

## The Nature of Universal Grammar and Language Acquisition

Ken-ichi Ōno

Universal Grammar (UG) has undoubtedly offered, and still continues to offer new and crucial insights into both L1 and L2 acquisition research. It has also helped in the understanding of language and the mind in general although not a few theorists are skeptical about the validity of UG. The linguists participating in the development of a generative grammar have taken notice of the common properties among the different languages (=linguistic universals) and have been convinced of the possibility of establishing a common system applicable to all languages (=Universal Grammar). From the Chomskyan viewpoint, these common linguistic properties which make up Universal Grammar are inherent in the human mind (Ellis, 1990). Those working in a Chomskyan framework, thus, posit that this innate language knowledge enables a child to learn the grammar of his mother tongue in a comparatively short period of time despite the insufficient input data.

To Chomsky, the study of language and language acquisition is a matter of biology in the sense that he postulates a "mental organ" that governs human language (Cook, 1991). The language faculty may be thought of as one of the mental organs, that is, the "language organ" which is genetically endowed with a set of principles and rules that apply to all languages, namely, Universal Grammar—the logic organ, the mathematics organ, and the commonsense organ are other conceivable "organs" in the mind. By studying the nature of UG, therefore, we may deepen our understanding about language and language acquisition.

This paper aims to get an overview of UG theory at present as well as its theoretical background (because UG is not a complete theory but is under constant development) and consider the consequence of the theory on language acquisition research. Before discussing UG theory, we should also take a look at other language theories which concern linguistic universals, in relation to language acquisition.

### LINGUISTIC UNIVERSALS

Whereas Universal Grammar seeks to find linguistic universals by means of the thorough investigation of a single language, a typological approach attempts to identify

“universals by examining a wide range of languages from different language families in order to discover what features they have in common” (Ellis, 1990: 191). The typological approach claims that the universals identified in this way, which are termed *typological universals*, are freer from the bias “that might result from concentrating on a single language or family of languages” (Ellis, 1990: 194).

Among the three kinds of universals, UG theory is concerned with two types, namely, *substantive* and *formal*. Substantive universals are actual linguistic elements and constructions such as a number of fixed phonetic features and certain syntactic categories (noun, verb, subject, object, etc.). These universal characters are independent of any particular language. They “do not necessarily occur in all languages, but they are available to all languages” (Richards, et al., 1985: 161). It is thus claimed that, for example, each language uses only a part of a universal set of sounds. Formal universals are of a more abstract sort. They are the types of grammatical rules that all languages must have. The long effort of a generative grammar to formulate the principles applicable to all languages—such as the constraints in question formation—can be described as the search for formal universals. Following this tradition, UG seeks to explain the whole of formal universals and then to become a complete linguistic theory made up of both formal and substantive universals.

In the typological approach the third type of universals known as *implicational universals* is distinct from substantive and formal universals. If the presence of one linguistic property entails the presence of some other property or properties in a language, it is called an implicational universal. Gass (1989) states that perhaps the most widely discussed implicational universal is the Accessibility Hierarchy for relative clauses. The basic idea is that “we can predict the kinds of relative clauses a given language will have” (Gass, 1989:513). According to the grammatical function of the relative pronoun, the hierarchy for relative clauses is shown as below:

SU > DO > IO > OPREP > GEN > OCOMP\*

The hierarchy indicates that “if a language has a relative clause type X, for example, indirect object, it will also have any relative clause type higher on the hierarchy or to the left of that type [that is, subject and direct object relative clauses]” (Gass, 1989: 513). And once we know what the lowest relative clause type is in a particular language, we can tell all other types.

The weaknesses of typological universals emerge when it comes to dealing with exceptions. For example, the claim that languages with subject-object-verb word order also have postpositions has exceptions, such as Persian (Ellis, 1990). In the same way, although the Accessibility Hierarchy holds true for many languages, there are exceptions (Gass, 1989). The problem is, then, how we should evaluate the importance of these exceptions. When can we treat an exception as an exception and when should we regard it as a counterexample to refute the premise? In other words, with how many and what

sort of exceptions can we still safely make a linguistic generalization? Thus it can be said that the prediction the typological approach makes on language learning has only relative importance.

Gass (1989) takes up *processing universals* in addition to the linguistic universals identified by Universal Grammar and the typological approach. Since processing universals have been recognized from a psychological perspective rather than a purely linguistic perspective, they cannot be discussed on equal terms with the other linguistic universals. It is known that in the process of interpreting sentences, speakers use some cues. Native speakers of English, for example, use word order as a primary cue in determining which lexical element is the subject and which element is the object. They also depend on other cues such as semantic knowledge, animacy criteria, and the morphology. Speakers of other languages use cues in different ways. For example, “Italian, in which word order is more flexible, relies more heavily on morphological agreement as well as on semantics and pragmatics” (Gass, 1989: 519). In the case of Japanese, it is case-marking that plays a major role in determining grammatical relations.

Through several studies of second language learning, it has been generally acknowledged that second language learners, irrespective of their native and target language, favor animacy as a primary cue. Thus, animacy cues are identified as universal properties, or processing universals in the field of language learning research. As mentioned above, in a strict sense, the approach of processing universals goes beyond linguistics. And it can also be said that this approach concerns the issues of performance rather than those of competence. In this sense, those who take interest in processing universals are on a different track from Universal Grammar theorists.

## THE LANGUAGE FACULTY

The basic premise of Universal Grammar is that the language faculty is inherent only in the human species, forming part of its biological endowment. Chomsky (1988a) maintains this as follows: “One is that language appears to be a true species property, unique to the human species in its essentials and a common part of our shared biological endowment, with little variation among humans apart from rather serious pathology” (2). This innateness argument is based on the observations that the child possesses quite specific language knowledge that cannot be conceivably taken from his or her experience. The a priori language knowledge ranges from phonology to syntax, to semantics. For example, in the realm of phonology, Chomsky explains that the knowledge about whether a certain string of sounds, for a language, is possible or not belongs to the innate language faculty (1988a: 25). Although native speakers of English have not heard either string of sounds, *strid* or *bnid*, they know by nature that *strid* is a possible lexical form, but *bnid* is not possible in English.

In the case of semantics, Chomsky points out that speakers have no difficulty in interpreting the different meanings of a word depending on a context: such as an abstract

versus a concrete meaning of the word *libro* (1988a: 28). As for syntax, there arises the issue of children's intuitive knowledge about structure dependence, which I will mention later. Chomsky argues that surely none of this fundamental linguistic knowledge is learned through instruction or relevant experience. This knowledge is one of the properties genetically endowed for human beings.

Then, how should we understand the claim of some researchers that they succeeded in teaching language to another species? It is well known that various attempts have been made to teach a chimpanzee or a gorilla sign language to a level where they can manage to use some of its system. Are these attempts to be considered evidence to "refute Chomsky's claim that the language faculty is species-specific" (Cook, 1991: 73). From the viewpoint of Universal Grammar, an objection as follows is made:

the languages involved [in the ape's learning] do not contain anything resembling the principles of UG; whatever the ape has acquired, it is not core grammar. The ape's knowledge might be peripheral or it might be functional knowledge of how to achieve things through questions but it is not language knowledge as a UG system. (Cook, 1991: 74)

To the Chomskyan, language is composed of the principles (and parameters) of UG, so if something does not resemble UG, it cannot be regarded as language. As long as the apes do not comprehend core grammar, they cannot be said to learn language even though they may obtain some peripheral knowledge of the means to get things done. (The distinction between *core* and *periphery* in UG theory will be discussed later. Here it should be noted that UG only accounts for the core.) To illustrate the point, Chomsky's following analogy with teaching human beings to fly is quoted: perhaps "the distinction between jumping and flying is arbitrary, a matter of degree; people can really fly, just like birds, only not so well" (Chomsky, in Cook, 1991: 74). Chomsky negates the possibility that the apes might have the language faculty because, unlike children, they do not "pick up" nor develop language for themselves. Whereas the child can acquire language without any controlled instruction, the apes must be all taught whatever they are to learn. This fact leads Chomsky to the following conclusion:

The language faculty confers enormous advantages on a species that possesses it. It is hardly likely that some species has this capacity but has never thought to use it until instructed by humans. That is about as likely as the discovery that on some remote island there is a species of bird that is perfectly capable of flight but has never thought to fly until instructed by humans in this skill. (Chomsky, 1988a: 38)

It is a matter of course that the notion of the biologically endowed language faculty should make us look at language acquisition from a biological perspective. In the Chomskyan view, acquisition of language is not quite the same as other types of learning. It is not merely to absorb information, as in history or geography, from outside the

organism. It is also different from developing some specific skills such as playing the violin or typing. According to Aitchison (1978), while “direct teaching and intensive practice have relatively little effect” on biologically triggered behavior (that is, language acquisition), “in activities such as typing or playing tennis, a person’s achievement is often directly related to the amount of teaching he receives and the hours of practice he puts in” (74).

Language acquisition is, above all, internal development. It is compared to the growth of a plant that has its entire potential in the form of a seed from the start. It is true that the environmental help is needed for both the plant growth and language acquisition, but, from the beginning, the entire possibility to mature is inherent in the seed and in the genes respectively. “In certain fundamental respects we do not really learn language; rather grammar grows in the mind [according to a preset biological clock]” (Chomsky, in Cook, 1991: 73).

As we know, in order to support his innateness argument above, Chomsky (1965) has invoked the rationalists like Descartes and Leibniz. Some linguists seem to be skeptical about the purity of his motive for quoting these authorities of the 17th century. Tanaka (1983) critically argues that Chomsky did not conceive his ideas as a result of the serious study of Descartes or Leibniz, but he got the ideas first into his head and then, in order to give them prestige, made use of the famous philosophers. Tanaka continues that it looks as if these classics were an advertisement for a commodity called Chomsky’s theory. However, those who agree with Chomsky seek to assess his position compared with other rationalists. Lyons (1991) first points out that since Chomsky was trained himself in the empiricist tradition, he “is well aware that his [rationalistic] notion of the genetic transmission” of the language faculty will be criticized by “many philosophers and scientists as absurdly fanciful” (136-37). Chomsky, continues Lyons, then questions our contradictory attitudes toward animals and humans in terms of the genetic transmission. Whereas we accept without question the biological view of the genetic transmission in the case of non-human species, we do not think it permissible to explain, from the same genetic standpoint, human behavior including the acquisition and use of language:

‘The empiricist view is so deep-seated in our way of looking at the human mind that it almost has the character of a superstition.’ After all, we do not accuse the biologist of unscientific mysticism when he postulates the genetic transmission and subsequent maturation of the quite complex ‘instinctual’ behaviour patterns characteristic of various species. Why should we be so ready to believe that human behaviour, which is demonstrably more complex and more flexible, *must* be accounted for without the postulation of certain highly specialized abilities and dispositions (to which we give the name ‘mind’) with which we are genetically endowed and which manifest themselves, in the appropriate circumstances, at a certain stage of our development? (Lyons, 1991: 137)

Chomsky is a rationalist or “mentalist” like Descartes in the sense that he believes that

the workings of the “mind,” unlike those of the “body,” are not determined by “external stimuli or internal physiological states.” Chomsky is thus opposed to mechanistic determinism, particularly behaviorism. However, he is somewhat different from Descartes and other mentalists in that he does not think the distinction between “body” and “mind” absolute. Rather, Chomsky predicts that the distinction will be dissolved as science further develops so that “the concept ‘physical’ has been extended step by step to cover anything” (Lyons, 1991: 138), ultimately the properties of the mind as well. In this respect, Lyons claims that, unlike Descartes, Chomsky “might equally well be described as a ‘physicalist’” (138).

### SOME FUNDAMENTAL NOTIONS OF UNIVERSAL GRAMMAR

This section will first give some thought to Chomsky’s following statement: “Linguistics is the study of I-languages, knowledge of I-languages, and the basis for attaining this knowledge” (1988b: 47-48). I-language and E-language are the dichotomy Chomsky has been recently using in line with the traditional distinction between *competence* and *performance*. I(Internalized)-language and E(Externalized)-language partly (not exactly) correspond to competence and performance. As competence is “the speaker/hearer’s knowledge of his language” and performance is “the actual use of language in concrete situations” (Chomsky, 1965: 4), I-language is defined as “a system represented in the mind/brain of a particular individual” (Chomsky, 1988a: 36), E-language as a collection of sentences (in the actual use) “understood independently of the properties of the mind” (Chomsky, in Cook, 1991: 12). Chomsky’s concern is thus directed solely at I-language because his Universal Grammar aims to explicate the internal properties of the human mind rather than describe the external language samples.

If we look at these distinctions more closely, they are not necessarily straightforward. Competence, for example, is now used in two different senses: grammatical competence and communicative (or pragmatic) competence. While grammatical competence holds Chomsky’s original meaning in the dichotomy of competence and performance, communicative competence has been proposed to indicate other conceivable aspects of competence, that is, knowledge of the proper use of language. Those who first put forward communicative competence in the 1970s coined the term, criticizing Chomsky’s notion of competence. However, in accordance with Chomsky’s current terminology, they can be called E-language linguists that emphasize communication and behavior. That is to say, E-language includes communicative “competence” as well as performance, while I-language contains grammatical competence (Cook, 1991).

Lyons (1991) explains the competence/performance and I-language/E-language distinctions in relation to the Saussurean dichotomy of *langue* and *parole*. First we should note that, although we have dichotomies at hand, there are really three things to be distinguished, not two. We have the *language-system* which can be identified with Chomsky’s competence or with Saussure’s *langue*. Then there is the use of the language-system in concrete situations, and thirdly we have the product or products of the use of

the language-system. Lyons continues that Chomsky's performance, as we know, covers the use of language, but normally not the products of language-use. On the other hand, Saussure's *parole* is understood to refer to the products of language-use rather than use (or performance) itself. And thus if we use the term "text" for the products, we now have three terms—"language-system," "performance," and "text." Then, according to Lyons, when we take into account the difference between Chomsky's competence and *langue* in the sense that the former is mental and individual while the latter is social and supra-individual, Chomsky's new term I-language can be now defined as "the language-system that is stored internally (i.e., in the mind or brain) of the individual" (170). E-language, on the other hand, refers to performance and text, and also, though it is confusing, to "language-systems" in the Saussurean sense, that is, languages considered as social entities such as English, French, or Japanese. In conclusion, the Chomskyan linguists consider only I-languages as their research object since I-languages are "'real' in that they exist in the world (i.e., in the minds or brains of individuals)," whereas E-languages are "more or less indeterminate in structure and are of uncertain ontological status" (Lyons, 1991: 171).

*Structure-dependency* is one of the prime principles of language, or one of the formal universals as we have seen above, proposed by Chomsky (1977; 1988a). It is the notion that underlies the whole linguistic theory of Chomsky. This notion has led him to propound the idea that language is organized on two levels (i.e. surface and deep level) which are linked by transformations. By structure-dependency Chomsky means that our utterances are not produced merely by threading together sequences of words, but rather every sentence has "an inaudible internal structure" (Aitchison, 1978: 22). For example, when we derive the interrogative sentence 'Is [NP the man who is tall] here?' from its declarative form 'The man who is tall is here' (Haraguchi & Nakamura, 1992), we do not follow the simple linear rule called rule R: "Find the first occurrence of the verbal form [*is* in this case], and move it to the front of the sentence," but employ the correct rule, R-Q (the rule of question formation): "Find the occurrence of *is* that is the *main verb* of the sentence, the verb of its main clause, and place it in the front" (Chomsky, 1988a: 42-43). Otherwise we would get the ungrammatical sentence 'Is the man who tall is here?' instead of the grammatical one 'Is the man who is tall here?' As mentioned before, Chomsky attributes this fundamental linguistic knowledge to the child's innate properties. The child learning any human language knows:

in advance of experience, that the rules will be structure dependent. The child does not consider the simple linear rule R, then discard it in favor of the more complex rule R-Q, in the manner of the rational scientist inquiring into language. Rather, the child knows without experience or instruction that the linear rule R is not a candidate and that the structure-dependent rule R-Q is the only possibility. This knowledge is part of the child's biological endowment, part of the structure of the language faculty. It forms part of the mental equipment with which the child faces the world of experience. (Chomsky, 1988a: 45)

Chomsky (1988a; 1988b) uses the term “Plato’s problem” to refer to the issue of how we come to have such rich and specific knowledge when our experience is so meager and limited. In solving the problem, Plato, as Chomsky does now, denied that the human mind is blank in terms of knowledge at birth (Lyons, 1991). Some knowledge is innate due to the mind’s prior existence. Therefore, learning in such cases should be considered as the remembrance (“anamnesis” in Greek) of one’s knowledge in the previous existence. Experience or appropriate instruction could trigger remembrance. But Chomsky, of course, has no intention of applying Plato’s idea of “anamnesis” directly to his theory of language and language acquisition. Chomsky replaces Plato’s postulations of pre-existence and recollection with the modern notions of genetic transmission and environmentally triggered process of growth. Apart from such modifications, Chomsky’s idea is essentially a modern version of Platonic rationalism (Lyons, 1991). Because it is inconceivable that the child should create language knowledge “from the [impoverished] data in the surrounding environment,” the source of the language knowledge such as structure-dependency “must be within the mind itself” (Cook, 1991: 55). Chomsky conclusively states:

Centuries later, Leibniz argued that Plato’s answer was essentially correct but that it must be “purged of the error of preexistence.” How can we interpret this proposal in modern terms? A modern variant would be that certain aspects of our knowledge and understanding are innate, part of our biological endowment, genetically determined, on a par with the elements of our common nature that cause us to grow arms and legs rather than wings. This version of the classical doctrine is, I think, essentially correct. (1988a: 4)

### PRINCIPLES AND PARAMETERS

Universal Grammar is composed of *principles* which apply to all languages, and *parameters* which vary among the languages within the limits laid down by *principles*. In the process of acquiring a particular language, the value of each parameter is set through experiences in the particular language society. Thus, principles as well as the parameters specific to the particular language form the *core grammar* of the language. Core grammar is the central part, or the *unmarked* part of a language. Then core grammar and the *periphery*, that is, the language-specific rules and conditions, or the *marked* part make up the particular grammar of each language (Nakamura, et al., 1989). Unlike core grammar, however, peripheral rules, which are historical, neological, or accidental, are not conditioned by UG (Ellis, 1990). Thus, in the Chomskyan view, understanding the nature of language means exploring the properties of principles and parameters, and the mechanism of language acquisition (both 1st and 2nd language acquisition) can be explained in terms of how the value of each parameter is determined in a particular language situation, i.e. *parameter setting*.

One of the parameters often discussed is the *pro-drop parameter*. Italian and Spanish

are called *pro-drop* languages because they can have subjectless declarative sentences:

Piove oggi	Anda muy ocupada
* rains today	* Is very busy
It's raining today	She is very busy
(Hilles, 1986)	(White, 1985)

English, on the other hand, is a *non-pro-drop* language as we can see that the literal subjectless equivalents in the above examples are ungrammatical. Cook (1991) proposes three possibilities for the setting of the pro-drop parameter in the initial state of the child's first language acquisition:

- 1 The switch is in a neutral position; the child is equally prepared for pro-drop or non-pro-drop.
- 2 The switch is set to non-pro-drop.
- 3 The switch is set to pro-drop, the reverse position. (75)

In case 1, the child's interim grammar might have either setting for pro-drop. Children learning Spanish and English would set the parameter appropriately according to the requirements of their respective languages. In case 2, whereas children learning English, using the non-pro-drop setting from the beginning, would have no need to change it, children learning Spanish would have to change the initial non-pro-drop setting to the pro-drop, triggered by the data they get during the acquisition process. In the last case, it is children learning English who would now need to change their initial parameter setting.

Cook then cites Hyams's argument that "the third of the above alternatives is correct for pro-drop: children start from the setting for the parameter that allows null-subject sentences" whether they are learning Spanish or English (1991: 76). Hyams came to this conclusion from her analysis of children's language in which she found that English children in the earlier years produced null-subject sentences such as "Read bear book" and "Want look a man," which were not because of the children's limited capacity. Hyams regarded the presence of "expletives" such as *there* and *it* as the positive evidence from which English children would learn that their language is non-pro-drop and set the parameter switch away from its initial value. And Hyams assumed, says Cook, that the trigger of parameter setting in children's language acquisition was positive evidence alone rather than direct negative evidence, i.e., overt correction or indirect negative evidence, that is, the non-occurrence of null subject sentences in this case. Cook (1985) basically agrees with Hyams in this respect:

First language acquisition relies chiefly on positive evidence; the child apparently receives little direct negative evidence in the form of correction of syntax. . . . The importance of indirect negative evidence is difficult to assess, since it is clearly impossible to specify everything that the child *doesn't* hear. (4)

In second language acquisition, two hypotheses are tested with regard to the pro-drop parameter (White, 1985). In the case where adult native speakers of Spanish learn English, White postulates that the learners carry over an L1 parameter [+pro-drop] into their L2 parameter [-pro-drop], which leads to errors based on the L1. Secondly it is hypothesized that the three properties associated with the pro-drop parameter will be lost together as the learners progress with their second language learning. Those three properties are: (1) null subject, (2) subject verb inversion, and (3) “that-t” violations, of which (2) and (3) are exemplified below:

- |   |  |
|---|--|
| (2) [NPe]vendrá Juan.<br>will come Juan.<br>'Juan will come.' | (3) El tipo que dijiste que salió temprano.<br>The guy that you said that left early.<br>'The guy that you said left early.' |
|---|--|
- (Safir, in Flynn, 1987: 29)

White's study shows that the first hypothesis can be supported, namely that “having to reset an L1 parameter will cause problems leading to transfer errors”(1985: 58-59). But the second hypothesis is not upheld, that is, the loss of the first property (i.e., null subject) does not necessarily entail the loss of the other two properties of the parameter. In other words, the hypothesis that learners recognize these as a unified parameter is not substantiated. And this is taken as a negative example of UG's effectiveness to explain second language acquisition by Gass (1989) who does not appear to strongly support UG, while it is not clear how the result can be interpreted by the proponents of UG.

The *head-initial/head-final parameter* is another major parameter to be taken up here. English is *head-initial* because a head (an italicized part) precedes its complements whereas Japanese is *head-final* because the complements precede a head, as shown below:

English:

- 1) [*The child* [who is eating rice]] is crying.
- 2) [*The child drank the milk* [after he ate the rice.]]

Japanese:

- 3) [[Go han-o tabete-iru] *ko-ga*] naite-imasu  
'Rice-obj. eating is child-subj. crying is'
- 4) [[Kodomo-ga gohan-o tabete kara] *okasan-wa sooji-shita*]  
'Child-subj. rice-obj. eating after mother TOP cleaned up.'  
After the child ate the rice, the mother cleaned up.

(Flynn and Espinal, 1988: 94-95)

This parameter is also related to the property of anaphora, that is to say, the speakers of a head-initial language like English have a strong preference for sentences with forward anaphora such as 6) below, in which the antecedent precedes the pronoun rather

than sentences with backward anaphora such as 5) in which the pronoun precedes the antecedent:

- 5) When he saw the dean, the man fainted.
- 6) The man fainted when he saw the dean.

(Flynn and Espinal, 1988: 95)

On the other hand, the speakers of a head-final language, like Japanese, do not show a particular preference for sentences with either forward or backward anaphora. This was confirmed by Flynn's initial studies on learning English as a second language by Spanish (head-initial) native speakers and Japanese (head-final) native speakers. It was also found that it became easier for Japanese speakers to process head-initial sentences than head-final sentences in English as they reached the advanced level, which Flynn argued was due to the parameter resetting. Later it was thought that it might be another property of word order rather than the head-initial/head-final parameter which determined the preference of anaphoric direction. However, examining Chinese speakers whose language is head-final like Japanese but SVO (word order) like English in her new study (Flynn and Espinal, 1988), Flynn confirmed again the psychological reality of the head-initial/head-final parameter, that is, its relation to the property of anaphora.

#### UNIVERSAL GRAMMAR AND LANGUAGE ACQUISITION

From the viewpoint of Universal Grammar, the acquisition of both first language (L1) and second language (L2) is, as we have seen, primarily a matter of acquiring principles and parameters. In other words, UG principally concerns the core grammar within which the difficulty of learning linguistic features is assessed in terms of the scale of markedness. Language learners learn unmarked (or less marked) rules before marked (or more marked) rules, and it is after they have established a core grammar (unmarked) that learners begin to construct a peripheral grammar (marked) (Ellis, 1990). In parameter setting, for example, in the case of the pro-drop parameter, pro-drop rather than non-pro-drop is considered unmarked. All children start with a pro-drop setting and they keep it if the setting works, or they reset it to non-pro-drop if evidence of the language they are learning is against the original setting. As for L2 learners, they start with the parameter they use in their first language, and regulate it according to evidence of the second language. The problem here is that there is not really a unified opinion about the classification of markedness. White (1985), for example, does not agree on seeing pro-drop as unmarked.

UG imposes constraints on grammar construction in L1 and L2 acquisition. Because of these universal constraints which are innate, the child is exempted from testing every possible hypothesis through the input data. Also if it were not for such constraints of UG, the child would not be able to make a successful hypothesis testing, for it is argued that the child "does not meet enough negative evidence [from the environment] to reject

incorrect hypotheses” (Cook, 1985: 6). We do not observe *wild grammar* in children’s language, that is, children’s grammar by and large stays within the bounds of UG at any stage of development. The same is true with the interlanguage of L2 learners, which does not breach the limits of UG. When we see that the child is so successful in language acquisition, exposed to such intricate data without enough appropriate feedback, it does not seem to be unreasonable to postulate the universal constraints.

It is not an easy task to examine how UG plays its role in L1 acquisition because of a maturation problem or non-linguistic factors called *channel capacity* (such as memory capacity and general cognitive abilities). It is, however, more complicated to assess the role of UG in L2 learning because there is one more factor, i.e. an acquired first language besides UG and a target language (L2). I will finally touch upon Cook’s proposal (1991) concerning the relationship between UG, L1, and L2. Cook suggests three ways to get access to UG in L2 learning. The first is the direct access to UG in which “L2 learners may use the principles of UG and set the parameters without any reference to their L1 values” (182). UG is substantiated independently in L1 and L2. The L2 parameters are, therefore, neutral at first, which is different from the usual claims about markedness as mentioned above. The second is the indirect access in which L1 lies between UG and L2, namely, L2 learners supposedly take the L1 settings of UG as a springboard and utilize, initially, the principles and parameters of L1 in the same way in L2. The third is no access to UG, that is to say, L2 learning may make no use of UG. In this case L2 is related to other faculties of the mind rather than the language faculty (=UG). These three models are not mutually exclusive, but are considered to be realized in various combinations. To conclude, UG theory has been criticized for several practical reasons by the language acquisition researchers. Most criticisms are, however, from the viewpoint of what Chomsky calls E-language approach and in that sense, are off the point. UG, at least, is the only linguistic (i.e. syntactic) theory that has been paid serious attention to in the field of language acquisition research for the last few decades. Although I did not refer to the details of UG theory, the discussion of this paper may be enough to show its promising insights into both language study in general and language acquisition research.

#### NOTE

- \* SU = subject
- DO = direct object
- IO = indirect object
- OPREP = object of the preposition
- GEN = genitive
- OCOMP = object of the comparative.

Examples of these relative clause types are given below:

Subject	I saw the boy <i>who</i> is six feet tall.
Direct Object	I saw the boy <i>whom</i> you know.
Indirect Object	I saw the girl to <i>whom</i> you gave the book.
Object of preposition	I can see the table under <i>which</i> you put the book.
Genitive	That's the woman <i>whose</i> sister is an actress.
Object of Comparative	That's the man <i>whom</i> I am taller than.

(Gass, 1989:528)

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