



## **Chomsky and Transformational Grammar**

**Prof. Israa Burhanuddin Abdurrahman (PhD)**

**israaburhan@tu.edu.iq**

**Tikrit University**

**College of Education for Women**

**Department of English**

**(3<sup>rd</sup> Year) BA Program**

**(Linguistics)**

**2023**

**2024**

## Chomsky and Transformational Grammar

Between 1933 and 1957, linguistics had set itself the task of perfecting 'rigorous discovery procedure,' i.e., finding a set of principles which would enable the linguist to discover a grammar from a mass of data collected from an informant (usually a native speaker). In 1957, at the height of structuralism's influence on linguistic studies, a young professor of Modern Language, Avram Noam Chomsky, at the Massachusetts Institute of Linguistics and Technology, published a (108) pages monograph entitled Syntactic Structures. This book challenged many of the basic beliefs of linguistics in his theory of language structure known as T.G.G. (Transformational Generative Grammar). Chomsky is the student of the structuralist Z. Harris, who started as a structuralist and 55 ended as a transformationalist. He received his earliest training at Bloomfieldian school of structural linguistics.

In that small book, Chomsky criticized the structuralist approach to language study. He maintained that the entire structuralist theory had been built upon wrong assumptions rejecting their method of taxonomic linguistics (i.e., data-gathering techniques and classification of data) and their belief in the adequacy of 'discovery procedure'.

*Note: Taxonomic Linguistics is an approach to linguistic analysis and description which looks at language phenomena with the primary aim of listing and classifying them into groups, for example, part of speech in grammar and types of consonants in phonetics. Followers of T.G.G. have often criticized such taxonomic description as lacking a systematic theoretical framework.*

The publication of Syntactic Structures proved to be a turning point in the 20th C. Linguistics. In this and subsequent publications, Chomsky developed the conception of 'generative grammar', which departed radically from the structuralism and behaviourism of the previous decades. Chomsky's proposals

were intended to discover the mental realities underlying the way people use language. Thus, the influence of the mentalism school is most marked in his work especially in his notion of 'competence' and 'innateness' and in his general view concerning language and mind indicating that "mental states and processes can explain behavior." He introduced many of his early theories and concepts in his *Syntactic Structures* and his well-known Review of B. F. Skinner's *Verbal Behaviour* (1959). In this book, he criticized behaviourists as they failed to offer a scientific explanation of how it is possible for a child at the age of five or six to produce and understand large number of sentences that he has not previously heard. Rejecting the structuralist's view, Chomsky emphasized that utterances cannot be identified as 'grammatical' only on the basis of their having been spoken and then collected by a linguistic field worker. An adequate grammar should be able to explain rather "what the speaker knows to be possible," i.e., to be able to produce and understand from limited number of rules unlimited number of grammatical utterances even those he has never heard before. Chomsky insisted that a grammar theory to be adequate must be able to explain native speaker's linguistic intuitions (i.e., a grammar knowledge that every speaker has in his head). Unlike Chomsky, structuralists did not believe in such words as 'mind', 'insight' and 'intuition'.

*Note (1): We should avoid the mistake of viewing Chomsky's T.G.G. as an extended structuralist theory although his grammar is like theirs in being syntactically based but his goals are fundamentally different.*

*Note (2): The work of Chomsky embodies a recognition of the strength of traditional and structural work, but formalizes the descriptive mechanisms of these studies and suggests means of correcting the weaknesses of their methods.*

## **Some General Notes and General Characteristics of T.G.G.**

1. The transformational theory has undergone several stages of development:
  - a) From 1957 through 1964, the transformational-generative theory of language focused primarily on syntax rather than on semantics. Chomsky indicated that "a grammar model should be based on syntax rather than on semantics. Syntax is an independent component of a grammar system and one which is primary." This shows that the early theory was concerned more with form than meaning. Thus, in 1957, 57 transformationalists followed the linguistic ladder starting with syntax, phonology and semantics. This means that syntax is central and we first need sentences to express our ideas not sounds.
  - b) In 1965, Chomsky modified his theory as he published his book *Aspects of the Theory of Syntax* (The Aspects Model) or (The Standard Theory). It is the most influenced book of grammar in the second half of the 20th C. According to this model, the linguistic ladder started with semantics, syntax and phonology. Still syntax is central and most important than the others that are called 'interpretive'. For example, if we want to give a talk, you first arrange the idea thinking of the rules of grammar taken from the syntactic component such as NP (Det) + N + (PL). These rules organize the idea, but we need meanings to arrange the idea semantically. Therefore, we go up to the semantic component (so it is interpretive). Finally, we have to apply the phonological rules of language to be able to speak. Thus, we go down to the phonological component taking pronunciation. So, it is interpretive too.
2. Chomsky's theory at the beginning was called transformational grammar. Then, it was called generative grammar. It is pure generative as it is a kind

of grammar, which is specialized to change one structure to another. Thus, if language is not transformational, it will be a static language without life. The relationship between language and life is that language satisfies human needs. So, language without transforms is lifeless. As last, it was called transformational generative grammar (T.G.G.). It is structural, but in a new way. It is Phonology called transformational, because it depends on transformations. It is called generative, because it generates all and only the possible grammatical sentences.

3. Chomsky believes in the universality of human languages. He believes that all human languages are but one and the same, i.e., languages share the general linguistic features and levels like: phonology, morphology, grammar and so on. They differ only in some specific points (language specifics). The transformationalists have a theory which should be applicable to all human languages. Chomsky believes that a linguistic theory should be universal. Structural linguists, on the other hand, do not believe in language universality although traditional grammarians believe in it considering Latin as a model (a language containing universal rules that can be applied to any language).
4. T.G.G. lays heavy emphasis on the native speaker and his intuition. The native speaker is a major thing in T.G.G. The transformationalists concentrate on the native speaker's knowledge and his linguistic competence (i.e., the rules and word images stored in his mind). According to them, the native speaker is the one who can decide whether something is right or wrong by his intuition. The structuralists also consider the native speaker as the source of information, but their method of collecting data was based on observations and they take information from the speech of the informant which represents language behavior. Chomsky indicates that

speakers use their competence (abstract knowledge of language) to go far beyond the limitations of any corpus by being able to create and recognize novel sentences and to identify performance errors (in speech).

5. It is believed (according to T.G.G.) that a native speaker has in his intuition what is called 'competence' and 'performance'. Competence is all native speaker's knowledge about his language which enables him to understand and generate unlimited number of sentences even those he has not heard before. This competence is stored in his mind in the shape of rules and word images, and when he speaks, he uses these rules unconsciously. Performance is the actual use of competence in real situations. It is found in the form of speech and writing. This parallels Saussure's concept of 'langue' and 'parole'.
  
6. Transformationalists believe in level mixing (i.e., linguistic levels) which is very important in linguistic analysis, i.e., we can use one level to explain things related to another level. In T.G.G., the linguistic levels start with semantics, syntax and morphology. They believed that one level must be applied to another, i.e., we must mix all levels together. The structuralists, on the other hand, do not believe in level mixing at all. They refuse it completely believing in level separate. They believe in the order: phonology, morphology, syntax giving priority to phonology, as speech is the source of information to them.
  
7. The theory divides sentences into two types:

a) **kernal**, i.e., the original sentence / the basic sentence pattern, a sentence which has not received any change yet, as in "Zeki can open the box" and,

b) **derived** or **transformed** sentences that have received one or more changes, as in, e.g.:

- Zeki cannot open the box. (1 change Neg.)
- Can't Zeki open the box? (2 changes Neg. + interr.)
- Can't the box be open by Zeki? (3 changes Neg. + interr. + passive)

8. They believed that a language has a number of transformational rules. This number is fixed. These finite rules generate infinite number of acceptable sentences (transformed from basic ones). Some of these transformations are universal such as: negative and interrogative. Some others are particular or not universal. Sometimes there are universal rules, but they are applied on languages differently, e.g., passivization.

9. They differentiate between deep structure (DS) and surface structure (SS). Deep structure is the abstract syntactic representation of a sentence (also referred to as an underlying or base structure) – the original form to which no change has happened yet. It goes with competence in the mind. Competence Deep Structure Kernal sentence e.g., Zeki cut Zeki. A surface structure of a sentence, on the other hand, is the final stage in the syntactic representation of a sentence – the form which has received one more changes. It goes with performance in speech or writing: Performance Surface structure Transformed sentence e.g., Zeki cut himself. (Reflexivization transformation)

**10.** Structuralists cannot differentiate between sentences, which are similar on the surface but have different deep structures. But transformationalists can do this and analyse ambiguous sentences too: e.g.,

(1) John is eager to please.

(2) John is easy to please. Structuralists say these two sentences are alike as they focus on the surface structure, but Chomsky in his *Syntactic Structures* shows the difference between them referring to their deep structures saying: In sentence

(1), John pleases somebody, whereas in sentence

(2) somebody pleases John. Transformationalists also interpret ambiguous sentences such as: e.g., Ann whacked a man with an umbrella. This sentence has two interpretations:

(a) Ann had an umbrella and she whacked a man with it.

(b) Ann whacked a man and the man happened to be carrying an umbrella.

**11.** They believed that sentences are unlimited in number. Sentences of a language must be well-formed, i.e., they must be syntactically and semantically acceptable. Any sentence which is not well-formed must be rejected. The native speaker is the one who decides the wellformed sentences.

**12.** Transformational rules are either optional or obligatory. An obligatory rule is that one which must be applied, otherwise the sentence is sentence is not right or incorrect, e.g., the rule of reflexivization (Zeki cut himself). An optional rule is that one which may or may not be applied like negative or interrogative transformations.

**13.** Transformational rules have the property of 'recursiveness', i.e., the capacity to be applied more than once in generating a given sentence. In



the following sentence, for example, the rule of relativization is applied twice. e.g., This is the dog than chased cat that killed the rat.

- 14.** Transformations do four processes: a) rearrangement / position change b) Substitution / replacement c) addition d) deletion These processes can be clarified in the examples below: e.g., Ali has taken the keys. (Active) The keys have been taken (by Ali). (Passive) a) Rearrangement of the object (the keys) has become the grammatical subject in the transformed sentence; b) 'have' replaces 'has'; c) 'been' is added, and d) 'Ali' is deletable, since deletion is optional or obligatory.