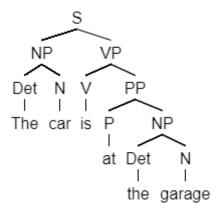
Namık ÜLKERSOY

1. Introduction

The goal of this chapter is to emphasize the importance and necessity of syntax in the field of English language teaching, with a focus on the theory of Government and Binding. The rules that constitute the word order of a language play an important role in teaching grammar. A language teacher must have more than sufficient knowledge of how words are put together in order to form complex sentences. We believe that syntactic analysis provides a useful insight for teachers. Earlier syntactic theory (Chomsky, 1957) analyzes sentences in terms of Phrase Structure rules and a set of transformational rules that form any type of sentences. Phrase structures mainly deal with the structuring of the noun phrase (NP), the verb phrase (VP), the prepositional phrase (PP), and the adjective phrase (AP). For instance, a noun phrase such as 'an extremely difficult task' can be analyzed as NP \rightarrow Det Adv Adj N. Phrase Structure formulates the sentence as: S \rightarrow NP VP.

Chomsky (1957, p.52) also suggests that there may be grounds for viewing Phrase Structure as insufficient: "the strongest possible proof of inadequacy...is to show that it cannot apply to some natural language". However, the application of Phrase Structure theory to English sentences has proven Chomsky's theory to be adequate. Chomsky's (1957) approach proposes a syntactic tree diagram such as the following:



The Government and Binding theory has emerged as an elaborate theory of syntax proposed by Chomsky (1988). This time, the X-bar theory has formed the skeletal structure for syntactic tree diagramming. In a later study, Haegeman (1994) presents the X-bar theory as a replacement for the Phrase Structure rules using the notions of head and complement. Haegeman proposes the following schemata:



This representation applies to all phrases and therefore one does not need to talk about complex Phrase Structure rules any more. For instance, a verb phrase can be shown as



Phrase Structure rules do not need to be accounted for each type of phrase as in earlier syntactic theories. Haegeman (1994, p.104) proposes a general rule for phrase structures:

$$XP \rightarrow Spec; X'$$

 $X' \rightarrow X'; YP$

In X-bar theory each phrase needs to have a head and a complement. XP is the maximal projection of any phrase. For English, XP will have the following structure:

2. Government and Binding Theory

In his discussion of Government and Binding theory (GB), Chomsky (1988, p. 163) defines the rule of government as follows:

 α governs β if and only if

- (i) α equals X^0
- (ii) α c-commands β and if γ c-commands β then γ either c-commands α or is c-commanded by β

The concept of government applies in case assignment in that a verb assigns case to its complement under government. B is almost always a noun complement and its case is assigned by the head α .

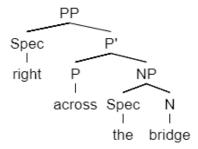
To understand government better, it is also essential to define what c-command is. Black (1999, p.41) refers to c-command as the notion of 'higher in the tree than' and explains c-command as follows:

 α c-commands β if and only if

a. α does not dominate β , and

b. the first branching node that dominates α also dominates β .

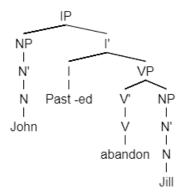
The notion of c-command can be explained more easily by means of a syntactic tree diagram.



In the tree diagram above, Spec and P' are dominated by PP and they c-command one another. Similarly, P and NP, and Spec and N c-command each other.

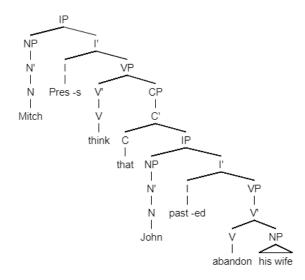
3. The Inflectional Phrase (IP)

The sentence (S) node of the syntactic tree in earlier theory (Chomsky, 1957) is replaced by inflectional phrase (IP). Haegeman (1994) proposes that tense is a category dominated by INFL which is the replacement for Auxiliary in the earlier theory. INLF is represented by the I node in the tree diagram as in as the following tree indicates



4. Complementizer Phrase (CP)

Sentences that take complement phrases are analyzed under CP as in 'Mitch thinks that John abandoned his wife'. The tree diagram represents the sentence as follows:



5. Case Theory

The theory of GB examines case assignment in terms of phrase structure. Black (1999) illustrates case assignment as follows:

- a. Nominative Case is assigned to the NP specifier of I: <u>John and Mary got married.</u>
- b. Accusative case is assigned to the NP sister of V or P:

John attacked the burglar.

For him to quit smoking is hard.

c. Genitive case is assigned to the specifier of N: <u>Mary's father</u> is in the hospital.

As far as morphological case marking is concerned, the apparent case marking is only observed in the genitive case in English (Haegeman, 1994). Syntactic approach to case marking provides useful insights for the analysis of certain ungrammatical structures such as the following:

- i) *Him started the quarrel.
- ii) *It is difficult her to forgive me.
- iii) *I would like very much her to leave the party.
- iv) *For she to marry John is impossible.

Phrase structure rules can account for the ungrammaticality of the four sentences above. In (i), a verb cannot assign the accusative case outside its governing area. For both (ii) and (iii), a preposition is required for the assignment of the accusative case. In (iv), the preposition is unable to assign the nominative case outside its governing area because it requires an object pronoun such as *her* for the accusative case assignment.

6. Binding theory

Haegeman (1994) examines binding in terms of two factors, binding and antecedent and the locality constraints. Binding is explained with specific reference to antecedent; that is, a reflexive pronoun must be bound by an antecedent. The co-indexation in the following example lays out the fact that the reflexive pronoun is bound by its antecedent subject NP:

John_i might have hurt himself_i.

Binding also accounts for the ungrammaticality of a sentence such as the following:

*Herself cleaned the entire house.

The sentence above is not grammatical since a reflexive pronoun cannot be used freely in an English sentence. It must be bound by an antecedent such as the pronoun *she* or a proper name such as *Mary*.

Locality constraints are also considered important in binding. A reflexive pronoun must be bound inside its local domain. The following example clarifies the notion of local domain:

*[IP John_i believes [CP that Mary hurt himself_i]

This sentence is ungrammatical because the reflexive *himself* is outside the local domain (IP) of its antecedent *John*. The NP *Mary* inside the local domain of the reflexive cannot be coindexed due to the lack of gender agreement. On the other hand, the following example would be grammatical since binding occurs inside the local domain (CP) of the reflexive:

[IP Mary believes [CP that John_i hurt himself_i].

Black (1999, p. 43) cites the formula for binding as follows:

 α binds β if and only if

- a. α c-commands β
- b. α and β are coindexed

One important fact about binding is that even when the reflexive and its antecedent are in the same local domain, the reflexive cannot precede its antecedent as in the following ungrammatical sentence:

*I hope [CP herself_i to forgive Mary_i]

Rules for binding also hold for the reciprocal *each other* (Haegeman, 1994). However, there is one difference, that is, a reciprocal is always plural and thus requires a plural antecedent as in examples a and b:

- a. John and Mary love each other.
- b. They hurt each other.

Structures such c and d below are not acceptable since c lacks a plural antecedent and d has no antecedent at all:

- c. *He stabbed each other.
- d. * Each other are leaving.

7. Move α

One of the essential components of the GB theory is movement. Sells (1985, p.54) defines movement in terms of the move α rule: "The relation between levels of representation is mediated by the transformational operation, move α (move anything anywhere)". In Haegeman (1994), movement is analyzed in two categories, NP movement and WH-movement.

8. NP movement

GB examines NP movement with reference to passives and raising. The following example borrowed from Haegeman (1994, p. 306) illustrates how NP movement is done in passive structures:

a. This story was believed by the villagers.

This sentence has the D structure in b:

- b. [IP e [r was [VP believed [NP this story]]]] by the villagers]]].
- c. [P] [NP] This story[P] [P] was [P] believed [P] by the villagers [P].

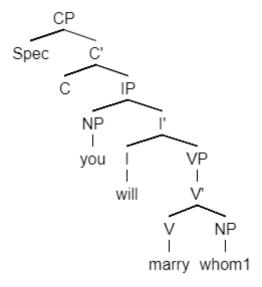
In b, the verb *believed* assigns thematic role theme to the NP *this story*. In c, the NP is moved to the empty subject position. The case marking is done by the finite inflection.

9. WH Movement

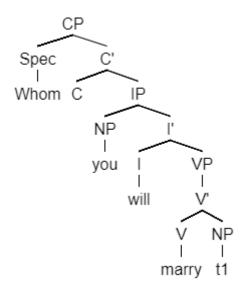
As far as English language is concerned, the moved WH item is referred to as WH- Phrase or WH-constituent (Haegeman, 1994). The following are some examples in which the WH constituent or the phrase is moved:

- a. Whom will you marry?
- b. How long was the movie?

In those WH questions, the NP that complements the verb *marry* in the deep structure of sentence a is moved to the Spec position in the surface structure. Similarly, the complement NP *which movie* in b is also moved to the Spec position in the surface structure. The Deep structure of sentence a can be observed in the following tree diagram:



The surface structure tree, on the other hand, illustrates that the trace(t1) is left by the WH phrase:



10. Some Constraints on WH Movement:

The GB theory proposes some constraints on movement. One of these constraints is termed *case filter*; that is, "every overt NP must be assigned abstract case" (Haegeman 1994, p.167). Case filter does not allow an NP to occur in a sentence without case assignment. Chomsky (1988, p.326) suggests "the structures in (i) and (ii) are barred by the Case Filter, since the post-verbal NP receives no case":

- (i) * I want [PRO to snow].
- (ii) * [PRO to snow all day] would be a nuisance.

Another constraint relates to the case assignment. Accusative case assignment allows only *whom* to move to the spec position whereas the nominative permits only *who* to move to the same position:

- a. Whom_i/*Who do you think will John call t_i first?
- b. Who_i/*Whom do you think t_i will cut the cake?

11. The That-Trace Filter

Haegeman (1994, p.399) defines the that-trace filter as follows: "the sequence of an overt complementizer followed by a trace is ungrammatical". The that-trace filter restricts the movement of the WH-phrase since the subject from the lower clause can be moved only when there is no overt complementizer. In that case, the movement in the following sentence is ungrammatical:

*Who_i do you think [CP that [IP ti will confess the crime first]?

As the example shows the subject *who* inside the lower clause is moved to the Spec position, and such movement is banned by the that-trace filter.

12. Subjacency Condition

Subjacency condition holds that "movement cannot cross more than one bounding node, where bounding nodes are IP and NP" (Haegeman 1994, p.402). The following ungrammatical sentence is an example of subjacency condition violation, where the *wh* phrase crosses several bounding nodes in order to move to the spec position of CP1:

*[CP1Whoi did [IP2 John make up [NP the lie [CP2 that [IP2 he met ti last week]]]]]

13. Implications of Syntax in Language Learning and Teaching a Second or Foreign Language

An important question regarding language learning and teaching is whether teachers should teach syntax exclusively to language learners in the classroom. In a study conducted in the late 20th century, Dulay and Burt (1973) collected samples of spontaneous speech from 145 Spanish speaking children, between the ages five and eight. The children examined were all studying at US schools, California and New York, and learning English as a second language. The data were collected by means of the Bilingual Syntax Measure (Burt, Dulay and Hernandez 1973), which consisted of seven colored cartoon pictures and a set of 33 questions in English and 33 in Spanish. The BSM is an instrument utilized to measure the syntactic and grammatical development of the language learners. Dulay and Burt (197, p. 257) conclude:

"Although we believe that an L2 teacher should continue to diagnose children's L2 syntax, our findings suggest that we should leave the learning to the children and redirect our teaching efforts to other aspects of language".

Similarly, Omari (1984, p.391) comes up with the following suggestion in her study of teaching syntax to speakers of non-Arabic:

It does not work to attempt to consider the learners languages when they speak Arabic because Arabic has its system which is completely different from their language systems. The Arabic language gives more consideration of gender and numbers of the subject which have more effect when you writing a sentence.

Dulay and Burt (1973) and Omari's (1984) conclusions adumbrate that native language syntax does not have a tremendous effect on second language learners' acquisition of the target language syntax.

As far as teaching a second or foreign language is concerned, the prominence of Syntactic theory is undeniable to language teachers, as Dulay and Burt (1973) state, the diagnosis of learners' syntax is imperative. Language teachers need to analyze and treat learners' errors at the phrase structure level, and for such analysis, a more than sufficient knowledge of syntactic theory is required. Syntactic theories such as phrase structure analysis and government and binding provide linguistic insight for teachers. Such insight may enable language teachers to view learners' syntactic errors with an effectively analytic perspective.

Teaching syntax at a certain simplified degree to language learners may also be useful. In a holistic approach, Mardijono (2004) coins the term from syntax to syntaxing. Mardijono (2004, p. 53) suggests that "the teaching of Syntax is not just to help the students learn Syntactic concepts and theories but also to engage them in the further step of applying what they have learned in their practical use". Mardijono further states that the use of syntax helps students develop their own creative writing style.

14. Summary and Conclusions

Phrase structure adequately explains which parts of speech can co-occur in a phrase. By means of phrase structure rules, one has the ability to rule out the elements that cannot occur next to one another as the following ungrammatical phrases implicate:

*a beautifully house (a noun cannot be modified by an adverb)

* shouted angry (a verb cannot take an adjective as complement)

Government and Binding Theory yields useful perspective for English language teachers as well. Firstly, case marking demonstrates the grammatically relevant place of pronoun in a sentence; that is, the nominative case marks the subject position, the accusative case the object position, relatively. Thus, the possibility of the following examples is ruled out:

*Him witnessed the robbery.

* Mark really hates she.

Secondly, binding also accounts for ungrammatical sentences since a reflexive must be bound and has to agree in gender and number. The following sentences are therefore unacceptable in terms of the English grammar:

- *Mary hates himself
- * Himself does not like to travel alone.

As far as error analysis is concerned, A study by Ulkersoy, Genc and Darmaz (2019) has provided applicable classroom results. In the study, the authors have conducted the study on freshman and sophomore year students' written performances at Malatya Inonu University English Language-Teaching Department in 2017. The results reveal that sentence structure errors, verb-centered errors and word-level choice errors are the most frequently observed error types. The authors suggest that language teachers should specifically treat those three types of errors. The three types of errors found by Ulkersoy, Genc and Darmaz (2019) imply the necessity of a syntactic approach to error analysis.

To conclude, the necessity of syntax is undeniable for language teachers because they must refer to syntactic theories in their recognition and treatment of grammatical errors committed by their learners. However, we do not suggest that language learners must be overwhelmed by theories such as Government and Binding, or syntactic tree diagrams and such. The application of syntactic rules can be achieved by learners via various creative writing tasks such as depicting a picture story. That way learners will rely upon their syntactic knowledge in order to create novel phrases and sentences of their own.

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To Cite this Chapter:

Ülkersoy, N. (2021). The significance of syntax in English language teaching. In Büyükkarcı, K. & Önal, A. (Eds.), *Essentials of applied linguistics and foreign language teaching:* 21st century skills and classroom applications, 47-56. ISRES Publishing.

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