Chapter 3


3.1 Introduction

It has been a very general conception, mainly as propounded by Behavioural psychology in 1940s, that man learns through imitation. But as the new thinking in the wake of Chomsky's cognitive learning came to be accepted as a more viable theory of language learning, it, as if, subverted the already prevalent theory of learning. Cognitive Psychology particularly emphasized that language learning is neither imitation alone nor is it a passive exercise. Giving a solid support to favour this theory the cognitivists say that in case of language acquisition, imitation alone cannot be the base as a child creates many novel utterances which can never be predicted by any acquisition model. What we commonly infer is that in a very short period of time, a child acquires the adult like capacity to put together the words both syntactically and semantically correct. This fact nearly proves that there is presence of a grammar in child’s mind which comprises a limited number of principles and parameters which not only help the child to learn a language but also force him to behave in accordance with the innate linguistic capacity. Some researchers like (Ochsner,
1979; Markee, 1994) tried to combine cognitive approach with experimental type of methodologies and gave it a name as Nomothetic Scientific tradition. Nomothetic Scientific tradition is a sharp contrast to Hermeneutic Scientific Tradition. The Nomothetic Tradition talks about a lawful, ordered and discoverable reality that casually obeys the law of nature. Logic, probability and explanation are normally associated with nomothetic tradition. On the other hand, the Hermenuetic tradition deals with "art of interpretation" that understands and interprets natural phenomenon. About this tradition, researchers think that “human events must be interpreted teleologically; that is, according to their final ends” (Ochsner 1979, 54).

Some more recent researches in the field of language development have provided some very relevant and sufficient detail about the process and schedule of acquisition. Since 1996 onwards, learners autonomy has been given more importance than any other factor. It is a kind of learning approach which regards learners independence in a more general way. Therefore, it is more methodological than philosophical. A good explanation of learners autonomy theory is given below.

People carry out their own personal experiments, construct hypothesis and actively seek to confirm or disconfirm them. In this way they built up theories about the kind of place that the world is and the kind of people that live in it. These personal theories or constructs are
rather like templates which people place over their impressions of any new events or persons with which they come into contact, in order to establish some kind of reasonable ‘fit’. To Kelly, learning involves learners making their own sense of information or events. Learners are actively involved in constructing their own personal understanding of things, and this will be different for different people. (Williams and Burden 1997: 27)

Since the main concern in this chapter is to review the theories, concepts and principles of universal grammar, the main focus will be on UG and not on grammar in general because it is UG that affirms that there are some universal traits that characterize all human languages.

Although first language acquisition has been the topic of great interest to the scholars for a long time, yet the scholars working in the field of second language acquisition have been equally interested in the following questions:

I. What does a person know when s/he knows a language?

II. What is the universal process of acquisition?

III. Is second language acquisition similar or dissimilar to L1 acquisition?
IV. Can some principles and parameters of the first language be applied to the learning of a second or third language?

V. Can adult learners attain native like mastery over L2 also?

The first question has been taken up well by Noam Chomsky and he answers it very precisely as he says:

> When we speak of a person as knowing a language, we do not mean that he or she knows an infinite set of sentences, or sound-message pairs taken in extension, or a set of acts or behaviours; rather, what we mean is that the person knows what makes sound and meaning relate to one another in a specific way, what makes them “hang together” a particular characterization of a function, perhaps. The person has a notion “structure” and knows an I language as characterized by the linguist’s grammar. (Chomsky, 1986: 27)

Chomsky’s theory of Universal Grammar is considered to be the most explicit and influential theory of the human capacity for language acquisition or learning. Therefore, the answer to the second question also lies in Chomsky’s theory which attempts to find out and define some basic properties of all possible grammars, and to characterize the language learning capacity of human beings. The Chomskian theory seems to imply that the language
learning propensity of L1A is guided by the UG by limiting the child’s choices of grammatical options. In case of L2 acquisition, UG makes no direct claim but the Full Access Hypotheses (Flynn & Martohardjono 1994; Schwartz & Sprouse 1996) explicitly claims that all principles and parametric values available to L1 learners are also available to the adult L2 learners, but the Full Access Hypotheses was not accepted universally. On the basis of studies and experiments, many researchers argue that UG is either unavailable or partially available to the adult L2ers (Schwartz, and Sprouse, 1996: 317-368). But the critics of the Full Access Hypotheses, despite all studies and experimentation, have failed to produce empirical evidences and description, hence, the general assumption that the processes of L1 and L2 acquisition are similar still survives in the field of SLA. H. Duley and M. Burt (1974 a, 1974b) made an experiment on L1 and L2 learners of the same language and found that the process of acquisition was same for the child learners because the kind of errors they made were similar in nature.

The acceptance of the existence of UG in SLA, modus operandi and their determined use simply imply the presence and shifting of the principles and parameters. Till date, a number of researchers (Dekydtspotter, Sprouse, & Anderson 1997; Dekydtspotter, Sprouse, & Swanson 2001; Dekydtspotter & Sprouse 2001; Slabakova 2005, 2006) have discovered the fact that L2 learners adopt L1 parameters at least when they start learning L2. The shifting of the principles from L1 to L2 grammar lies in the fact that structural dependency is
the basic characteristic and the basic principle of UG. During studying the acquisition of the correct setting of the verb-raising parameters by the L2ers, many researchers have come to the conclusion that the intermediate L2 grammars are UG possibilities.\(^1\) Besides some common principles, the shifting of parameters from L1 to L2 can easily be noticed in Null-subject, V2, and Verb-raising parameters. Although the shifting of parameters in L2 does not resemble parameters in L1, yet all the three parameters show that the interlanguage grammars are UG constrained.

Dealing with the final question (Can adult learners attain native-like mastery of an L2?), the researchers have investigated that "adults seldom attain native-like mastery of an L2 whereas children generally do achieve such mastery." (Hulk, 1991; Schwartz, 1993; White, 1990, 1991, 1992) The data collected by Kenny and Greg further strengthen and clarify the fact that "very young L2ers are able not only to master the syntactic/morphological/phonological L2 differences relating to functional projection, but also to follow a very similar path of acquisition as L1ers." (William C. Ritchie and Tej K Bhatia, 1996). But in real practice, this is not the case with the adult learners. They start learning L2 with the full-access from the mother tongue and then respect the syntax. During the initial phase, the errors they produce are the indication the transfer of L1 parameters to L2A. 1a and 1b given below will amply illustrate the point:

1. (a) Mein kela khata hun. (Hindi)
Sub + Obj + Verb.

1. (b) I bananas eat.

Sub + Obj + Verb.

Sentence 1b shows that the learners of English (as L2) stick to L1 patterns at the initial stage. This happens because the adult learners, due to the initial full-access, cannot get rid of the habit of translating L1 into L2. Hence, they can hardly attain native-like mastery of an L2.

3.2 Universal Grammar: Its Concept

For the last several decades, the scholars in Generative Theories (Emerged in 1950s with Chomsky's Generative Grammar) of linguistics have been repeatedly looking into the core question whether L2 acquisition is similar or dissimilar to L1 acquisition. Everybody studying the Generative approach has been trying to find the availability of UG in SLA. The concept of UG was first explored by Noam Chomsky (1965, 1966) from the grammars written by the 17th and 18th century philosophers who believed in the existence of a universal grammar which accommodates certain rules applicable to all languages. For example, Diderot believed that natural order or syntax of grammar minimally varied from language to language. This assumption was not held by Diderot only but almost all 17th and 18th century philosophers and linguists who were the precursors to Chomsky’s generative theory of language.
acquisition. Right from his earliest writings, Chomsky talks about UG and its concept with its two basic characteristics:

I. Human language must be constrained by a set of universal principles common to all.

II. The process by which the child realizes the language particular grammar is biologically dictated.

In his *Aspect of the Theory of Syntax*, he accepts these characteristics as a precondition for language learning as he writes-

The child must possess, first, a language theory that specifies the form of the grammar of a possible human language, and second, a strategy for selecting a grammar of the appropriate form that is comparable with the primary linguistic data…(Chomsky,1965:25-28)

Later on in 1981 in his ‘Lectures on Government and Binding’, Chomsky came out with the elaborated concept on Universal Grammar and proposed that both substantive (phonetic features or syntactic categories) and formal (conditions of combining sound and words) are developed in the mind of the learner on the basis of quite limited evidences or inputs. Continuing with his studies and research, Chomsky in 1985 came out with *The Lexicon in Acquisition* which made his concept of Universal Grammar more explicit than the previous ones. Here, he accepts that form of the grammar and the strategy
of language acquisition are the minimalist programmes as he mentions this fact in his book.

…the theory of language and the expression they generate is Universal Grammar; UG is a theory of the initial state so of the relevant component of language faculty.

(Chomsky, 1985: 27)

Chomsky’s ‘Syntactic Structure’ (1957) and its review ‘Verbal Behaviour’ (1959) brought almost revolutionary changes in the field of language acquisition. He made some remarks on the basis of his new theory that the theory of second language acquisition based on the concept of imitation should be re-evaluated. This remark made the scholars think about the field of further possibilities for structural linguistics which was brought into light by reviewing the relationships between active and passive, wh-questions, etc. He not only reviewed the theories of SLA available till his time but also presented an idealized model of linguistic competence in human beings that enables them use some finite patterns of L1 to acquire L2.

In his ‘Aspect’ (1965) which came much before his ‘Knowledge of Language’ (1986), Chomsky pointed out and linked similarities among languages which are called linguistic universals. This book later opened the doors for substantive and formal universals in SLA and gave a particular shape to concept of UG which includes three elements i.e. syntax, phonology, and
semantics. The sound or utterance can be transformed into deep and surface structures where deep structure represents semantics and surface phonology. For example, the word ‘eat’ can have following interpretations-

a) Phonological- /iːt/

b) Semantic- To put food in mouth, chew and swallow it.

c) Syntactic- It is a verb and not a noun. It takes animate subject and an edible direct object.

d) Morphological- It is an irregular verb in its past and past participle forms i.e. ate, eaten.

Therefore, Chomsky and other researchers of the sixties reshaped the concept of UG from a rule based grammar to a principle based grammar. Chomsky did not rely upon the artificial rules and discovered some principles which govern both first and second language acquisition. For example, the transformation of a sentence from active to passive may follow certain rules laid by a grammar of a certain language but there is a universal principal in the finite form which governs the same transformation in almost all languages. His claim has been tested in the following examples-

2. (a) He writes letters. (Active voice)

2. (b) Letters are written by him. (Passive voice)

The same sentences with their equivalents in Hindi language are:

3. (a) Vaha patra likhta hai. (Active voice)
3. (b) Patra uske dwara likhe jate hain. (Passive voice)

Given below are the structures of passive voice in English and Hindi languages respectively.

2. (b) Object + be-verb + past participle + preposition + subject.

3. (b) Object + subject + preposition + past participle.

The rule of transformation from active to passive voice in both the languages allows subject at the position of object and vice-versa. This rule highlights the fundamental principle that object in passive voice of statements occurs at the very beginning of the passive structure both in Hindi and English languages. This particular fact marks the availability of some finite universals and their transfer to second language acquisition

3.3 Universal Grammar: Its Theories

For the past 40-50 years, much heat has been generated on finding and designing of theories and principles of second language acquisition leading to designing of various theories of language acquisition by a number of researcher (Skinner, 1966; Schumman, 1978; Krashen, 1985; Hirakawa, 1995, Ellis, 2001; White, 2003) have proposed n-number of theories. But, not all of them are useful. Their appropriateness, usability and relevance have cut their number to sixty only. In fact, the past five decades have been so progressive in
the field of SLA theories that it has now become an autonomous and independent discipline with at least four basic and important assumptions:

a) Native language’s knowledge is of primary importance in second language acquisition.

b) The influence of the native language is very low in second language acquisition.

c) The influence of the native language is quantitative on second language acquisition.

d) The influence of the native language on second language acquisition is due to the theoretical issues of language acquisition.

All these assumptions give hint about the transfer of L1 theories to L2 acquisition in some or the other respects. But, defining transfer is not as easy as one thinks of it because there are many theoretical frameworks available which usually put the researchers and the scholars into a mess. For example, the behaviourist’s theory considers transfer as an imposition of native language information on L2 whereas the mentalist approach finds acquisition as innate process. The term ‘transfer’ in the theory of acquisition has undergone various changes. At the very beginning of acquisition research it was converted into the phrase ‘mother tongue influence’, but during 1980s some linguists further changed it into ‘cross-linguistic influence’ or ‘cross-linguistic generalization.’ Latest researches in SLA during the last decade of the 20th century have made it
clear that transfer of the native language principles to L2 acquisition does not mean a mechanical transfer. It rather requires the generalization approximation of the target language structures. Thus theories have been discovered, designed, adopted, amended, changed, and finally recommended for the process of learning, study and research in SLA. Some limitations in the field of research does not allow discussion of all the theories in this chapter, yet some important ones have been taken to instantiate the concept of language acquisition theories

3. 3.1 Language Transfer as Cognitive Activity

Language transfer as cognitive activity was the prevalent theory in the 1970s and early 1980s. In this period of research on language acquisition, the scholars started to examine L1 influence as direct linguistic reflex on L2. This did not considered transfer as the transfer of L1 information to the target language during the process of acquisition. The way they observed the transfer was redefined broadly involving some new pieces of information as given below:

1. Direct transfer delays the restructuring of the rules of the mother tongue into second language.
2. Information always transfers in groups.
3. Acquisition of second language may take different path from L1.
4. Certain things are avoided during and after transfer.
The rules of L1 are also overproduced after transfer.

Shifting of attention from L1 to L2 means speeding up the process of acquisition.

Social status of the learner and the reputation, scope, field of use, and necessity of the L2 have different impacts both on the learner and the language to be learnt.

### 3.3.2 The Government and Binding Theory

In 1965, Chomsky’s ‘Syntactic Structure’ was superseded by his ‘Aspect’ which was considered as the standard model for separating deep structures from surface structures. Later on during the 1970s, this model was extended to Government and Binding model which was based on his ‘Lectures on Government and Binding’. This theoretical framework of generative grammar throws light upon the relationship between phonetic form (sound sequence) and logical form (representation of syntactic meaning). He feels that language is neither a sound nor is it a meaning alone. It, rather, is a complex combination of the two. In L2 acquisition, this theory is considered to be very important because the L2 learners acquire syntactic interface rather than sound or meaning. The word ‘government’ in ‘Government and Binding’ refers to a certain relationship between the elements called the governor and the governed. For example, in phrase ‘my book’, the word ‘my’ is a governor and the word ‘book’ is governed by the possessive adjective ‘my’. Therefore, the process of
government ensures that the words should be used with an appropriate case. Another word ‘Binding’ stands for the relationship between pronominal and anaphoric elements in the sentence. Its main concern is the categories of NP distributed in a sentence particularly in the anaphors like ‘himself’ and ‘each other’. This theory show how the words ‘him’ and ‘himself’ are used differently. For example:

4. (a) Aryan hurt himself.
4. (b) Aryan hurt him.

It is the Binding Theory that makes the difference in interpretations of the sentences like 4a and 4b to make the learner know how the words ‘Aryan’ and ‘himself’ refer to the same person in 4a and two different persons in 4b. Thus the word ‘himself’ is bound to the word ‘Aryan’ while the word ‘him’ has a different index.

Therefore, GB is a theory that demands two structures i.e. deep and surface structures. In deep structure, all the elements of a sentence are at their original location as they were there in the mind of the user, but, in surface structure, they are moved to particular places within a particular structural unit. Surface structure also makes essential unity between sound and meaning. GB talks about a syntactic structure in which movement of the elements in a sentence can be seen to determine phonetic and logical components.
3.3.3 X-bar Theory and $\Theta$-Theory

In Government and Binding Theory of Chomsky, there are further classifications as X-bar Theory and $\Theta$ (theta)-Theory of language acquisition. The X-bar Theory deals with phrase structures with the claim that there is a head element in all phrases of all languages which remain in centre while structuring a phrase. This may refer to a general principle of UG which captures the properties of all phrases of all languages without giving special importance to certain type. For example, the phrase ‘my book’ contains the word ‘book’ as a noun which is the head of this noun phrase. This principle also works in similar way in other languages like Hindi and Sanskrit. The phrase ‘meri kitab’ in Hindi and ‘mum pustakaha’ in Sanskrit are also having ‘kitab’ or ‘pustakaha’ as head of the noun phrase. Therefore, a phrase, according to this theory always consists of a head element and one or more constituent elements which are closely associated to the head. One basic requirement for this theory is that the head in the phrase must belong to the category that shows the type of the phrase i.e. noun, verb adjective, adverb, etc. Another important fact about the X-bar theory is that the head element in a phrase always belonging to major word classes in a lexicon. Hence, heads in phrases are lexical categories which may be represented by basic symbols as N, V, A, P, etc.
Θ (theta)-theory of grammar is also applied to language acquisition. This theory handles the relationship between the different elements in a sentence which have been used in the form of different types of phrases. This theory should not be considered like the grammatical functions as subject, object, verb, etc. Grammatical functions are the configurations in phrase structure while Theta-theory is concerned about the role of a phrase or element that goes with it. For example, when we write ‘he writes letters’, the relationship between two NPs ‘he’ and ‘letters’ is made clear by the VP ‘writes’. Θ-theory specifies the theta-role of ‘he’ as the agent who performs the task of writing and of ‘letters’ which are affected by the action. The linguists who believe in Θ-theory also believe in the fact that the acquisition and use of a second language are governed by Θ-theory. Since this study is based on the L2ers whose L1 is Hindi, the examples given below prove that Θ-theory is also applicable to the L2 of these specified learners.

5. (a) Vaha (NP) patra (NP) likhta hai (VP).

5. (b) He (NP) writes (VP) letters(NP).

The difference between 5a and 5b lies in their structures. A second language learner of English may write 5a as ‘he letters writes’ because at the initial level interference of the mother tongue is noticed highest. At the initial stage a second language learner generally transliterates the structures of L1 into L2, but as time passes, the logic and structures of L1 are easily transformed
into the standard structures of L2. It proves that the full access from the L1 cannot be helpful in developing correct, unflawed patterns of L2. But it does not mean that L1 does not have any influence on L2. Grammar is not confined to structures alone. It is having several other features also i.e. clause, phrase structure, word formation, etc. The similarity between 5a and 5b is that the relationship which is made by the VP ‘writes’ between the two NPs (he and letters) in 5b remains same in case of the mother tongue also. θ-role cannot be assigned to all arguments because "…each argument bears one and only one θ-role and each θ-role is assigned to one and only one argument."

Therefore, the X-bar theory and θ-theory reveal how complex noun phrases are formed in a language and what role is assigned to them. These theories consider sentence as a complex structure like human body that is made up of small parts. Every part of our body is so important that losing one may leave the whole structure devoid of meaning and function. The θ-role assigned to every small part is not only found in all languages but it is equally important also which again gives the signal for the universality of language.

3.3.4. The Movement and Case Theory

The theory of movement and case limits the movement and narrows down the possible number of human language. One of the properties of UG is that certain elements in sentence can be moved to certain locations though
movement to all positions under all conditions is not free. For example, the process of transforming a sentence from active to passive marks certain movement which is given in 6b below.

6. (a) He attacked his classmate.
6. (b) His classmate was attacked by him.

The movement of NPs ‘he’ and ‘his classmate’ is fixed i.e. from subject to object and vice-versa. But the problem with the movement is that the rule regarding the movement of NPs cannot be applied to passive structures only because passive transformation is one of the examples and not a rule in itself as Chomsky says "Movement is never determined by specific rule, but rather results from the interaction of other factors." (Chomsky, 1981a)

The Wh-movement requires special attention of the learners both in case of questions and relative clauses. In questions, wh-word is the replacement of an NP and is restricted to be used at certain places which bring universality in its use.

7. (a) Who could do it?
7. (b) Whom could do it?

The structure 7b is not possible because the wh-word ‘whom’ is not agentive whereas the word ‘who’ in 7a is the replacement of the agent and fit to be the theme of the sentence. Similarly, there are some peculiarities in the use of wh-words in relative clauses. It is not always rule bound that certain wh-
word should be there in relative clauses. Sometimes, a wh-word can be omitted and at some other occasions the wh-word is replaced by ‘that’ as given below in 8b.

8. (a) The man whom I met yesterday was Pramod.

8. (b) The man I met yesterday was Pramod.

8. (c) The man that I met yesterday was Pramod.

Besides the movement of NPs and wh-words, there is one more movement that can be taken for instance. It is the movement of verb or verb phrases which can be noticed in case of subject-verb inversion. It is through this movement that we come to know the right position of auxiliary in a sentence. The general rule about verb-movement is that it is always moved to the left and gets inflected after movement though modals never get inflected as given below in 8a, b, c, d and e.

9. (a) Aryavart 

9. (b) Does Aryavart like jam?

9 (c) What does Aryavart like?

9. (d) Aryavart will like jam.

9. (e) Will Aryavart like jam?

The case theory of grammar is the modification to the transformational theory. This theory explains the role relationship between two elements in a sentence. The syntactic relationship which is on the surface of the structure cannot convey the complete meaning. Therefore, Chomsky goes beyond the
visible case and says that the abstract case lies in the deep structure of sentences. It is the abstract case that brings out the deep structure even if the NP is not normative or accusative. This theory has two constituents i.e. modality and prepositional. Modality case deals with the grammatical function and prepositional case deals with a tenseless set of relationships. According to Fillmore, ‘Human languages are universally possessed with case relations like-inflection, superlation prepositions/prepositional particles, word order, or any combination of these.’ To surface structure of the sentence, normative or accusative cases are assigned as per the requirement of the grammatical function.

10. Prajna learnt her lesson.

In the surface structure of the sentence given above, the first NP (Prajna) is a Normative case and the second NP (her lesson) is an Accusative case which are structurally connected to each other by VP (learnt). Thus tense and verb phrases make sentence 10 a structural case.

In case of prepositional phrases, modality and tense have nothing to do with the structure of the case. In fact, in such cases, the preposition is the case assigner in the NPs as shown in the tree diagram of the phrase ‘in the market’ below:
A generative case is always more complex than a prepositional case as it is associated to the whole structure of the NP. For example, the phrase structure ‘Aryan’s pencil’ shows that noun ‘Aryan’ is followed by another noun ‘pencil’ and genitive case ‘s’ is making a relation between the two.

### 3.4 Conclusion

Right by birth, human beings have a capacities to walk, eat, swim, etc. and they develop their capacities according to need and environment they face time to time. But these capacities are not genetically programmed. In some myths, it has been shown that a child learns many things in the womb of mother (the famous myth of Abhimanyu in *the Mahabharata*). The revaluation of all theories of UG strengthens the belief in the myth of Abhimanyu in *the*
Mahabharta. Human mind is just like the hard disc of a computer which supplies different type of help for a programme to be run properly. In fact, the base of language learning is just like a software which is uploaded in human mind partly by the gene and mostly by the subconscious listening in the womb of mother. Since all other capacities except learning and using a language are based on requirements of body and mind, they seek support from outside. But the theories of UG make it clear that mind in our brain works like an operating system in where the software of language learning and use is inbuilt except in cases of genetic disorder. This genetically programmed capacity of language learning is almost uniform across the world and determines the ways in the finite knowledge of language principles and parameters is converted into desired or sometimes even extraordinary linguistic performance.

The question which has been answered in this chapter is how far UG is available to the adult second language learners. It has been illustrated through sentences 1a and 1b that the adult learner of L2 has full access to UG at least at the initial stage. This does not at all imply that UG finds full access in every situation. The availability of UG to an L2er may be the same but its access is varies from learner to learner, language to language and even from time to time.

It is a remarkable fact that a few observations in L2 acquisition by Ellis, Flynn, Lightbrown, White, Cook, Chomsky, Flex, Gass, etc, have thrown
enough light on the relationship between first and second language acquisition and the role of UG. Theories, according to Chomsky, represent language as knowledge rather than as social behaviour because the UG finds that the property of human mind related to language acquisition is a specific characteristic which is ‘common to all humans’. UG and its theories are already there in the learner’s mind which enables them generate infinite number of sentences with finite set of principles and parameters which constitute the core grammar of all languages. It has also been noticed that identification, sequential arrangement, and universal applicability of theories have been everlasting problems. Atkins (1982) tries to find out a way to arrange the theories in a particular sequence but it is very difficult to decide which theory should put first and which should be the last one. However, it may be possible that a particular sequence may work as an acquisition model at a particular time with particular learners; the same model may fail elsewhere. Thus the universality of an acquisition model based on theories is still a great problem.

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References


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