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## Investigating the Problem of Language Acquisition within the Context of Chomsky's Linguistics Models

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**Abstract:** The aim of this study is to investigate how Chomsky's deals with Language Acquisition (LA henceforth) in his different models, from the classical model to the minimalist and after (1950s to 1995 and after) in most of his known books and articles in a follow up study to explain his statements and justifications and how he revised his approach in each model and what new ideas he added. At the end of the study, it is obvious that Chomsky has changed his approach in dealing with the problem of LA instead of maintaining the same approach during the development of his views on LA. Chomsky's changing approach to language acquisition from his classical model in the 1950s to his minimalist model in 1995 and beyond can be attributed to several factors, including revising the empirical data to fine-tune his LA theory, the criticism of lacking evidences led Chomsky to simplify his theories while still maintaining their core principles. In addition, the development of new technologies like brain imaging and computational models allowed Chomsky to incorporate new insights into his theories of language acquisition. For example, the Minimalist Model incorporates insights from computer science and cognitive neuroscience. Chomsky, in his improved approaches seeks simplicity and clarity and as part of the broader progress in the field of linguistics, his revision and improvement reflect the progress in the field. In conclusion, while Chomsky's theories represent significant advancements in the field of linguistics, the process of understanding language acquisition is an ongoing and complex one, and it is not clear whether a finally harmonious and integrated visualization of the problem of language acquisition exists.

**Keywords:** Language:1; acquisition 2; Linguistic models 3; poverty of stimulus 4

### Introduction

The problem of language acquisition (LA) is a central topic in Chomsky's writings for over 50 years. He negotiates this problem continually and sporadically in most of his research from the classical model of the 1950s to the minimalist Model of 1995 and after. His focus on this linguistic problem emerges his belief that understanding the nature of LA, its complicated processes, and its reality contributes to constructing linguistic theories and helps in understanding the nature of language in general (Chomsky, 1975).

### 1. Background of the study

Noam Chomsky, as one of the most remarkable linguists in the present era, produced a revolution in linguistics in which the linguist, as well as the child, is provided with discovery procedures to extract from the corpus and the neighborhood (Searle, 1972). The Chomskian revolution represents a revolutionary approach to the study of language in an explicit form in *Syntactic Structures* in 1957. It is revolutionary in the sense that receiving grammar as language theory and representing syntactic relations becomes the center of longue instead of

social conventions. As a result, any procedure based on induction is abandoned, and any one based on generality is adopted. The revolution utilizes the abandonment of empiricist constraints and sets new grounds for grammatical rules in linguistic debates (Newmeyer, 1986).

Chomsky's linguistic revolution actually revolts against all known conceptions regarding the nature of language and the human mind.

His contribution in the field of linguistics began in 1949 in an undergraduate essay, in which he presents the generative linguistics as Chomsky's package of language. Chomsky criticizes the behaviorist theory in 1959 in his review of B. F. Skinner's major book entitled *Verbal Behavioral*, "the most devastating review ever written," as characterized by Smith Neil in 1999. He states that Chomsky's review

"Not only sounded the death-knell for behaviorism, but also laid the foundation for current mentalistic linguistics and cognitive science more generally. The crucial advance in this transition is that mentalism pays due attention to the 'built in structure' which both makes first language learning possible and underlines all of our linguistics and cognitive ability". (Neil, 1999, p. 97).

Chomsky fights against behaviorists who claim that children are mimicking languages used in their neighborhoods and depend on positive and negative reinforcement. On the other hand, Chomsky hypothesizes that children are certainly prewired to learn language. They are born with language forms, and their brains are prepared to acquire language in a strikingly rapid process. The remarkable rate at which a child

acquires his first language pushed Chomsky to hypothesize, in 1957, a device of language acquisition known as a language acquisition device (LAD), which is hardwired in the brain of a child and enables the child to produce and comprehend a language.

After that, he moves to the theory of universal grammar, which underlines the universality of syntactic rules shared by all languages and stored in the LAD such as verbs and nouns, making sentences positive and negative, and the superior competence of children to produce sentences without making any of the expected mistakes. Therefore, what children need to do is simply learn their mother tongue vocabulary. In addition, the innateness of language and the notion that language occurs during critical developmental stages are among the characteristics of Chomsky's linguistic revolution (Newmeyer, 1996).

Chomsky supposes that language is a rich isolate mental faculty and that studying its nature as a system should occur before studying the manner in which it is acquired. "You cannot study the acquisition or use of language in an intelligent manner without having some ideas about this language which is acquired" (Chomsky, 1975, p. 67). Language as a mental faculty undergoes uniform maturation despite variation of experiences encountered and other considerable cognitive faculties. Any child must acquire the essential lexical properties as well as the universal principles stored in his mind to understand any sentence (Chomsky, 1986).

It is commonly assumed that whatever the human intellectual capacity is, the faculty of language is essential to it (Chomsky, 2006, p.176). Consequently, studying the system of

language is related solely to studying the ways in which language is acquired. Therefore, it is expected that investigating precisely the obscure procedures that underlie the language acquisition process as exactly treated by Chomsky in his known linguistic models will identify most of the confusing cases of language study and mental mechanisms.

The study's originality emerges from being the first study that is specifically based on following up how Chomsky dealt with LA within the generative conceptual (theoretical) framework of Chomsky's linguistic models from 1950s to 1995 and after to be unified in a beneficial reference which is supposed to be a remarkable contribution to the study of language.

The study of the problem of LA is an investigation of how Chomsky interpret LA in the context of Chomsky's linguistic models on its theoretical basis, not with the processes of LA. Chomsky considers language to be a system that is acquired—the ways of acquisition and use, not with the manner in which it is acquired (Chomsky, 1975). Therefore, Chomsky's linguistic models from the 1950s to 2000 and after are explored for specific parallel arguments relating to the problem of LA with an apparent interpretation of language processes and favorable and valuable outcomes on behalf of language science. This study can be used as a coherent reference for the researchers in the same field.

### ***1.1 Chomsky's views against Behaviorism***

The problem of LA has concerned a large number of linguists. Eagerly, researchers seek an answer to understand humans' remarkable ability to acquire their first languages rapidly and effortlessly despite

having very poor input from their neighborhoods. One of the earliest researchers of language development was B. F. Skinner (1957) who explains LA by way of behaviorist reinforcement principles. However, the primary pioneer in linguistics research, Noam Chomsky, heavily criticizes Skinner and makes a radical shift from behaviorism to innateness. According to Chomsky, the main hypothesis about language suggests that the mind's specific faculty accounts for LA (Chomsky, 1965).

Chomsky's views of language and LA have inspired most linguists all over the world. Hundreds of scholars work to investigate Chomsky's theories in relation to certain and specific linguistic problems. The researcher, in this part, reviews some studies that discuss Chomsky and his treatment of the LA problem.

### ***1.2 The critical period***

Mckenzie-Brown (1970) indicates that Chomsky's ideas explain language facts in a way that no other theory can. He signifies Chomsky's contribution to LA by referring to some of Chomsky's statements regarding the LAD, the little black box, as described in some of Chomsky's works. It contains the universal rules shared by all languages. Mckenzie-Brown explains the critical period and indicates its vital role in LA. The paradox of LA, as used in some of Chomsky's writings, is explained as well. It is emphasized that LA is not a normal speculative problem. The author refers to Chomsky's interpretation of such a phenomenon when children receive a very limited information and mathematically insufficient data and still able to master.

Love (1990), in his article about Chomsky's theory of LA, differentiates between the

“logical” and the “psychological” problems of language acquisition:

A different idealization of the acquisition process arises from a distinction between what are known as the “logical” and the “psychological” problems of language acquisition. The logical problem is essentially that of explaining in general terms how it can in principle be possible for children, on the basis of limited and partial exposure to their language, to acquire the complex and rich system that constitutes their mature linguistic knowledge. The “psychological” problem, in contrast, is the problem of “real-time” acquisition: What does the actual process of acquiring a language consist in?” (p. 167)

Love (1990) demonstrates that Chomsky aims to enrich linguistics’ psychobiological foundations through resting on an explanation of the child’s ability to acquire knowledge of his native language unconsciously despite the inadequacies of evidence to which the child is exposed. Love (1990) states that Chomsky’s insistence to assimilate language (grammar) to the logistic systems is no more than an attempt to review the previous assumptions about languages as fixed codes with form and meaning—correspondences that are bound to be inadequate.

### ***1.3 The Universal Grammar***

Similarly, Yang and Roeper (2011) debate the problem of LA in relation to universal grammar (UG) focusing on the continuity from the Principles and Parameters framework to the Minimalist Program. They mention children’s ability to compare and analyze the input data and build an intimate model concerning how UG extends to models that receive unprocessed primary

linguistic data. It assists both the minimalism abstractions and the systems of data-comparison that employ them. They provide an analysis of minimalist principles and find that children follow the barrier-like constraints of the strong minimalist thesis and give an instinctive witness of phase-based effects. They argue that such interfaces are central to the process of LA and open the gate for syntactic analysis confirmation. In addition, an alternative to viewing children’s language as the result of interfering performance factors is constituted, which validates the core prediction of minimalism: Its mechanisms should be transparent in the acquisition process if the theory is correct.

### ***1.4 Language Acquisition Device***

Avram (2012) discusses Chomsky’s biological device that mediates the input–output relation called LAD. Its main role is filtering the linguistic input the child is exposed to. He debates the device’s uses of universal principles that guide the operation of acquisition. In addition, other assumptions with respect to language computational systems are discussed for the purpose of creating an obvious conception to meet an explanatory adequacy. The data from the LA, in addition to the desire to follow up the process of language development, leads to magnificent revolutions in the generative representations, whose major task is to explain LA (Avram, 2012).

Calinescu (2012) considers Chomskian views of language in general as well as some insights about Chomskian characterizations of language faculty. He discusses the human capacity for LA on the basis of Chomskian views. The biologically isolated language faculty, which accounts for language

processing, is especially negotiated in Chomsky's economy principles, which concern language faculty's representations and derivational.

Comparably, Wen (2013) identifies a large number of LA problems through applying Chomsky's theories of language development. He seeks to straight any misunderstanding and provides feasible solutions for serious problems in Children's LA. Based on Chomsky's views regarding LA, Wen offers some recommendations for parents of different language backgrounds about how to deal with LA issues.

### ***Innateness theory***

Huang (2016) concerns the necessity of innateness theory, especially universal grammar for child LA. He investigates the controversy between the external role of environment and the role of input using an examination of the relative clause as a complicated cross-linguistic construction. In his study, he uses data from Chinese-speaking children and a statistical analysis of corpora. He concludes that innate grammar is crucial in assisting the inconsistent input properties. He urges to understand language-specific properties well to be able to explain the acquisition patterns and their interactions with the language external factors.

Minimalist Program supported innateness concerning the linguistic capacity and clarified the theory of acquisition metatheoretical role in generative theory. Although language acquisition is not the main concern of MP, however, MP can be used as the theoretical basement for language acquisition experimental researches such as MP faculty of Language model. Actually, it can be used to account for child's language

acquisition processes (Victor & Lorenzo, 2008).

In reviewing the critical points in research projects concerning the problem of LA, it is obvious that many linguists referred to one or more of Chomsky's generative hypotheses to interpret the process of LA following divergent methods. Undoubtedly, the studies as a whole have not covered all of the related aspects of the problem. Instead, these studies only included discussion of peripheral points from single perspectives, such as by focusing on Chomsky's universal grammar theory in an attempt to describe the LA problem or by discussing Chomsky's theory of LA to differentiate between certain logical and psychological problems. Researchers have left an obvious gap in studying the problem of LA in relation to Chomsky's views and interpretations. The purpose of this research is to repair these weaknesses and bridge these gaps through an investigation of all Chomsky's models, which he developed over a period of over 50 years to reach a clarified interpretations related to the study of language as a whole.

## **2. Materials and Methods**

### ***2.1. Methodology***

The research is conducted through an investigation of Chomsky's linguistic models: The Classical Model (1950s), The Standard Model (1965), The Extended Standard Model (1970s), Government and Binding Model (1970s–1980s) and The Minimalist Model (1995 and after). The researcher concentrates a thoroughly on Chomsky's account of the problem of LA in all of his linguistic theories.

## 2.2. Research Design

This is a theoretical study, which uses Chomsky's interpretations of LA in his writings to find out how his views about LA have developed. The researcher raises some arguments on the basis of Chomsky's views and concluded with a cohesive summary that can be rereferred to all interested researcher.

## 3. Discussion

### 3.1 Chomsky's Linguistic Models

Chomsky's theories are introduced gradually and constantly to solve problems and to analyze different theoretical and empirical considerations as indicated by John Lyons (1991): "Chomsky's thought has not changed fundamentally since at least the early 1960s. But it has continually refined and modified over the years, in a succession of books, articles, lectures and interviews addressed to leaders and audiences of the most diverse backgrounds and interests" (p.5). In the introduction of each work, Chomsky focuses on the work that preceded it and treats it as a modification of the previous one.

#### 3.1.1 The Classical Model (1950s)

By the appearance of Chomsky's *Syntactic Structures* in 1957, which can be considered a historical turning point in the linguistic field and a revolutionary event, Chomsky "made an independent and original contribution to the study of formal systems from a purely mathematical point of view" (Lyons, 1991, p. 65). In this period, the notion of generative grammar is established and Chomsky prefers transformational grammar over the phrase structure grammar because the former is simpler and reflects the intuition of the native speakers. The grammar is conceived as a device to form

sentences; the generality of rules is discussed in order to simplify the diversity and complexity of language, and the abstract level of language is proposed (Lyons, 1991). A separation between phrasal structure rules and transformations is made. The former creates the kernel sentences (basic structures), and the latter alters them into passive, negative, etc. The most memorable example is Chomsky's sentence: "Colorless green ideas sleep furiously" (Chomsky, 1957, p.15), which intended to denote the independency of syntax from semantics because sentences can be grammatical but meaningless (Cook & Newson, 2007).

Chomsky believes that acquiring language is controlled by biological neural circuits that contain linguistic cues located in the human brain. Chomsky studied the structure of a child's sentence "him falled me down", which is a model sentence used by children. He found that using the affix -ed in falled to express the past form of fall reflects child's brain creativity, and computational processing since this word is not stored or inputted into his/ her brain. These linguistic notes open the gate for further neurological pathway and to the discovery of brain processes regarding language.

Contrary to studies prior to Chomsky which focus on expermental learning of language, Chomsky argues that language is acquired unconsciously during the critical stages. Chomsky (1957) states that there is a machine produces language known as "finite state processes" P 20, that it is "the simplest type of grammar which, with a finite amount of apparatus, can generate an infinte number of sentences", P 24. He discusses the property of human language known as recursivity and applying

transformations to create infinite Kernel sentences and the need of levels of representations for understandings the messages.

From 1960s, Chomsky planned to explore child language acquisition processes. He insists on the peculiarity and creativity of child language, contrary to B.F Skinner school of behaviorism. According to Chomsky, language is more than the pronounced forms. He grew the early seeds of brain mapping and neurological science. Focusing in this discovery, Many interested researchers grow endlessly in different fields such as neurobiology, anthropology, psychology, etc. Different paradigms studied in relation to language are explored within the first language acquisition. Chomsky investigated language to find that there is more than language surface and that the development of child language is gradual.

In this model, Chomsky criticizes the behaviorist approach to language in his review of Skinner's *Verbal Behavior* (1959). He refutes the functional analysis, which seeks to identify the verbal behavior upon external variables that control a particular verbal response by observation and manipulation of the speaker's physical environment.

In the Classical Model, language acquisition involves two interrelated processes: language learning that occurs in the language acquisition device (LAD) which is a neural system inside which, innate processes are performed, and language use that refers to the production and reception of language.

### **3.1.2 The Standard Model (1965)**

This model was first called the Aspects Model, named after Chomsky's *Aspects of*

*the theory of syntax* in 1965. It introduces a distinction between language knowledge and language use (competence and performance) and its identification of the sentence's deep and surface structure. Chomsky's two classic test sentences: "John is eager to please" and "John is easy to please" were used in several of his works to indicate that sentences may have the same surface structures but differ deeply in meaning. John is the subject of the verb "please" in the first example, but he is the object of "please" in the second one (Cook & Newson, 2007, p. 3).

Chomsky (1965) reveals that the grammar of natural languages are unique in certain LAD where the input is the linguistic data and the output is the grammatical rules that are built on the basis of such data. This device is constructed abstractly through which any child has the ability to devise appropriate grammar that has particular rules specified by an innate linguistic theory. What involved in the construction of LAD is the child's ability to determine the structure of any signal in a real situation due to his/her rich and fully developed innate capacity of probable appropriate structural descriptions. According to this model, children learn the deep structure first, and the surface structure follows after a while.

What distinguishes this model from the preceding one is the semantic component, which is included as part of the grammatical analysis of language and is referred to as the logical deep structure of relations (Lyons, 1991).

### **3.1.3 The Extended Standard Model (1970s)**

There are modifications in the transformational grammar version of 1965. This model differs from the standard theory

in that it is semantically-based, while the slandered theory is syntactically-based (Lyons, 1991). Within the Extended Standard Theory framework, the deep structure is viewed as a distinct level of syntactic structure. At this level, lexical items are inserted working as the input to maintain the transformational component. However, semantic component rules function on both of deep and surface structures, not specifically on deep structures as it was the case in Standard Model (Natie, 2016). Chomsky (1978) stated that “Contrary to what the Standard Theory of Aspects proposed, it seems highly probable that surface structure plays a primary role in semantic interpretation” (p.193).

This model proposes that children with their innate ability to create phrases form hierarchical structures that relate syntactic elements with semantic components, which demonstrate the relation between the linguistic items and their meanings. Moreover, in this model, parameter setting is proposed that utilizes that the child can acquire different variations of language including different word orders and verb tenses, according to the language he/she is exposed to which evident that the LAD is not a fixed set of rules. It is capable of adjusting to accommodate the linguistic input a child receives.

#### **3.1.4 Government and Binding Model (1970s–1980s)**

Government and binding, (GB- theory) is one of the generative theoretical frameworks. It was presented initially in Chomsky’s *Lectures on Government and Binding* in 1981. The syntax is represented on the basis of general innate and fixed principles according to which this theory and languages

differ only in terms of parameters. Therefore, the child, to acquire a language, only needs to acquire the necessary parameter settings as well as master the necessary lexical items (Chomsky, 1982).

According to Lyons (1991), GB theory is considered to be a development of Chomsky’s previous models. Government is a traditional notion developed and generalized later in modern linguistics. Among natural languages, it is almost a genuinely universal property for one category to be governed by another. Binding, on the other hand, originates from formal logic and adapts to “the grammatically conditioned occurrence of pronouns and the way in which their reference is determined either directly or anaphorically” (p.201). In the recent version of GB theory, the transformational rules are simplified to very general movement transformations (move alpha), which keeps its role of combining the D-structure with S-structure. The categorical subcomponent is replaced by X-bar theory, which links both syntax and lexicons; the phonological component is referred to as phonetic form (PF) and the semantic component as logical form (LF).

In 1980, Chomsky attributed the poverty of stimulus in his discussion of child language as the first language acquisition and child’s grammatical competence and tackled it as an evidence of an innate ability to acquire language in the child’s brain. The human being is endowed with certain grammar, known as linguistics data, a device that contributes to the evaluation of the constructed structures using the P&P as the theoretical framework (Chomsky, 1981, 1986).

Observing the gradual processes of child's language acquisition, it is obvious that child acquires concepts and structures in a very amazing facility, despite the lack of sufficient input and meaningful environment in their initial stages that have drawn the attention to the fundamental problem of linguistics known later as Plato's Problem. Chomsky insists on solving this problem scientifically, particularly, using cognitive science and linguistics as explained in principles and parameters, and introduced in lectures on government and binding (1981).

#### **3.1.4 The Minimalist Model (1995 and after)**

Essentially, the minimalist program is not distinct from the previous versions of generative syntax. Actually, this program and other earlier stages of generative enterprise share the same crude outline; however, the remarkable feature that distinguishes it is the limitations it imposes on the process of achievement. Cook and Newson (2007) state that there are approximately three phases of the minimalist program: Until 1996, the minimalist program concerned simplifying language knowledge to shared common principles among all languages and limited acquiring particular languages to be part of the lexicon. The second phase is based on rethinking syntax in which the system of GB theory is eliminated in favor of the lower number of operations, and the perfect mediation between the central computational system of language and both phonology and cognition is checked and explored. The third phase (known as the phases model) emerged after 2000.

Chomsky (1995) declares that the minimalist program deals particularly with the way of linking sound and meaning,

which was earlier described as a computational system. This system is combined with external systems by means of PF and LF, which represents a link between sound and meaning described as derivation. The derivation process uses lexical items as inputs and a combination of PF and LF representations as outputs. The elements in the input (numeration) are linked together in phrase structures by a merge operation, which is based on both thematic relations as basic relations and syntactic ones as optional. A move operation, on the other hand, is used in different stages of derivation that leads to variations in word order among languages. Basically, derivation is constructed by economy, local relations, and simplicity.

Chomsky's later writings after 1995 give some insight into his current thinking. Economy of representation, economy of derivation, and economy of grammar are of the minimalist program's most important consequences. The spell-out point in which the process of derivation splits, and convergent derivations that produce grammatical and interpretable structures, are discussed. Certainly, the basic concepts of the minimalist program are numeration, computation, spell-out, and convergence. In addition, all applied movements have uninterpretable features that need to be checked (Cook & Newson, 2007).

In MP, the Poverty of Stimulus argument has been discussed to criticize empiricism. In addition, high focus was devoted to explanatory adequacy aims concerning the initial linguistic state of the child. Gradually, the concern has been shifted to the faculty of language to cover the system of thought, discover the external world and the human mental state. Despite supporting FL and

declaring that the best version of linguistic theories is the one capable of modeling the LF, Chomsky's focus in MP Model was not limited specifically on interpreting language acquisition phenomenon in particular, he declares that language acquisition theory is irrelevant. (Chomsky, 2000: 96). However, he discussed it and characterized it as a process of building a computational linguistic system that is capable of production and interpreting unheard sentences depending on an innate capability. In other words, children are born with certain linguistic knowledge that enables them to learn the rules of their language.

Chomsky's theory of first language acquisition is based on the idea that humans have an innate ability to acquire language. He argues that there is a language acquisition device, LAD, in the brain that allows children to learn the rules of their native language quickly and efficiently. Chomsky suggests that children are born with a set of universal grammar rules that they use to figure out the syntax and phonology of their language. He believes that all languages have a common underlying structure and that the LAD helps children to identify this structure and learn the specific rules that apply to their language.

The LAD is a language-processing mechanism in the brain that enables children to learn grammar, syntax, and vocabulary with little formal instruction. According to Chomsky, children acquire language through a process of exposure to language input from the people around them. As they hear language used in their environment, their LAD kicks in, and they begin to recognize patterns in the language.

Chomsky also believes that children acquire language through what he calls 'universal grammar'. This is a set of principles and rules that underlie all human languages, and which are hardcoded into the LAD. Children use these principles and rules to make sense of the language input they receive, allowing them to acquire language rapidly and efficiently.

In contrast, behaviorist theories suggest that language learning is primarily a result of environmental factors, with reinforcement and punishment playing a key role in shaping children's language development. Behaviorists argue that children learn language by imitating the speech of those around them and through positive reinforcement for using language correctly. They also suggest that language development is gradual and involves a series of small steps, from simple imitative behaviors to more complex linguistic structures.

Chomsky's theory emphasizes the importance of innate biological factors in language acquisition, while behaviorist theories focus more on environmental factors, such as reinforcement and imitation. According to Chomsky, the LAD allows children to rapidly and effortlessly acquire language because it contains a set of universal grammar principles that are hard-wired into the human brain and allows children to develop grammatical rules for language by analyzing the language they hear around them. He believes that this process enables children to learn a language quickly and efficiently, even if they are exposed to very limited input.

Chomsky also emphasizes the role of critical periods in language acquisition. He

suggests that there is a specific window of time during childhood when language acquisition is most effective and that after this period, it becomes much more difficult to learn a new language. It is obvious that the complex and rapid nature of language learning is due to the unique cognitive capacities of the human brain which is a biologically predetermined ability in humans.

It is obvious from the investigation on how Chomsky discussed the phenomenon of first language acquisition that he has changed his approaches in his different models from the Classical Model (1950s) till the Minimalist program (1995) and beyond. There are many factors that are supposed to contribute to this gradual change such as the empirical evidence, the criticism, technology development, seeking clarity, and the progress in linguistics field.

Chomsky's theories of language acquisition have evolved significantly over time, and while his minimalist approach represents a significant shift towards a more streamlined and componential model, it is not clear whether he has arrived at a finally harmonious and integrated visualization of the problem of language acquisition. That is because the complexity of LA processes. It is incredibly multifaceted involving cognitive, neurobiological, and sociocultural processes. While Chomsky's theories have contributed to shed light on the underlying structure of language and the role of innate knowledge in language acquisition, there is still much to be understood about how children acquire language.

Furthermore, while Chomsky's ideas have been influential in the field of linguistics and have provided a framework for further

research, they have also been the subject of ongoing debate and criticism. Some linguists have questioned the extent to which innate knowledge plays a role in language acquisition, while others have criticized Chomsky's theories for being too abstract and lacking in empirical evidence.

In conclusion, while Chomsky's theories represent significant advancements in the field of linguistics, the process of understanding language acquisition is an ongoing and complex one, and it needs to be clarified whether a finally harmonious and integrated visualization of the problem of language acquisition exists.

#### **4. Conclusion**

The analysis of Chomsky's treatment of LA problem and the development of his views about LA within his linguistic models for over 50 years is supposed to be one of the most influential and efficient approaches that leads to deep understanding of LA, linguistic critical issues, and Language science in general. In every one of Chomsky's linguistic models, Chomsky approached, developed and revised the mystery of LA to shed light on the nature of language, and linguistic psychology to investigate related linguistic complexities.

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