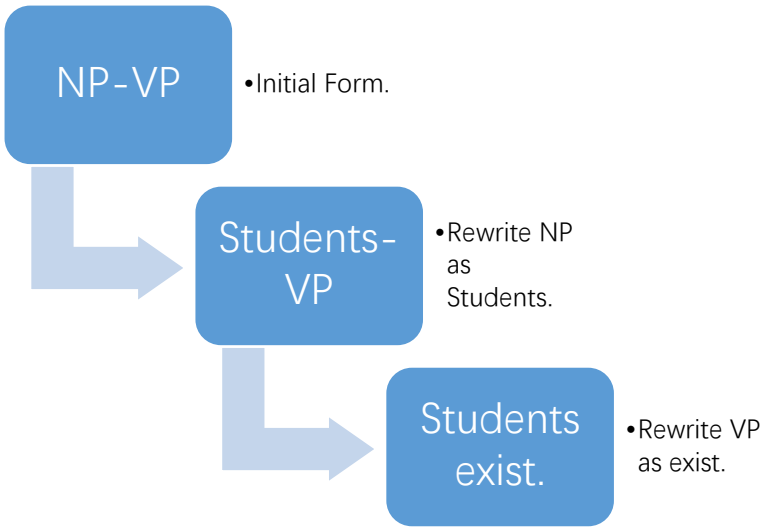

Figure 2. Using rewriting rules to compose a sentence

These separate rules, or postulates, or theorems, along with all the existing rules of rewriting, are the collectively the syntactic Grammar of English concerning Simple Sentences building. Ideally, the language of English as limited to the Simple Sentences would be viewed as the set of all possible combination of morphemes created under this rule. This is essentially the fundamental system used by Chomsky in syntactic analysis at first and before making any use of it, we shall do the same to Mandarin and Japanese Simple Sentences.

While modern Chinese has a confusing morphological system, with many arguing the very existence of Chinese morphology, on a syntactic level, it has similar sentence order as English. The four Simple Sentence Structure are:

SVO Structure: Similar to English.

S-ad-VO Structure: An adverb is added, and it is always located before the object.

S-ad-V-at-O Structure: Adding an attributive before the objective.

S-ad-VCO Structure: A complement is placed behind the verb.

Figure 3 shows the examples of these structures and due to certain limitation they are shown with English words and Chinese sentence structures.

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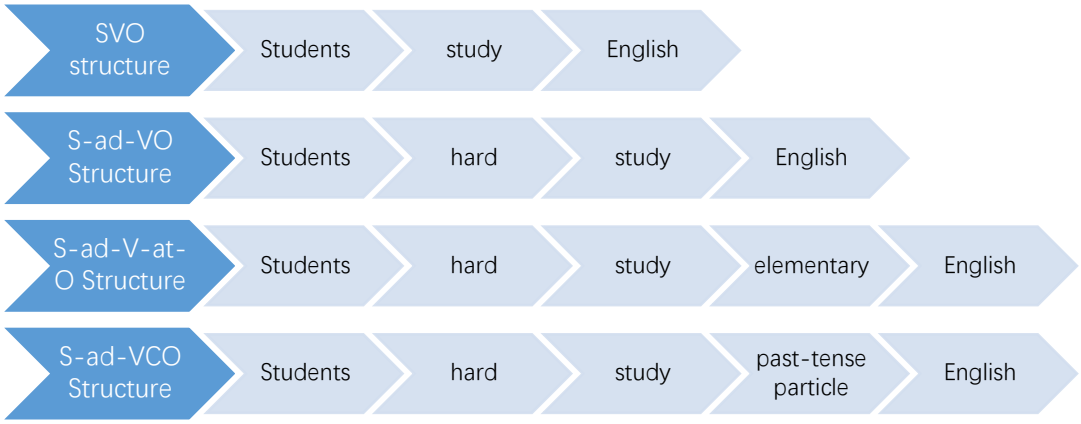

Figure 3. Four Basic Structures of Simple Sentences in modern Mandarin, shown in Chinese sentence order with English words

Japanese has different sentence order, and the four basic types are sometimes named as: Determination Sentence, Description Sentence, Existence Sentence and Declaration Sentence.

Determination: Something is logically similar or equal to another.

Description: Something shares certain features.

Existence: Something exists.

Declaration: Declaration of an action.

Figure 4 shows the examples of these structures and due to certain limitation they are shown with English words and Japanese sentence structures.

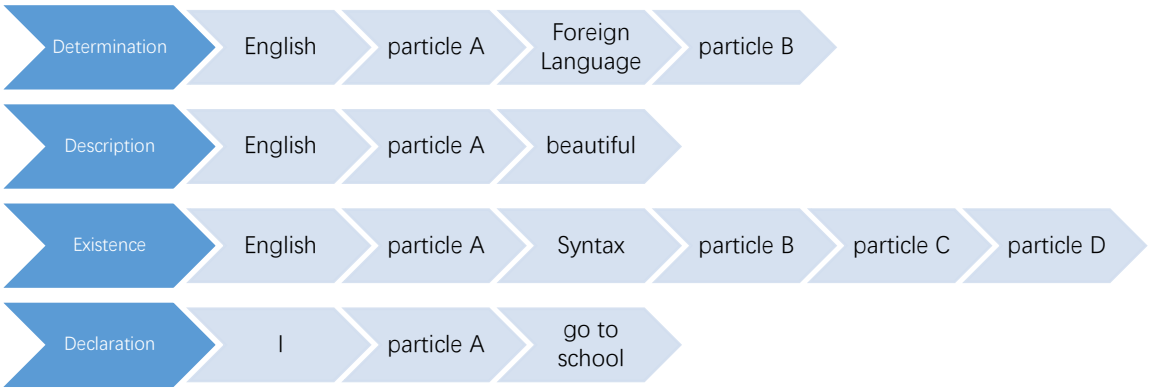

Figure 4. Four Basic Sentence Structures of Japanese, shown in Japanese sentence order with English words

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Now, the methods we used to decipher the English Syntax concerning the Simple Sentences will help building a link between all these languages by presenting grammar in the forms of rules of rewriting the NP-VP sequence.

Let us consider the Sentence "English is simple." It is crystal clear how to write it in English, as we have already explained that English has "SVP structure", which allows its speakers to use the structure of "Something be something" in this occasion. In Japanese, we have a different but equally understandable process of composing this sentence: It is a description; thus, it uses the structure of a Description sentence. English is the Subject; it is located at the beginning. Simple is the feature that English has, it is located in the second position. These are traditional ways for language learners to create sentences.

However, should one use the similar method in Mandarin, one would find it difficult. Naturally, one cannot simply replace each word of the sentence with the morphologically correct Chinese word convoying same or similar meaning, as the sentence structures used in both English and Japanese are unique and not grammatically correct in Mandarin. "English is simple" is not a correct sentence understood by common Mandarin speakers. It is also difficult to find a Chinese sentence structure functioning in the similar fashion, because there is no corresponding sentence structure to be used directly at all. This clearly creates problem, because the sentence "English is simple." is a logically correct expression. It convoys what might be called universal human logic and is understandable for English speakers whose Native Language Mandarin.

Theoretically, a multi-lingual speaker should be able to translate most of the information in the said sentence into Mandarin. And practically, many obviously are able to. Yet, traditional grammar education here is blocking the understanding of less experience learners: This is exactly the place where viewing grammars as rules of rewriting started working. In English, we have the following process of building it grammatically correctly: First there is NP-VP. Then according to Rule one, we rewrite NP as a noun, "English." According to Rule three, we rewrite the VP as "be" and "simple". Thus, the English sentence is completed. In Mandarin this time, we would apply a similar rule defining how to rewrite VP in its grammar: VP in Chinese could be rewritten as an adverb and a predicate. Thus, instead of searching for a proper structure, the learner could start to construct the sentence in Mandarin following this perspective of replacing elements in a sequence. He would easily be offering a sentence like "English very simple" or "English relatively Simple", while knowing this is as close as he can get to.

5. CONCLUSION

Summarizing the possible influence of Generative Grammar Theories in language education: It builds up students' confidence as well as instructors' expectancy. Its research methodologies allow students to build language abilities especially grammar abilities based upon the rules allowed in the target language, rather than simply the pre-set combinations given. While arduous work awaits to actually design a practical teaching plan on the idea, one would be safe to say that it might just be worthy of the time.

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