

**An Analysis of Theoretical Review of Generative Grammar in
Contemporary Linguistics**

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This article presents a theoretical analysis of Generative Grammar and its relevance in contemporary linguistics. The discussion begins with an overview of the origins of Generative Grammar, particularly the contributions of Noam Chomsky, who introduced the idea that language is a mental capacity governed by an internal system of rules known as Universal Grammar. Utilizing a qualitative analytical method, the article synthesizes and compares primary theoretical contributions and critiques from various linguistic schools to assess the current status and applicability of Generative Grammar. The analysis reveals that Generative Grammar continues to play an important role in linguistic theory, especially in understanding syntactic phenomena and language acquisition.

INTRODUCTION

Noam Chomsky is one of the leading scholars in both politics and linguistics (Barsky, 1998). Universal grammar places Chomsky not only on par with linguistic scholars such as Franz Boas and Edward Sapir in the field of linguistic anthropology, Leonard Bloomfield in structural linguistics, William Labov in sociolinguistics, Joseph Greenberg in typological linguistics, Steven Pinker in cognitive linguistics, and Uriel Weinreich in language contact studies, but also as someone capable of making a revolution in the field of linguistics (Higginbotham, 1982; Sampson, 1980) and in the understanding of human cognition (Barsky, 2011). Language, in Chomsky's view, is not conditioned by behavioural systems that assume the necessity of cycles and responses as understood by linguists of the behaviourist school (Higginbotham, 1982). The formulation of language in this universal grammar creates a sharp separation within the American intellectual tradition between cognitive psychology and behavioural psychology, leading to the emergence of linguistics as a branch of psychology (Bauer, 1978).

The idea of linguistic universalism in Chomsky's grammar, in addition to being formulated through a critique of behaviourism to advance the productivity of language ability that is not limited by stimulus and response, also draws its theoretical inspiration from Roman Jakobson's universal phonology and the classification of morphemes that have similarities in syntactic analysis, such as eat, drink, sleep which are verbs, while verbs themselves are a universal element of language as proposed by Zellig Harris (Sampson, 1980). Roman Jakobson was one of the main figures of the Prague school, particularly in the field of phonology, so Chomsky, in addition to inheriting the American descriptivist intellectual tradition especially from his first teacher, Zellig Harris, is also a collaborator of both schools. Regarding the genealogy of Chomskyan universal grammar theory, its tracing must consider Zellig Harris as one of Chomsky's inspirers. The term generative in the generative grammar theory with universal implications was borrowed from that first teacher. Before working with Noam Chomsky, Zellig Harris had already worked with Noam Chomsky's father (Barsky, 2011).

Contemporary linguistic studies have undergone a major transformation since the emergence of generative grammar theory pioneered by Avram Noam Chomsky in the mid-20th century (Susiawati, 2019). This theory marked a paradigm shift from a behaviourist approach to a mentalistic and cognitive approach in understanding the nature of language. Chomsky proposed that language ability is an innate aspect of human beings that is universal in nature, and not merely the result of imitation or habituation from the environment (Mehrpour & Forutan, 2015). Through this theory, language is no longer viewed as a product of behaviour, but as a complex and structured system inherent to human cognition. One of the fundamental ideas in generative grammar is nativism, which is the view that humans are born with a set of biological mechanisms that enable natural language acquisition.

Within this framework, every individual possesses a Language Acquisition Device (LAD) that forms the basis of linguistic competence (Krashen, 1981). This theory explains why children around the world are able to acquire their mother tongue in a relatively short period of time and with complex structures, without the need for intensive formal instruction. Nativism serves as a crucial foundation for the development of subsequent linguistic theories (Braine, 1994), especially in explaining first language acquisition. Furthermore, the concept of Universal Grammar developed by Chomsky explains that all human languages share structurally similar basic principles. These principles are fixed and universal, which means that the differences among languages in the world lie only in their parameters, not in their fundamental foundations. This concept underpins the hypothesis that humans have an internal capacity to comprehend and generate unlimited linguistic structures. Universal Grammar not only supports the argument for the innateness of language, but also provides a foundation for cross-linguistic analysis in the fields of typology and syntax.

Another aspect discussed in generative grammar theory is the distinction between competence and performance. Competence refers to a speaker's intuitive knowledge of linguistic rules that exist in their mind, while performance refers to

the actual realisation of language use in real-life situations (Shohamy, 1995; Taylor, 1988). Although both are interrelated, Chomsky emphasised that competence is more essential for analysis because it represents a stable internal system that is unaffected by psychological or situational factors. This distinction is crucial in linguistic research as it allows researchers to differentiate between linguistic errors caused by cognitive limitations and those caused by external conditions. The discussion in this paper also includes the definition and role of grammar within the generative framework. Grammar, from Chomsky's perspective, is a finite set of rules capable of generating an infinite number of sentences.

Thus, grammar is not only a descriptive tool, but a productive system that explains the human creative capacity in language. In transformational generative grammar, grammar consists of three main components: the syntactic component, the semantic component, and the phonological component, each of which has its own role in sentence formation and interpretation. Finally, this paper will also discuss reactions to generative grammar theory that have emerged from various linguistic schools, particularly generative semantics developed by George Lakoff and systemic functional grammar by M.A.K. Halliday. These two approaches arose in response to the limitations of Chomsky's theory, which is considered to pay insufficient attention to meaning and social context in language use. Generative semantics offers an approach that integrates meaning more directly into syntactic structure, while Halliday's theory emphasises the social and communicative function of language. The discussion of these responses provides a broader understanding of the dynamics and development of linguistic theories following the Chomsky era.

Based on the background and initial discussion of the generative grammar theory proposed by Noam Chomsky as well as its developments and the responses to the theory, this research is formulated to answer the following fundamental questions: How does the concept of nativism explain the innate human capacity for language acquisition?; What are the basic principles of Universal Grammar theory and how are they applied in linguistic studies?; How can the distinction between

competence and performance be used in language analysis, particularly in theoretical and practical linguistics?; How are the structure and function of grammar understood within the framework of transformational generative grammar theory?; What are the main components of transformational generative grammar and how do these components interact to form sentence structures?; What are the responses from other theories such as generative semantics and systemic functional grammar to the shortcomings of generative grammar theory?

Literature Review

The theoretical review of generative grammar in contemporary linguistics reveals a complex and evolving field that has significantly influenced linguistic theory since its inception in the mid-20th century. Generative grammar, primarily associated with Noam Chomsky, focuses on the innate linguistic capabilities of humans, aiming to describe the implicit knowledge that allows speakers to produce and understand an infinite number of sentences. This approach has undergone various transformations, reflecting shifts in theoretical perspectives and methodological approaches. The following sections delve into key aspects of generative grammar, its historical development, and its contemporary implications. Generative grammar emerged in the 1950s, spearheaded by Chomsky, who proposed that language is a mental object and that humans possess an innate language faculty. This theory posits that linguistic competence involves the ability to generate an infinite number of sentences from a finite set of rules and vocabulary (Klingvall & Manninen, 2023). The framework has evolved through several stages, including the Standard Theory, Extended Standard Theory, and Minimalism, each refining the understanding of syntactic structures and their relationship to meaning and sound (Bagha, 2009). Central to generative grammar is the syntactic/computational component, which constructs hierarchical structures through operations like Merge, interfacing with phonological and semantic components to map these structures to sound and meaning (Klingvall & Manninen, 2023).

Over the decades, generative grammar has faced criticism and undergone significant theoretical shifts. Critics argue that the framework's focus on syntax has overshadowed other linguistic components, such as semantics and pragmatics (Edelman, 2003). Cognitive linguistics emerged as a response, emphasizing the role of meaning and conceptual structures in language understanding, challenging the syntactocentric view of generative grammar (Fortis, 2012). Despite these criticisms, generative grammar has adapted, incorporating insights from cognitive science and psycholinguistics, although some argue that it still lacks empirical support for certain theoretical constructs like movement and traces (Edelman, 2003). Generative grammar's methodological approach involves formalizing linguistic knowledge through explicit rules and structures, aiming for a comprehensive theory of language that aligns with cognitive and neurological evidence (SHI, n.d.).

Chomsky's insistence on the explicit nature of generative grammar has sparked debate over the interpretation of 'generative' as merely 'explicit' versus its role in specifying an infinite set of sentences. The framework's reliance on mathematical and formal analysis has been both a strength and a point of contention, with some arguing that it allows for overly powerful grammatical descriptions that may not accurately reflect natural language constraints (Berwick, 1984). Generative grammar continues to influence linguistic theory, with ongoing debates about its applicability and relevance in light of new linguistic and cognitive findings (Freidin, 2016). The integration of generative grammar with cognitive linguistics and other interdisciplinary approaches offers potential for a more holistic understanding of language, bridging gaps between syntax, semantics, and cognitive processes (Edelman, 2003; Fortis, 2012). Future research may focus on refining the theoretical constructs of generative grammar to better align with empirical data and exploring its implications for language acquisition and processing (Ogawa, 2001).

While generative grammar remains a foundational framework in linguistics, it faces challenges from alternative theories that emphasize the role of meaning and cognitive processes. The ongoing evolution of generative grammar reflects broader trends in linguistic theory, highlighting the dynamic nature of the field and the need

for continued integration of diverse perspectives to advance the understanding of language.

METHOD

This study employs a qualitative-descriptive approach with a library research design. This approach is chosen to explore the theoretical framework of Noam Chomsky's generative grammar through a critical review of primary and secondary sources related to nativism, universal grammar, competence-performance, and syntactic structure in transformational grammar. The main data is drawn from the paper "Generative Grammar" and is supported by relevant literature such as works by Chomsky, Halliday, and Lakoff. The objective of this approach is to systematically describe the theory, interpret its key arguments, and evaluate the relevance of the theory to contemporary linguistic studies.

The data is collected from written documents including scholarly papers, linguistic reference books, and written sources containing discourse on generative grammar. Data collection is conducted through documentation and in-depth literature study (Polkinghorne, 2005). The researcher identifies key concepts in the texts such as the Language Acquisition Device (LAD), deep structure, surface structure, and Chomsky's hierarchy. Each data point is analysed critically and contextually to uncover relationships between concepts and to compare Chomsky's perspectives with those of other figures such as Halliday and Lakoff.

Data analysis is conducted qualitatively through the stages of data reduction, data display, and conclusion drawing (Miles, 1994). Data reduction is carried out by selecting essential information from the supporting literature. Data display is presented in the form of analytical narrative to illustrate the logical relationships between components of generative grammar. Conclusion drawing is focused on reinforcing the position of generative grammar within the realm of both theoretical and applied linguistic studies.

Although this study is library-based research, its context remains relevant to academic activities in higher education, particularly in the development of

theoretical linguistics teaching materials. The research is conducted within the professional scope of a lecturer in the field of linguistics, with the aim of producing a scholarly exposition that can be used for lectures, module development, or journal publication. The relevance of the study lies in its contribution to clarifying the generative grammar framework as a foundational tool for syntactic analysis and language acquisition among advanced learners.

DISCUSSION

Nativism

The Nativist school of thought emphasises the innate abilities of children, viewing environmental factors as secondary to their development. According to this perspective, when a child is born, they possess an inherent hypothesis about language, such as the structure of a language. Languages across the world differ in structure; for example, some follow a Subject-Verb-Object (SVO) order, while others use Subject-Object-Verb (SOV). An example of an SVO structure can be found in both Indonesian and English, as in the sentences: *Saya* (S) *bermain* (V) *bola* (O) and She (S) sings (V) a song (O). Conversely, Japanese and Korean typically follow an SOV structure, such as: '*Watashi* 'I' (S) *wa gohan* 'rice' (O) *o tabemasu* 'eat' (V) and *Abeojiga* 'father' (S) *chaeg-eul* 'book' (O) *ilg-go* 'read' (V).'

This sentence illustrates Subject-Object-Verb (SOV) word order in Japanese and Korean:

Japanese: *Watashi wa gohan o tabemasu* – 'I eat rice.'

Korean: *Abeojiga chaeg-eul ilg-go* – 'Father reads a book.'

In both cases, the subject comes first, followed by the object, and finally the verb, which is typical of SOV language structure. The world's language systems are undoubtedly complex, but the child's innate capacity for language acquisition enables them to use language at a very young age. As noted by (Saville-Troike, 1973, 2008), infants begin producing all vowel and consonant sounds from all languages around the age of six months. When children begin hearing their parents communicate, they become aware of the type of language spoken around them. They

begin to identify the specific language structure and organise it into a correct grammar system. They intuitively know that certain words function as verbs, nouns, adjectives, and so forth. They also grasp how to arrange these words into sentences. This ability is possible because children are born with a set of language learning tools referred to as the Language Acquisition Device (LAD) (McNeill, 1966).

According to Saville-Troike, there are five tendencies that explain the natural human ability for language acquisition: (1) In all languages of the world, children begin learning their mother tongue at the same age and in similar ways; (2) In all languages, children are able to master basic grammar and phonology; (3) Children can understand and produce utterances they have never heard before, even when these differ from the speech of those around them; (4) There is a cut-off point in first language acquisition, after which mastery may no longer be fully achieved; (5) First language acquisition is not solely dependent on general intelligence. Unlike behaviourists, who believe that language acquisition is based on imitation and reinforcement, nativists argue that children do not merely copy what they hear. Rather, they internalise language rules and use them to create novel sentences they have never encountered before. The following examples illustrate the application of nativist theory to English language development:

Example 1: ‘Brother is going’

When attempting to say this sentence, a child who relies only on imitation might say “brother is,” “is brother,” or “go brother.” These utterances are plausible for a child still acquiring their first language and unaware of grammatical categories and syntax. Interestingly, many children in this situation say “brother go.” While this sentence is not grammatically correct in English, the word order is logical. The subject brother precedes the verb go, indicating that the child understands the basic structure intuitively.

Example 2: ‘He hitted me just now’

This sentence features an incorrect past tense form of the verb hit, which should remain hit in past tense. The use of hitted is understandable because the child

applies a general rule of adding -ed to form the past tense. Like in the first example, the word order is correct: he (subject) precedes hitted (verb), followed by me (object). This shows that the child is not just copying speech but actively constructing language based on internalised rules.

Example 3: ‘Go!’ (intended meaning: ‘You must go away now!’)

In this example, the child simplifies a complex sentence into a single-word command. Although the full sentence is beyond the child's production capability, they choose ‘go’ a verb representing action. This suggests that the child understands the central concept of verbal action and is able to express intent even with limited vocabulary. Such behaviour supports the theory that children are born with an internal language learning mechanism, or LAD. These examples collectively reinforce the idea that language acquisition is not merely a process of environmental mimicry but an innate, biologically grounded ability that allows children to produce language creatively and systematically.

Universal Grammar

Universal Grammar is a linguistic theory that postulates the existence of a set of inherent principles shared by all human languages. This theory seeks to explain the commonalities in language acquisition across different linguistic systems, transcending the boundaries of individual languages. The human capacity to acquire any language prompted Noam Chomsky, a prominent linguist of the 1950s, to propose the hypothesis that all languages are underpinned by a universal grammatical structure. The emergence of this hypothesis generated considerable interest and debate within the linguistic community and subsequently evolved into a scholarly movement aimed at uncovering the universal principles governing human languages, now referred to as Universal Grammar. Chomsky began formulating this theoretical framework in 1957.

He argued that the ultimate aim of Universal Grammar is to establish a general grammar that accounts for all languages (a goal of universality). In line with this, proponents of the nativist perspective conducted extensive research, which

culminated in the development of Universal Grammar theory. For Chomsky and his supporters, Universal Grammar is closely associated with the logical structure of language (i.e. linguistic input) and the innate human capacity for language. This capacity is conceptualised as a set of ‘innate universal rules’ (Aziz, 2009). Without such universal rules, it is argued, the world's languages would differ so drastically that mutual understanding and communication would be virtually impossible.

Given the universal nature of language, it can be observed that all languages possess systematic structures and rules, with no language enjoying absolute exceptionality. This universality is especially evident in early language acquisition. The rules of Universal Grammar are thought to be permanently embedded in the human mind from birth. Consequently, the acquisition of these rules is considered an innate, biological faculty present in all neurologically normal individuals, regardless of their native language, cultural background, or educational attainment. Language acquisition, therefore, occurs naturally in all human beings as long as they are not subjected to severe cognitive or physiological impairments that would hinder their ability to perceive, comprehend, or produce language. This theory stands in contrast to behaviourist perspectives, which posit that language is acquired through learned behaviours, physical practice, and repetition.

In contrast, Universal Grammar holds that language is a natural faculty of the mind an intrinsic part of human cognition from birth. There are several linguistic features that are universally present across languages. These include (1) Verbs denote actions, processes, or states that do not qualify as attributes; (2) Transitive verbs inherently require the presence of a subject; (3) Intransitive verbs do not require additional complements, as their meaning is self-contained; (4) Adjectives modify nouns or pronouns, specifying their quantity and quality; (5) Pronouns function as substitutes for nouns or noun phrases; (6) Adverbs modify verbs, adjectives, numerals, and can even modify entire sentences. Numerals indicate quantity, grouping, or order of nominal elements (Fishman, 1972; Gumperz & Cook-Gumperz, 2008; Halliday, 1993; Poedjosoedarmo, 1984).

Universal Grammar theory encompasses a set of grammatical elements and principles innately present in all human languages, enabling children to structure linguistic input in specific ways. These principles are derived from what Chomsky terms the Language Acquisition Device (LAD), and include both substantive and formal universals (Mahmud & Idham, 2019). Chomsky metaphorically refers to this inborn linguistic faculty as a ‘small black box’ in the brain (McNeill, 1966) elaborates that the LAD includes four innate linguistic capabilities; the ability to distinguish speech sounds from other environmental sounds, the ability to categorise linguistic data into classes that can later be refined, the understanding that only specific linguistic systems are possible while others are not, the capacity to evaluate developing linguistic systems and construct the simplest possible system based on available input. Through the LAD, children can acquire the language of their environment rapidly and effectively, even with limited linguistic exposure.

Competence and Performance

In his seminal work *Aspects of the Theory of Syntax* (Chomsky, 2014), Noam Chomsky posits that linguistics is fundamentally a branch of psychology concerned with human cognition. He introduces the distinction between two essential components of language: competence and performance, which together form the basis of linguistic behaviour. The first component, competence, refers to an abstract, inherited capacity embedded in the human mind that enables language processing. It represents the internalised knowledge a speaker has about their language, including phonological, semantic, and syntactic systems. In essence, competence denotes a speaker’s subconscious understanding of the rules that govern their language. Chomsky argues that most of the utterances we hear from native speakers are novel, yet speakers are able to produce and comprehend them effortlessly due to this internal linguistic knowledge.

The second component, performance, refers to the actual use of language in real-life situations. It is the observable manifestation of competence, shaped and often constrained by various psychological and environmental factors such as memory limitations, fatigue, distraction, emotional states, and other extralinguistic

conditions. These external factors may interfere with the accurate realisation of one's linguistic competence during speech production or comprehension. Thus, while competence reflects the idealised, cognitive knowledge of a language, performance involves its practical execution in communication. For performance to accurately reflect competence, these extralinguistic influences should ideally be minimised. In other words, performance is the actual use of language in real communicative contexts language as it is spoken and understood in daily life.

Figure 1. Inaccurate utterance due to heightened emotional state

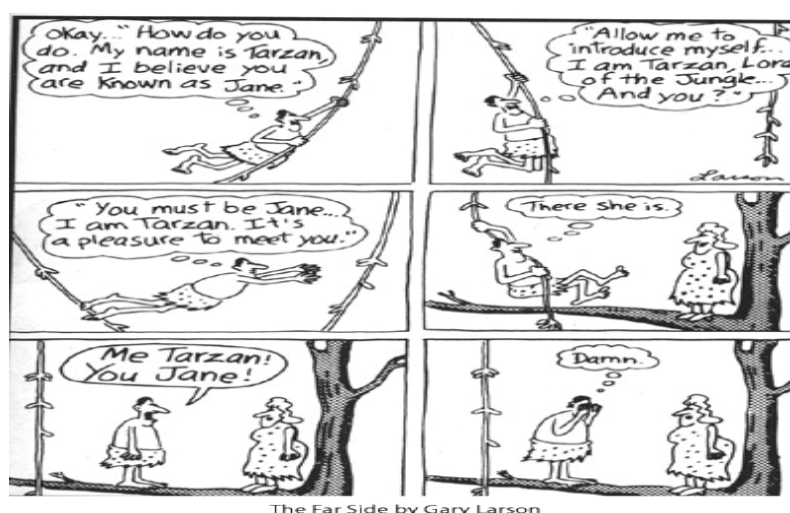


Figure 2. Inaccurate utterance due to memory limitation



According to Chomsky, grammar consists of a finite set of rules that can generate an infinite number of sentences. In their performance, a person can produce and comprehend an unlimited variety of sentences many of which may never have been spoken or heard before. Even if a similar sentence has previously been uttered, it is unlikely to be reproduced in exactly the same way. This ability is referred to as the creative aspect of language (Abdul, 2012). Unlike most linguistic research particularly descriptive linguistics which uses performance as the primary object of study, generative grammar as proposed by Chomsky considers competence to be the central focus of linguistic inquiry, although performance remains important. Therefore, distinguishing between competence and performance is crucial for identifying whether a linguistic mistake is due to a momentary speech error or a lack of knowledge of the language itself. This distinction serves as a measure of one's actual linguistic competence.

For instance, suppose you are a native speaker of English and you say:

"We swimmied in the ocean this weekend."

Figure 3. Grammatical error made by a native speaker



This constitutes an error in performance, rather than in competence. As a native speaker, one possesses an inherent understanding of how to inflect irregular verbs, such as converting swim into swam in the past tense. However, due to extralinguistic factors such as cognitive fatigue, emotional disturbance, or momentary lapses in attention language performance may decline, resulting in utterances like *swimmed* instead of the grammatically correct swam. Linguists employ the distinction between competence and performance to differentiate between a speech lapse made by a native speaker (reflecting temporary disruption in performance) and an error committed by a child language learner or a non-native speaker, who may not yet possess full knowledge of the grammatical rule (thus reflecting a gap in linguistic competence).

Components of Transformational-Generative Grammar

The analysis of transformational-generative grammar seeks to uncover the knowledge and capacity of speakers to comprehend and produce an infinite number of sentences. Transformational-generative grammar functions as a precise system of rules that recursively generates a vast array of sentence structures. This rule-based system can be analysed into three core components: the syntactic component, the phonological component, and the semantic component. The syntactic component characterises and generates an infinite set of abstract structures, each encompassing all the information required for the interpretation of a particular sentence. The phonological component determines the phonetic form of a sentence generated by the syntactic rules. It links the syntactic structures to their corresponding phonetic representations. Meanwhile, the semantic component provides the semantic interpretation of a sentence. Both the phonological and semantic components serve as interpretive components.

Each of these components utilises the information provided by the syntactic component of the language and interacts with one another. As a result, the syntactic component must represent each sentence in terms of two levels of structure: the deep structure and the surface structure. The deep structure is responsible for determining the semantic interpretation, while the surface structure is derived through repeated

applications of specific transformational operations. The syntactic component must generate both the deep and surface structures and establish a link between them. The fundamental subcomponent of the syntactic component is a system of base rules that generates a finite set of phrase marker sequences, each possessing a specific structural description. These basic phrase markers constitute the foundational units of the deep structure. In essence, these are referred to as base rules. Beneath each sentence lies a sequence of linguistic elements known as the base phrase marker, generated by the base component of the syntax.

In addition to the base, the syntactic component of transformational-generative grammar also contains a transformational subcomponent. The syntactic component accounts for sentences that are derived as surface structures from base-generated structures. Since the base rules only produce a limited number of phrase markers, they typically correspond to kernel sentences. Thus, the transformational rules expand the expressive capacity of the grammar by generating non-kernel (derived) sentences from these core structures. A diagram representing the relationships between syntactic, phonological, and semantic components, along with the processes from deep structure to surface structure.

Noam Chomsky stated that a grammar must explain or account for the reality and phenomena of language that are described. This means that he uses a deductive system and connects it to what has been done in traditional grammar, while discarding the imperfections of the traditional grammar form. The distinction between deep structure and surface structure requires transformation rules. This demonstrates the inability of taxonomic grammar to provide semantic explanations and accounts according to the sentence of a language. Instead, Chomsky emphasizes the relationship between language structure and logical structure.

Deep structure represents the totality of grammatical functions and relationships between lexical elements, which provide the semantic content of a sentence. This process occurs in two stages: First, the 'rewrite rules' of the base form, which generate a pre-terminal sequence composed of grammatical elements and symbols. This sequence determines the grammatical aspects of the sentence.

Second, at this level, symbols are replaced by lexical elements that determine the semantic aspects of the sentence. These lexical elements are complex symbols with phonological, semantic, and syntactic features. In the deep structure, three logical foundations are found: (1) the classification of word classes (lexicon); (2) the classification of relationships (grammatical relations between various elements of the lexicon); and (3) the classification of functions.

The subcategorization rules generate basic sentence patterns and descriptions for the structure of each sentence, known as the markers of the basic phrase structure. These become the elements of the deep structure. The lexicon is a list of morphemes along with the necessary information for semantic, syntactic, and phonological interpretation. Although the exact form of the lexicon is not yet clearly understood, information such as word type, elements that can precede or follow them in a sentence, whether abstract or not, must be included in the lexicon. Transformation rules modify the deep structure generated by the lexicon category rules into the surface structure. The semantic component provides a semantic interpretation to the sequence of elements produced by the base subcomponent. The meaning of a sentence generated is determined by the semantic subcomponent. The meaning of a morpheme can be described by providing the meaning or semantic features that constitute the meaning of the morpheme. For example, consider the words ‘father’ and ‘mother’ compared with ‘pencil’ and ‘chair.’ We can see that ‘father’ and ‘mother’ have the semantic feature of ‘living being,’ while ‘pencil’ and ‘chair’ do not have the semantic feature of ‘object.’ Therefore, we can accept the following sentences (1) and (2), but not (3) and (4) as follows:

(1) Father likes to eat durian.

(2) Mother likes to eat durian.

(3) *Pencil likes to eat durian.

(4) *Chair likes to eat durian.

Why are sentences (3) and (4) not acceptable? Because the verb 'eat' can only be performed by a noun with the semantic feature of living being and cannot be performed by one with the semantic feature of 'object.' The phonological component provides a phonological interpretation to the sequence of elements produced by the transformation rules. Using phonological rules, the sequence can be pronounced. Unlike structuralist grammar, which attempts to describe the characteristics of specific languages, transformational grammar attempts to describe the universals of language. Chomsky described the phonological component as the component that breaks down each sentence that is spoken or sounded out. In other words, it is concerned with realizing the phonetic representation of each sentence.

The Reaction of Generative Transformational Theory to Generative Grammar

Just as Chomsky was dissatisfied with the structuralist theory developed with his teacher Zellig Harris, which he argued could not solve linguistic problems, especially in the field of syntax, Lakoff, along with his colleagues, responded to Chomsky's generative transformational theory. As a result of this reaction, Lakoff developed a theory known as generative semantic theory. The emergence of this theory was driven by his dissatisfaction with the semantic analysis presented by generative transformational theory. In generative transformational theory, Chomsky posits that semantics and syntax are distinct entities with different internal structures. This is demonstrated in a quote from Chomsky in the book *Semantic Generative* written by (Lakoff, 1969), where Chomsky remarks, Chomsky remarks that properties of surface structure play a distinction role in semantic interpretation. 'However, according to generative semantic theory, semantic and syntactic structures are homogeneous, meaning that they can be analysed together and linked to each other using only transformational rules' (Abdul, 2012). This is because the semantic structure is the same as the logical structure, which does not have a periodic connection between the predicate and the set of arguments in a proposition.

Systemic Functional Grammar

Michael Alexander Kirkwood Halliday, born in Leeds on April 13, 1925, is now 91 years old. M.A.K. Halliday is an Australian linguist, born in England, who is known as the creator of the model of Systemic Functional Linguistics (SFL). Halliday began his career as a Mandarin language teacher in London before publishing his seminal paper on the SFL model in 1961. He was a member of the European group of linguists associated with the Prague School. Halliday's background in both English and Chinese, particularly with regard to its unique morphology, influenced his decision to not assign morphology as an independent level of analysis in his linguistic theory. In 1976, Halliday moved to Australia as the Foundation Professor of Linguistics at the University of Sydney, where he remained until his retirement. His work has also significantly influenced fields outside linguistics, such as visual and multimodal communication, and he is regarded as a founder of social semiotics. Halliday has also contributed to both theoretical and applied linguistic realms, advocating for the application of our understanding of the fundamental functions of language in the field of education.

To trace the career of M.A.K. Halliday as a linguist and the founder of Systemic Functional Grammar (SFG), we cannot overlook the early influence of two figures from the London School of Linguistics: J.R. Firth (1890–1960) (Rorty, 2012) and Bronislaw Malinowski (1884–1942) (Senft, 2009), who followed a continental structuralist approach with a tendency to apply practical aspects. Unlike Malinowski, who was an ethnographer and cultural anthropologist famous for his research on the Trobriand Islands in the South Pacific, Firth became the first professor of general linguistics in England and played a key role in developing linguistics as an independent academic discipline. He also continued and advanced Malinowski's social and functional approach to language.

Firth is considered the first to use the term 'system' in a new sense, which later became the technical term 'systemic' in the context of SFG. Malinowski's influence on Halliday can be seen in his classification of language functions into three meta functions: ideational, interpersonal, and textual. Given the early influence

Halliday received and utilized in developing his functional model of language architecture, it is not surprising that Halliday and his followers are often referred to as the "Neo-Firthian" school, a descendant of the London School of Linguistics. Malinowski and Firth's ideas significantly impacted Halliday in the development of SFG. Malinowski's idea that "meaning is function in context" influenced Halliday's theory, which links grammar, meaning, and context. Firth, as a linguist, emphasized the importance of balancing 'anatomy' and 'physiology' when studying linguistic phenomena. This view was a reaction to the American structuralist school led by Bloomfield, which overly emphasized 'anatomy.' Halliday followed this stance by developing an approach that emphasized function as a response to Chomsky's formalism. To clarify the differences between the theory proposed by Chomsky on Generative Transformational Grammar and the theory proposed by Halliday on Systemic Functional Grammar, the following table has been created:

Table 1. Differences Between Chomsky's and Halliday's Theories

Chomsky	Halliday
The Study of Language Is Limited Only to Language for Its Own Sake	The Study of Language Involves Aspects of Social Inquiry
Formalism (Mental Phenomenon)	Functionalism (Social Phenomenon)
Influenced by Zellig Harris and Jacobson	Influenced by Firth, Malinowski, and the Prague School
Prioritises Syntactic Structure or Sentence Form	Prioritises Semantic Structure or Sentence Meaning
Psychology	Anthropology, Sociology, Psychology

The generative transformation theory focuses on language at the sentence level, specifically examining syntax, semantics, and phonology. In contrast, Halliday's theory connects language with the social context of society. Chomsky's theory is known as formalism or cognitive theory, which suggests that language is an innate structure present since birth. According to Chomsky, children have an intuitive understanding of language because the concept of language is already embedded within them. On the other hand, Halliday's theory, known as

functionalism, views language as a communicative tool that emerges through human interaction. This view contrasts with Chomsky's belief that language acquisition is unaffected by environmental factors. As we know, Chomsky developed the generative transformation theory due to his dissatisfaction with his mentor Zellig Harris's analysis of language, particularly in the syntactic domain. Chomsky sought to transform sentences using tree diagrams. In addition to Zellig Harris, Chomsky was also influenced by the Prague School of Linguistics, particularly Roman Jakobson, who pioneered the concept of a universal phonological system. In contrast, Halliday's theory of systemic functional grammar (SFG) was influenced by both continental structuralism and the Prague school. His structuralism influences came from his mentors, Firth and Malinowski, the latter being a cultural anthropologist and a pioneer of linguistic anthropology. Halliday's view on functionalism in sentences also came from his exposure to the Prague School.

In terms of application in other studies, Chomsky's theory is frequently used in psychology, particularly in studies of language acquisition, due to his belief in the genetic nature of language, proposing that the human brain is equipped with a universal language structure (Language Acquisition Device). This theory in psychology is referred to as cognitive genetic theory. Meanwhile, Halliday's structural-functional theory in linguistics is assumed to be influenced by three academic fields: anthropology (which emphasizes semiotic systems), sociology (which focuses on social roles and status), and psychology (particularly behaviorism and consciousness theories). These three influences are rooted in the work of Ferdinand de Saussure, who is considered the founder of modern linguistics and claimed that functionalism stems from structuralism.

CONCLUSIONS

The study of generative grammar involves several core concepts that explain how language operates in the human mind. One central idea is nativism, which asserts that language ability is innate rather than entirely learned. This view is closely tied to Universal Grammar, a theoretical set of structural rules shared by all human languages. Chomsky also introduced the distinction between competence (a

speaker's internal knowledge of language) and performance (actual language use), emphasizing the importance of studying the former. Another major focus is the role of grammar, particularly the abstract syntactic rules that govern sentence formation. These elements culminated in what became known as transformational generative grammar, which includes components such as phrase structure rules, transformational rules, and deep and surface structures. These theoretical tools help explain how different sentence forms relate to one another and how humans produce grammatically correct sentences even without explicit instruction, reflecting the theory's cognitive depth.

Transformational generative grammar marked a significant advancement in linguistic theory by providing a formal system to explain the structure of language. This model introduced several components that work together to generate grammatical sentences from a set of abstract rules. At its core are phrase structure rules, which define how words combine into phrases and sentences. Transformational rules modify these structures to account for variations such as questions, passive constructions, or embedded clauses. Chomsky's model also introduced the concepts of deep structure and surface structure where deep structure represents the core meaning of a sentence and surface structure represents its spoken or written form. This framework allowed linguists to systematically explain sentence ambiguity and syntactic movement. Over time, the theory evolved through refinements such as the Government and Binding Theory and the Minimalist Program, yet the foundational components of transformational grammar continue to be essential for understanding syntactic relationships in human language.

Chomsky's theory of generative grammar has had a profound influence beyond linguistics, particularly in the field of psychology. His idea of an inborn Language Acquisition Device (LAD) suggests that children are biologically predisposed to acquire language, supporting the notion that grammar is part of human cognition. This view provided an alternative to learning-based models and has been central in discussions about how language develops in the brain. However, Chomsky's ideas have also sparked critical reactions from other linguists. For

instance, Michael Halliday challenged generative grammar from a functionalist perspective, focusing on language use in social contexts rather than abstract competence. George P. Lakoff, drawing from cognitive linguistics, questioned the innateness hypothesis and emphasized the role of meaning and conceptual structures in shaping grammar. Despite these critiques, Chomsky's theory remains influential, providing a formal and explanatory model that continues to inspire research in both theoretical linguistics and cognitive science.

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