Some Thoughts on Universal Grammar and Language Diversity and Their Implications on SLA

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Abstract: *This paper is based on a review of the article the myth of language universals: Language diversity and its importance for cognitive science. The reason for choosing this article is that it is an unprecedented and powerful refutation to the Universal Grammar (hereinafter referred to as UG) put forward by the influential leading figure in the field of linguistics- Chomsky. Once published, this article caused a sensation and attracted a lot of peer commentaries, with both praise and criticism. This article is no doubt a huge challenge to UG, but UG as one of the most influential linguistic theories, which dominates linguistic field for several decades, is not without merits. Therefore, this target paper will analyse and compare these two theories, and try to gain some insights to promote Second Language Acquisition (hereinafter referred to as SLA) based on the two theories.*

Keywords: *Language Diversity, Universal Grammar (UG), Second Language Acquisition (SLA)*

1. Introduction

In the article The myth of language universals: Language diversity and its importance for cognitive science written by Nicholas Evans & Stephen C. Levinson (2009)[1], the two authors summarize decades of cross-linguistic work by typologists and descriptive linguists to justify the amazing diversity of linguistic structures and challenge the long-standing and authoritative Universal Grammar put forward by generative linguists led by Chomsky, who hold that the differences between languages are superficial and if the languages are abstracted in terms of forms, those differences between individual languages will be lost. The article begins with a forceful opening, "Languages are much more diverse in structure than cognitive scientists generally appreciate. A widespread assumption among cognitive scientists, growing out of the generative tradition in linguistics, is that all languages are English-like but with different sound systems and vocabularies." (p.429). Then, in the rest parts of the article, E&S provide ample evidence and a great number of specific language examples which do not comply with UG so as to support their propositions of language diversity.

2. E&L's Main Points for Language Diversity and against UG

First and foremost, E&L demonstrate language diversity from the following dimensions: sound inventories, syllables, morphology, syntax and word-classes and semantics which correspond to the classifications in UG respectively so as to contradict the conceptions in UG one by one. One counter-example of sound inventories is the sign languages of the deaf which do not possess sound systems at all. Then as for syllables, the example of VC (vowels consonants) structure of syllables demonstrated in Arrernte is given to object to the default "CV" (vowels consonants) universal in UG, which claims there is a universal preference for CV syllables over VC syllables among all languages, thus shaking the stance of the absolute "CV" syllable universal. In terms of the morphology, its diversity is conspicuous only if we pay little attention to our own language—Chinese. The Chinese language lacks all the inflectional affixes of person, number, tense and aspect as well as word derivation while its counterpart Indo-European languages possess all of these inflections and derivations. When it comes to syntax and word-classes, the universal classification of word-classes by "big four"-nouns, verbs, adjectives, and adverbs can be replaced by other types of major word-class: ideophones, positionals and coverbs in some languages. And this variability in word classification definitely dilutes the plausibility of UG. As to semantics and the perspective that language is a translation of innate and universal mentalese, many counter-examples are mentioned to prove that instead of being merely a translation or explicit expressions

of mentalese, languages reflect cultural and ecological differences.

To be followed, they move on to argue that "the emperor of Universal Grammar has no clothes" (p.438) by quoting Greenberg (1986, p.14) [2] "assuming that it was important to discover generalizations which were valid for all languages, would not such statements be few in number and on the whole quite banal?". And even these few generalizations can still be contradicted by some distinctive languages. Then with respect to the default statement about grammatical subject as a great idea, Dyirbal act as a contradictory example for it acquiescently regards subject as the pivot. Closely following this, the universality of constituency of language is refuted by introducing Virgil and Jiwarli as representatives of dependency-based syntactic structure. At last, recursion in syntax is also considered untenable by referring to languages like Biniji Gun-work whose embedding is in morphology rather than syntax and Piraha which lacks subordination and possessives. They then conclude that the generative power can also be found in semantics or pragmatics rather than syntax.

What interests me most is the content of section 7 (p.444) in which E&L put forward a new solution to solve the contradiction between the common biological foundation of human language and the diversity of different languages. They proposed the cognitive and cultural coevolution model in which biological evolution and cultural evolution are independent of each other and interact with each other. This twin-track model provides a mechanism for the biological evolution that tries to adapt to the cultural environment. The differences of language can be explained through the cultural diversity. Like the evolution of biological species, the process of language diversification and hybridization is a historical process and follows the laws of human biology. The coevolution model can help rebuild language family tree, identify structure characteristics of each side, and retrospect the original source language. Languages keep changing unceasingly, with the relatively stable state replacing the unstable state. The stable state is the product of the interaction among culture, communication, cognition and language processing constraints etc., in which cultural factors affect the direction of language change. Evolution and population biology research perspectives can better explain the typical and atypical features of languages and this kind of explanation relies on the process of language formation rather than the innate brain device.

In the conclusion part, E&L summarize their main ideas from the following aspects. Firstly, from a biological point of view, linguistic variability is a special property because no other animal communication system exhibits such variability. Secondly, the diversity of languages has evolved in historical, cultural and geographical environments to a large extent. In addition, many factors, such as the human brain, language organs, and functional and cognitive constraints on communication systems, all play the role of selectors in the process of language evolution. Thirdly, language diversity is represented by archetypes, collections of features and family similarities, rather than absolute possible and impossible language types. Fourthly, in the long history of biology, the biological basis for language has evolved only recently. Human language organs such as the brain, mouth, and tongue are responsible for language as well as other functions. Fifthly, the task of linguists is to study human cognitive abilities and how the same or similar biological basis gives rise to linguistic and cultural diversity.

After a heated debate among the linguistic field, E&L received both criticism and praise among fellow linguistics. They made a final conclusion that in terms of language, Chomskyan Linguistics usually acquires corpus by intuition and the corpora used are quite limited, while Diversity Linguistics display extensive language facts with the help of corpus, typology material database, multimedia so on and so forth. With regard to the theoretical model, the former proposes that the structure of one language can be directly applied to another language on the basis of UG hypothesis, while the latter suggests analyzing one language alone first, then making cross-linguistic comparison with other languages. Furthermore, the former argues that there is an innate principle dedicated to language in human brains, whereas the latter doesn't agree with this point of view. The former seeks inner and structure-based mechanism to analyze languages, while the later appeals to functional, practical and historical factors to explain languages.

3. Reflections on UG and Language Diversity

According to the above analysis, the biggest divergence between UG and language diversity is that the UG principle in generative linguistics holds that language universals can be derived from existing languages, even from a single language, and can be further revised and improved through the language facts, while the language diversity principle in typological linguistics believes that the language universals can only be found by summarizing cross-language facts and that verifiable and meaning

language universals rarely exist. And from the publishing of this article, the dispute between UG and language diversity never stops.

But in a broader sense, there is no irreconcilable contradiction between UG and the co-evolution model put forward by E&L [3]. Because E&L acknowledge the biological basis of language and include biological evolution in the co-evolution model, and Chomsky has also long believed that there are close connections between psychology, linguistics and biology, and proposed to apply Darwin's theory of evolution to language study [4]. Only that UG puts more emphasis on biology, while language diversity pays more attention to culture.

Both UG and language diversity theory have merits and deficits. Chomskyan Linguistics attempt to maintain the long-established theory for decades, and deduce abstract theoretical model through intuitive corpora. Its core UG theory is established on the basis of assumptions or minor universal language, and these assumptions need to be tested and verified by more cross-language inspections, brain science researches, and nerve linguistics researches. For example, whether there is a specific area in human brains to deal with language function, whether language area is separated from other ability areas in the brain, whether the child was born with the language acquisition mechanism, and if there is such a mechanism, how to connect it with language function, and so on. But with the change and progress of languages, this theoretical model has been changing inconsistently, which makes people fail to reach consensus. Diversity linguistics focus on the differences of language and rich, authentic linguistics corpora and can keep track of the new progress of languages, but it lacks of unified theoretical framework. With the emergence of more languages, some language phenomenon cannot be described and explained under the existing theoretic frameworks, therefore, these frameworks should be revised or new frameworks should be put forward to be more applicable across languages.

4. Implications On SLA

Just as I mentioned above, both UG and Language Diversity principle have strengths and weaknesses. But from my perspective, the main purpose for us linguistic researchers or language teachers is to find solutions or useful tips for language learning, no matter which sides we take or which opinion we support. Only if they have some reference for promoting or accelerating language learning, they can be called good theories. Therefore, both UG and language diversity can give us some implications on Second Language Acquisition.

4.1 The Implications of UG On SLA

Although UG has long been criticized for its abstractness, complexity, its exclusively concentration on innate devices, its totally ignorance of the social and cultural contexts, its applying methods from logic and mathematics to analyze language, and neglecting the flexibility, adaptability and practicability in real life, but it still has some merits and redeeming features that cannot be replaced by other principles.

Initially, UG helps us to generalize some distinctive features and properties of all languages so that we will not feel frustrated and pressured when facing enormous amounts and large varieties of languages all around the world. And there is a tendency for human mind to generalize rules and orders to get a better understanding of what is to be learned. So, when we are going to learn a new language, we may not at a total loss, because there are at least some common features in this target language compared with our native language.

Secondly, though some claimed universal principles do not apply to all languages, the universals in phonology, in my view, can hold water. A case in point is the universal application of the International Phonetic Alphabet, which to some extent accelerates our acquisition of the pronunciation of a specific language by comparing these phonetic elements with those of our native language.

Thirdly, UG emphasizes the triggering function of language experience or input that can facilitate learning. The triggering mechanism is beyond question very useful for first language acquisition. Children use this mechanism to quickly acquire their mother tongue and can deduce sentences they have never heard of in a first few short years of life. But whether UG also applies to older second language learners remains a question. Because if UG works for second language learning, then most of the L2 learners will eventually achieve more or less the same level of proficiency or final state as the L1 native speakers do, as long as there is enough language experience or input to activate their underlying system of UG, while in fact, there are some people who live in the country where target language is spoken for many years but still cannot speak target language fluently and accurately. There are also some people

cannot be as successful as other L2 speakers even though they are under similar circumstances and receiving similar language input.

4.2 Implications of Language Diversity On SLA

In their article, E&L emphasize cultural and social factors when account for language diversity. They advocate to move our focus from innate mind to intricate social artefacts. This point of the view accords with the Sociocultural Theory put forward by Vygotsky[5] , which emphasizes interaction with other people in language learning process, and may give us some insights on second language acquisition.

Firstly, we can not deny language diversity, for just as there is no two same leaf in the world, there is no language exactly same with the other. Even though there exists a general property of feature shared by all languages, when considering the cultural and social aspects, this universality may seem implausible. In addition, there always exist some languages which do not abide by the claimed aspects of universals as listed in the article such as in syllables, morphology, syntax, semantics, linguistic universals, syntactic constituency and recursion in syntax.

Secondly, as for the practical function, language diversity overtakes UG in second language acquisition. Because the ultimate goal of whether we teach a language, conduct linguistic researches or try to find language rules is to help language learners to use the language in authentic context rather than giving them some abstract and obscure principles regardless of the social and cultural contexts as UG does. Unlike mathematics and other subjects, languages are born to be used. They should be used to interact with people under certain cultural and social contexts. We cannot treat language as a set of abstract rules within our brain, because the UG principle which can be used to interpret some phenomena in L1 acquisition may not be applied completely in SLA. A case in point is that Yang Xiuzhen, also known as YueLiang Mama, who was of low-level literacy and began to learn foreign languages at the age of 51, picked up 11 languages through ample amounts of interaction with foreign tourists. She did not know any universal principles, but only by frequently and intensively interacting with and imitating the target language speakers, she creates the cultural and social contexts of language learning, thus facilitating her foreign language acquisition. Another case in point is that a person who lives in the country where the second language is spoken may achieve higher language proficiency easily than a person who study a second language in his home country for many years, because the L2 learners who lives in the social and cultural contexts of target language get more opportunities to interact with the local people and immerse in the local culture, thus facilitating their language acquisition. One recent study reported in Nature found that cultural evolution, not the brain, drives language development, which corresponds to our analysis above.

5. Conclusion

In summary, UG put forward by generative linguists like Chomsky tends to explain languages through internal mechanism, emphasizing the triggering function of input and ignoring the use of language in real contexts, whereas language diversity proposed by language typologists like E&L tends to explain language through external factors, emphasizing the cognitive and cultural evolution of language and focusing on the role of contexts. The task of generative linguists is to explain language facts, while the task of language typologists is to record language facts. Both tasks are important for language researches. If we say these two theories are trying to answer the question why languages become what they are now, then the former tries to seek the answer with respect to the results of language computing or evolution, i.e., the current situation of language; and the later tries to answer the question in terms of how biological evolution and cultural evolution, through interacting and coordinating with each other, jointly but independently lead to language differences. [6] To be specific, biological evolution generates language diversity and cultural evolution maps the actual forms of languages to multiple interacting activities.

Personally speaking, on the one hand, I appreciate the innate capacity or the language mechanism emphasized in UG and its interpretability for the logical problem of language in first language acquisition, while I do not quite agree its claimed universal rules that can be applied for all of the languages, for the reason that languages have social and cultural attributes, and we cannot truly acquire a second language without referring to the social and cultural contexts of the target language. Perhaps there does exist some rules that seemingly can be applied to most of languages, but when we take specific cultural and social factors into consideration some delicate variations, even not so distinctive, may occur. On the other hand, I am greatly illuminated by the language diversity and the biological and cultural co-evolution model put forward by E&L, for it provides an important reference for second language acquisition. As for SLA, to

know more about the culture of the target language and to interact more with target language speakers, cannot guarantee absolute success in language acquisition, but it can definitely accelerate the language acquisition process.

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