

## On the Relevance of Universal Grammar in L2

**Malika Jmila**

Department of English, School of Humanities  
Ibn Tofail University , Kenitra, Morocco

### Abstract

There is growing evidence that Universal Grammar (UG) is heavily involved in second language acquisition (SLA). However, current research in applied linguistics still explores various issues in interlanguage, particularly the initial state (the representation that learners use to make sense of second language input). That is, do the properties of interlanguage come from UG or the first language (L1)? Does this count as access to UG? Does L1 grammar constitute the initial state? Does UG count as the initial state? In this paper, I will provide evidence from the production of Arab learners of English to support the fact that UG is undoubtedly involved in the development of L2, and to challenge the claim that UG is irrelevant in L2 acquisition. I will outline the evidence put forward in the published literature indicating that universal grammar principles shape the processes of acquiring a second language. More specifically, I will provide evidence from the linguistic behavior of Moroccan learners of English, showing that L2 learners transfer their pre-existing knowledge to the target language, which indicates that they indirectly pick up from UG, a cognitive move that can be considered as an indirect access to UG. However, I by no means claim that our understanding of the nature of UG itself is clear enough in any conclusive way, as more research should be conducted in this connection.

**Key words:** initial state, interlanguage, parameter-setting, second language acquisition, universal grammar

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## Introduction

The potential similarities in Second Language Acquisition (SLA) shown by subjects of various mother tongues have been the subject of serious debate in recent years (White 2003, Cook 2010, Parodi 2012). Linguists who have striven to tackle this issue have been concerned whether SL learners make errors similar to those made by children acquiring their native language or not. Such a conclusion has led many researchers to seek evidence so as to confirm that universals definitely exist in SLA. White (1985, 1986, op.cit) is the leading figure who has confirmed this issue, followed by a number of linguists such as Parodi (op.cit).

The purpose of this paper is to outline the evidence put forward in the published literature indicating that universal grammar (UG) principles shape the processes of acquiring a second language. It also provides further evidence in this regard from the linguistic behavior of Moroccan learners of English. The structure of this paper can be seen along the following lines. Section 1 summarizes the relevance of UG in SLA. Section 2 discloses the various pieces of evidence put forward in the applied linguistics literature, which indicate that UG cognitive processes constitute a fact of life. Specifically, it outlines the relevance of UG principles and parameters in SLA. Section 3 provides further evidence from L2 behavior of Moroccan learners of English, with a view to corroborating the fact that UG is clearly involved in L2 processing.

### 1. Relevance of universal grammar in SLA

White (op.cit:55) and Cook (2010) maintain that universal grammar (UG) is involved in the process of SLA. This innate ability which enables children to acquire their native language, White claims, can “explain and predict incidences of interference from the L1, so that language falls within the scope of explanations that are oriented towards linguistic universals”. This seems to support the claim that language transfer confirms the idea that UG exists in SL learning. But how can we prove that such a phenomenon exists in L2? Before tackling this issue, the theoretical construct of UG in L1 is outlined below.

#### 1.1 Universal Grammar in L1

Chomsky (1965:26) argues that UG consists of two types of universals:

- a- substantive universals,
- b- formal universals

The formal type includes fixed features such as the syntactic categories Noun, Verb, Subject and Object. The former type, on the other hand, is an abstract category which states possible grammatical rules. In other words, it is made up of certain means whereby grammars have to be constructed. However, the child still has to choose from the options available to him/her so as to suit the setting of his/her language.

Following Chomsky (1981b), it could be argued that UG consists of abstract and “linguistically significant principles” that entail all natural languages. It also determines the initial state of the learner's mind, namely his/her pre-linguistic state prior to being exposed to any language. In this respect, Chomsky (op.cit :7) points out that “in a highly idealized picture of language acquisition, Universal Grammar is taken to be a characterization of the child's pre-linguistic state.

Chomsky (1965, op.cit) argues that UG enables the child to acquire their native language easily and successfully. Once born, the child is exposed to an impoverished input data which do not suffice to form a basis for constructing certain grammatical rules. To solve this problem,

Chomsky, along with his collaborators, claims that any normal human being is born with abstract principles constraining the ways in which he/she can conceive language. These abstract principles are activated through a person's contact with the environment; it is this encounter of these abstract principles, UG, together with this person's experience that allows him/her to reach the steady state or competence.

This line of reasoning has found its echoes in the realm of second language acquisition. By way of illustration, Krashen (1980,1981, 1982) develops a model referred to as the "Monitor Theory", whereby the learner may attain the acquired competence. In this theory, Krashen aims at showing that there is another factor that may affect the learning process of L2, called the filter. More specifically, to reach competence of his/her LI, the child needs not only UG but also some clear cut evidence about a language s/he is in the route to acquire. In Krashen's terminology, the learner cannot reach the acquired competence unless s/he has acquired sufficient input. In other words, the learner has to learn the lexicon of his/her language, the words and their meanings so as to put his/her abstract knowledge into operation. This is done under certain hypothesis testing. He claims that the child builds up his/her knowledge of his/her L1 via a series of hypotheses which help him to convert his innate knowledge into the surface forms of his/her mother tongue passing through transformations. Thus, the child builds up his/her competence by "successive approximation, passing through several steps that are not yet English" (McNeill 1966: 61).

While acquiring L1, the child encounters certain types of evidence. Following Chomsky (1981b), the child has to face two kinds of evidence: positive and negative evidence. Positive evidence involves the actual sentence of a language. For instance, when an English child hears the sentence given in (1), he/she will automatically judge that English has subject-verb-object order. However, when an Arab child hears a sentence such as the one in (2), he/she will implicitly understand that Arabic has verb-subject-object order.

- (1) Mary loves John  
 (2) ?akal-at Fatimal-xubza  
 eat- past- fem Fatima-the - bread "Fatima ate bread"

In this respect, Cook (1988: 14) claims that "UG is crucial in the organization of the primary linguistic experience. UG determines the way the child will interpret and organize the language he/she is exposed to".

Negative evidence falls under the heading of two categories:

- direct evidence.
- indirect evidence.

Indirect evidence stands for the structure of a language that seems unfamiliar to the child because he has never heard such a construction before. For instance, an English child would find that verb-subject-object is a "strange" construction in English, and therefore, he rejects it. Thus, under those empirical findings, it is worthwhile mentioning that an L1 learner relies basically on positive evidence rather than on negative evidence because the child at an early stage of his/her acquisition receives "little direct negative evidence in the form of correction of syntax" (Brown and Hanlon 1970, cited in Cook: 1985).

## 1.2. Universal Grammar in L2

SLA has received much attention in recent years since SL research has proved to be an especially complicated endeavor due to the fact of understanding the various factors that might influence a language learner's performance while learning a second language. Such factors can be presented along the following lines:

- Native language
- Social variation
- Regional variation
- Age at which the learner is exposed to the foreign language
- Type of exposure to the foreign language.

Besides the factors just cited, Generative linguists' main interests center around the putative discussion whereby UG exists in L2, (Parodi 2012, White 1986, 2003; Cook op.cit, 1988, 1991, 1995, 2010, Tsimpli and Roussou 1991, Platt 1993, to name but a few). Their investigations lead us to raise such a question: Can we talk about UG in SLA?

It seems that we can. Since the errors which adult second language learners make resemble those made by children in the course of their native language acquisition, we can assume that both of them follow a similar, though not identical, process in learning. Increasing evidence indicate that language acquisition, first or second, depends mainly on the language faculty which all humans possess at any stage of their life. Therefore, it is worth noting that L2 learners might have access to UG either directly or indirectly through the first language. In this respect, Bley-Vroman, (1989: 42) points out that L2 learners follow the same route as those acquiring their L1. He takes it that "a consensus has developed during the last decade that the same fundamental process controls both the child's learning of a first language and the adult's learning of a foreign language.

To the extent that our assumption here is along the right lines, we are in a position to ask whether L2 learners start learning the target language from scratch or depend on their previous existing linguistic knowledge of L1. To confirm this assumption, it has been claimed by many linguists such as Broselow (1988) that SLA is a process which is governed by the properties of the two languages in question, namely the native language and the target language. Broselow (op.cit: 194) points out in this regard that "error patterns are associated with particular native language backgrounds; these errors provide some reflection of the grammatical system of the first language.

However, a difficulty arises when the structures of L1 differ from those of L2. So much so that we can predict the problems that L2 learners will face. Thus, properties which are identical to all or many languages can be easily learnt. On the other hand, language specific properties are difficult to learn since these are exceptions in some sense. A Moroccan student learning English as a foreign language, for instance, may encounter many problems, especially when approaching structures that differentiate English from his/her mother tongue, Moroccan Arabic (MA). In such cases, the learner will presumably pick up structures and patterns from his L1, i.e., he would resort to transfer. Despite this claim, it is worth stating that there are some aspects that cannot be transferred to the target language but rather they are dependent on L1. Such aspects are fully discussed in Cook (op.cit). Cook points out that "clustering of vocabulary" is not allowed to be transferred to L2, while "short term memory" is a type of capacity that is transferable to a second language.

In the light of what has been established so far, language transfer confirms that UG is involved in SLA. When the learner transfers from his L1, he indirectly picks up from UG. This can be considered as an indirect access to UG which satisfies our earlier assumption about the "indirect access to UG" mentioned above.

Having discussed the main issue of UG, let us turn our attention to discuss the other side of the coin, namely principles and parameters.

### 1.2.1. Principles and Parameters in Universal Grammar

UG consists of a set of principles and parameters that helps to explain both the acquisition and the learning process of a language. The current theories in LA are targeted at characterizing these principles and parameters to provide a more developed account of linguistic competence. This idea is advanced in Cook (1987):

While the principles of UG lay down the absolute requirements that a human language has to meet, the parameters of UG account for the syntactic variation between languages. English does not just instantiate UG principles; it also has particular setting for all the UG parameters (p. 37).

Principles are seen as a closed class. They do not vary across languages and their function is to describe the underlying grammatical system. For instance, all languages have lexical categories such as nouns, verbs, objects, etc. Thus, principles do not change from language to language. Their use, however, changes. Parameters, on the other hand, are considered as an open class because they can be remodeled. White (2003) takes it that the adoption of a particular parameter leads us to a range of consequences in the grammar. Whilst the parameters are thought of as "open", the possibilities of parametric variation are themselves constrained by UG.

It is worth mentioning that the learner is provided with parameters to be fixed. For instance, an L2 learner will have to specify the value of a given parameter, and say whether it has a plus or minus value. Each parameter might contain at least one or more variables, which are fixed via exposure to positive evidence discussed above in the sense of Chomsky (1981b). Once the parameter of any language is fixed, the innate structures will emerge and then will be set by the child acquiring such language. As implied above, the principles of UG will interact with those parameters which contribute to the determination of a core grammar.

The difference between UG and Core grammar is that UG couches the pre-linguistic state of the mind, whereby the parameters are still open, while core grammar is determined once the parameters are fixed. Following this argument, Chomsky (1986a) states that UG is "a system of sub-theories, each with certain parameters of variation. A particular (core) language is determined by fixing parameters in these sub-theories (p.2).

Chomsky implies that not all the rules children form constitute core rules, but there are some elements that are not constrained by UG (such as borrowings and history of language). Core rules, on the other hand, as Chomsky argues, are more general and they constitute the grammatical competence of the learner, which is "covered" by the principle of UG. Core rules are unmarked (this will be further elaborated below), while periphery rules are exceptional, i.e., they are marked.

It is worth noting that UG mediates between the language input and the grammar formed by the child. This assumption solves what is often referred to as "the Logical Problem of Acquisition" mentioned earlier in our discussion. To conclude this section, it is worth stating Chomsky's statement about the principles and parameters of a language:

What we "know innately" are the principles of the various sub-systems and the manner of their interaction, and the parameters associated with these principles. What we learn are the values of the parameters and the elements of the periphery (along with the lexicon to which similar considerations apply) (1986b, 150-151).

### **1.2.2. Markedness in SLA**

There has been much awareness of the development of a theory of markedness within syntactic theories in the recent inquiries in SLA because markedness has been one of the most-discussed paradigms in the language acquisition literature.

Central notions to the theory of UG are the notions of core and periphery. Core grammar is considered to be made up of unmarked features while periphery is made up of marked features. Indeed, this dichotomy between core and periphery raises the issue of the theory of markedness. Before indulging in our discussion, the concept of markedness deserves consideration.

Following Cook (op.cit), markedness stands for "a departure from the usual "neutral" form in one way or another". What has been mentioned above about the difference between core and periphery grammars will be elaborated in this section and related to language acquisition.

The distinction between core and periphery grammars is that the core grammar is unmarked since it is determined via the interaction of pre-linguistic knowledge and positive evidence. On the other hand, the periphery is marked because as we depart from 'the heart' of UG which entails core rules (unmarked features); the other acquired knowledge (periphery) becomes marked, since it is not defined by either any interaction of the principles of UG or linguistic experience. Such a peripheral knowledge has to be learned via both experience and positive evidence. On the basis of the theory of UG, it could be claimed that the unmarked features can be learned based on very limited evidence; whereas marked features require more evidence.

On the basis of the theory of markedness, it is assumed that children usually start acquiring the unmarked aspects of their mother tongue which comprise the core grammar of their L1. Via a positive exposure to language, the child starts resetting those aspects which prove to be more marked than others (Cook 2010). This explains the fact that he/she has to reset those parameters which are considered to be more marked in the language he/she is acquiring. To support this argument, Cook (op.cit) claims that the child prefers to learn 'unmarked' knowledge that conforms to Universal Grammar, rather than 'marked' knowledge that is less compatible with such grammar.

## **1. Evidence from Moroccan learners of English**

Jmila (1993) conducted an experiment aiming at testing the validity of parameter setting in L2 acquisition. Specifically, it tests whether the pro-drop parameter explains transfer in Moroccan learners of English or not. Besides, it challenges one of the hypotheses put forward by Clahsen (1990) and his collaborators that UG does not exist in L2.

The results obtained from two groups, i.e., the 6th and 7th form levels, where the 7th form represents learners of higher proficiency, whereas the 6th level represents the level of lower proficiency, indicate that the 7th form shows more accuracy in judging sentences with missing subjects compared to 6th form learners. The 7th level scored 52% as a mean value for correct sentences and 48% for incorrect sentences, while the 6th level shows equality between the correct and incorrect sentences. Their mean value is 50% for both sentences. However, it seems that both groups have difficulty in judging those sentences. This relative difficulty is probably caused by the great distance between the native language, Arabic, and the target language, English. In such circumstances, L2 learners have a tendency to resort to the structure of their L1, which violates the Extended Projection Principle (EPP) stipulating that the subject is an obligatory constituent of a sentence. This, in fact, induces the phenomenon of "interference" to occur, in the sense of Selinker (1972). But how can we account for the fact that 7th form learners show more or less accuracy in judging those sentences than the 6th level do? A possible answer would be that 7th form learners seem to be equipped with more knowledge of the TL and have relatively richer resources in distinguishing grammatical sentences from those ungrammatical ones since they have been exposed to English for 3 years. This also explains the fact that they appeal less to the native language compared to the 6th form students.

Noteworthy is that this property of pro-drop language shows difficulty for both levels, the 6th and 7th forms. However, it seems from the results obtained that the 7th form scores are about 55.9% in all the tests for correct sentences, 38.8% for incorrect sentences and 5.5% show no responses at all. By way of illustration, 7th form students who show high proficiency are able to estimate the linguistic knowledge that they have at their disposal. They are relatively aware that the complementizer THAT should be deleted from embedded clauses while the subject [NP] has been extracted from sentence(4) below:

(4) Who do you think (that) [e] killed Jim?

As for the 6th level, their limited linguistic knowledge of the TL encourages them to rely heavily on their pre-existing knowledge of their mother tongue where the complementizer THAT should not be deleted before the trace [e]. As a result of their extensive reliance on the knowledge of their mother tongue, they come up with incorrect sentences in the TL, which exemplifies a kind of interference.

Based on the results obtained in this study, it is safe to claim that learners of high proficiency (7th level) are more efficient in the use of the three characteristics of the pro-drop parameter than the learners who represent the low proficiency level (6th level). This explains the fact that learners of high proficiency are more equipped with more knowledge of the TL and, as a consequence, they appeal less to the native language. On the other hand, low proficient learners show deficient knowledge of the TL. Therefore, they resort more frequently either to the use of French, L2, or Arabic, L1, to express themselves.

## Conclusion

It emerges from this short exposition that the resetting process of L2 is gradual since L2 learners seem to rely heavily on their pre-existing knowledge about other languages known to them. To put it differently, L2 learners at their early stage of learning the TL (English) seem to transfer structures from both languages, either from their mother language (L1 = Arabic) or from their L2 (L2 = French), to the TL (English). However, a cogent observation that should be made

is that as the learning process increases, the degree of transfer decreases, which implies that L2 learners are in their route to reach the stage of competence.

Secondly, the evidence presented in this paper challenges Clahsen's claim (op.cit) that UG does not exist in L2. For one thing, that L2 learners transfer their pre-existing knowledge to the TL means that they indirectly pick up from UG, which can be seen as an indirect access to UG.

Another piece of evidence that supports the view that UG exists in L2 learners comes from the data presented in this study. Though data collection is based on classroom settings, the findings seem to correlate with the ones observed in "the naturalistic environment", where L1 learners acquire their mother tongue without formal instruction (Cook 2010). In other words, L2 learning is a developmental process where L2 learners go through similar (though not identical) stages that L1 learners pass through during the process of L1 acquisition.

Nonetheless this paper does not claim that these findings are conclusive. For one thing, the concept of UG itself is understood differently by various scholars. Hence, only through further research on UG and related theoretical constructs can these findings be corroborated.

### About the Author

Malika Jmila, a graduate of the University of Essex, England, is a Professor of Linguistics in the Department of English, School of Humanities, at Ibn Tofail University, Kenitra, Morocco. She teaches linguistics at the graduate and postgraduate levels as well as the Professional Translation BA Program. Her research work focuses on language universals and translation pedagogy.

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