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**A Grammatical Analysis of the Syntactic Structure among English and Arabic Languages: case study of selected sentences from the holy Quran.**

A Dissertation Submitted in Partial Fulfilment for the Requirements of a  
Master's Degree in

**'LINGUISTICS'**

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

سُبْحَانَكَ لَا عِلْمَ لَنَا إِلَّا مَا عَلَّمْتَنَا إِنَّكَ أَنْتَ الْعَلِيمُ الْحَكِيمُ

"Exalted are You; we have no knowledge except what You have taught us.

Indeed, it is You who is the Knowing, the Wise."

The holy Quran, verse (2:32)

## DEDICATION

This modest work is dedicated to everyone has read this piece of research.

A special dedication to “**K.B**”

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Firstly, I gratefully thank my supervisor, **Dr. Hadjer BELGHOUL**, for her advice, support, and patience to accomplish this humble work.

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## ABSTRACT

Syntax is a set of laws that determine the word order, and basically the architecture of the sentence within the different languages. This research aims to shed light on the syntactic analysis of the Quranic sentences. It aspires to work on a comparative study between Arabic and English languages syntax. The linguistic model used in this research is developed by Chomsky in 1950s, namely Phrase Structure Rules. The latter is a theory that represents a rewriting rule which describes the components of the sentence in a given language. The main aim of this work is to examine and exhibit the situations where the two languages are different and similar in. The study is performed rigorously throughout a corpus of 11 selected sentences of different Quranic verses. Then, these sentences are represented in tree diagrams where the Arabic version of the same English sentence is separated in one table. Afterwards, the tables are divided according to each rule taken from the modal. An explanatory note is written below the tables to indicate the major remarks. The results show that Phrase structure Rules found some issues and problems in light of Arabic nominal sentences, barely certain sentences follow the same word order, especially some imperative, affirmative, and negative sentences.

**Keywords:** Syntactic Analysis, Syntax, Phrase Structure Rules, Tree Diagrams

## LIST OF ABRIVIATIONS

- **PSR** : Phrase Structure Rules
- **TGG** : Transformational Generative Grammar
- **S** : Sentence
- **NP** : Noun Phrase
- **VP** : Verb Phrase
- **AdjP** : Adjectival Phrase
- **AdvP** : Adverbial Phrase
- **PP** : Prepositional Phrase
- **MSA** : Modern Standard Arabic
- **SA** : Standard Arabic
- **SE** : Standard English
- **SVO** : Subject, Verb, Object
- **VSO** : Verb, Subject, Object
- **X'** : X-Bar

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## GENERAL INTRODUCTION

In the field of linguistic studies, Quranic Arabic has been at the forefront of many scholars' topics of interest and study items. Some have discussed the deep structure or the meaning of the Quranic language. Otherwise, other scholars have dealt also with the surface structure of the Holy Quran in a distinctive linguistic rank such as Morphology, Phonology, and Syntax.

In fact, certain languages have different syntactic architectures; English and Arabic are as well. Truthfully, Standard Arabic is categorized as a Semitic language, while Standard English is an Anglo-Saxon language. In spite of these differences among these two languages, they do have some linguistic features and issues in common.

Because of the investigator's personal interest in Quran and the various micro-linguistic aspects, the latter process' motivated the researcher to stand upon a syntactic theory conceived in 1957 by the linguist Noam Chomsky, known as the Rules of Phrase Structure. This formal system is used to describe a given language in a syntactic process; in other words, it deals with any component of the sentence and represents it structurally. Accordingly, the Quranic language and the linguistic climate provide a focal inspiration for the researcher to work on such domain.

The study, basically, aims to illustrate the operations of the PSR model on selected Holy Quran sentences. In this way, it analyses to what degree the principles and the guiding rules of the theory are approved. On top of that, it is a comparative study of the sentence structure between Standard Arabic SA and Standard English SE Languages at the level of simple sentences.

Later, the following Research Questions were set up in order to dismantle the task of applying the Chomsky PSR theory:

1. Would the application of PSR theory on Quranic Arabic cover all the grammatical categories in the Arabic language?
2. At what categories can both languages be different in Syntax?
3. What are the possible situations in which we can find similarities?

The questions, therefore, constitute the guideposts for the entire research, as they cover the dimensions to be researched. Therefore, a variety of hypotheses were proposed to be reviewed and eventually confirmed or rejected via the analysis. These hypotheses are:

1. There could be some categories in Quranic Arabic such as the full nomination of the sentence's components which are not included in PSR process.
2. Arabic compound verbs could create a problem and a big difference in the sentence construction.
3. Simple sentences are strongly being a case in which the word order of both languages could fall in one circle.

The analysis offers an experimental study that follows a mixed method approach: quantitative and qualitative methods. It deals with a selection of 15 sentences chosen from different Holy Qur'an Surahs based on their importance to the study's objectives. An online website, that maintains the archives of an annotated translation of the Holy Quran called the Quranic Arabic Corpus by Kais Dukes, has been used to promote data collection and usability.

The research is divided into three chapters; the first two are theoretical, and the third one is practical. To begin with, the first chapter is divided into two parts; the first part deals with the structure of the English language sentence by defining syntax in general and explaining some grammatical categories. Then, it moves to the syntactic framework in which major English phrases are represented in their construction. Afterwards, the second part covers the Arabic language sentence structure, where it tackles an overview of the Arabic syntax and the origin of the Arabic language, as well as Arab scholars who hardly worked in this field. Then, a close attention is paid to the construction and the structure of the Arabic sentence and the word order.

Later, the second chapter is concerned with the most famous syntactic theories in the 21<sup>st</sup> century. First, it starts with a formal description of Chomsk's Transformational Generative Grammar, and how it helps at the level of the sentence. Then, the description will be given on how this linguist sees grammar when linking it to syntax. After, it moves to the linguistic model that is used in the third chapter, which is the PSR used by Noam Chomsky in the 1950s. This chapter is devoted to the development of these rules in a very specific way by this scholar; so that they cover many other grammatical categories and in a farther conception.

Regarding the last chapter, the content is focused on the practical part of the research. It deals with the essence of the investigation or the adopted methodology, i.e. the methods used to collect the data. Finally, this chapter contains the analysis of the data and, ultimately, the discussion of the results, where there is a comparison between the findings and the hypotheses.

## CHAPTER ONE: OVERVIEW OF SYNTAX IN ENGLISH AND ARABIC LANGUAGES

### A. PART ONE: ENGLISH LANGUAGE SENTENCE STRUCTURE

#### 1. Introduction

The field of linguistics has several sub-branches. Each branch has its own linguistic study with special linguistic terminologies. Thus, the case that tackles the study of the sentence is all known as syntax. The current chapter is divided into two parts. The first part with a clear and an understandable language, starts with the major definitions according to some linguists. Moreover, the content carries on with all of the English phrase class' by describing the structure of each of these classes in charts.

#### 1.1. Defining Syntax

It is found in the 'Oxford Advanced Learners Dictionary' (2015) that the word syntax is originating from the late Latin from Greek *syntaxis*, from *sun* which means "together" and *tassein* "arrange". Syntax refers to how to tell words, phrases, are put together to formulate a sentence. Rather in computing, in which is a different field, is a set of rules that manage words and phrases in their right places so that the computer is meant to use this language correctly. Different scholars agreed that SYNTAX is the study of how a sentence should be built grammatically and semantically correct in a given language, depending on the rules of grammar.

To start with, Chomsky (1957, p. 11) states that "syntax is the study of the principles and processes by which sentences are constructed in particular languages". Hence, the role of syntax in here is to analyze such principles and processes that the sentence is structured with.

Besides that, it is about a set of rules that we use in order to generate a sentence or a phrase in a particular language.

Furthermore, Tallerman, (2005, p. 1) claims that the term 'syntax' is also used to mean the study of the syntactic properties of languages...". In this sense, it is well understood that syntax analysis is not only dropped on the construction of the sentence, but also on the classification of words, word order, and the structure of the phrase and the sentence in which are required too in this subfield of linguistics.

## **1.2. Grammatical Categories**

Sag and Wasow (1999) define the concept 'grammatical category' as a terminology that encompasses not only parts of speech, but also phrase types, including noun phrase and prepositional phrase...etc. Then, to distinguish between the two types, (parts of speech and phrase types), the term 'lexical category' means speech parts, and 'non-lexical category' or 'phrasal category' means phrase types. For convenience, they will be abbreviated, so that 'noun' becomes 'N', 'noun phrase' becomes 'NP', adjective phrase will be AdjP, verb phrase will be VP, adverb phrase will be AdvP, and verb phrase will be VP.

## **1.3. Syntactic Framework**

This section deals with the notion of the structure of the major phrase class in the English language. Moreover, it provides a syntactic representation of these classes for a clear understanding on how the construction is made of.

### **1.3.1. Phrase Class in the English Language**

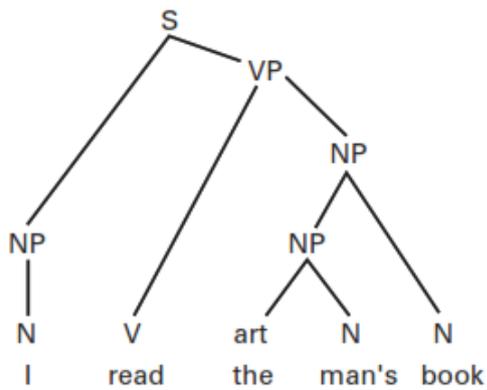
The following sub sections shed light on the all known classes of the English syntax. In fact, by presenting and describing these classes with an understandable language to show the

major and the most components of each category or class. Starting with the noun-phrase (NP), verb-phrase (VP) and so on with the other class' (AdjP), (PP), etc.

### 1.3.1.1 The Noun-Phrase (NP)

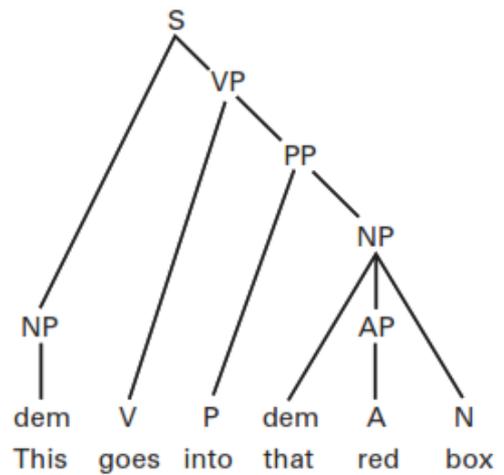
The arrow tree diagrams represent the major cases that we can find in the noun-phrase analysis. This work is introduced by Fabb (1994, p.56, 57, 58). Starting with the first case, or the genitive case, as in the first figure (1.1), the NP presented in (*the man's*) is considered as the second NP in the sentence in which another NP follows it directly. The test made by this professor is about to replace this NP by a possessive pronoun (*his*) that covers the situational possession of the ('s) added to (*the man*). This case introduced by the scholar is called the genitive NP. A headless phrase is about to be the second study that illustrates how a NP can begins with a demonstrative pronoun. This last one (*this*), clearly in the figure (1.2), is considered as a NP too by itself without the need of having a noun, unlike the determiner (*the, a, ...*) in which is a closed class of word. Just like what it has been previously, there are other closed class of words, besides the determiners, that are called quantifiers. These are about a set of words that covers the quantity of the subject headed in the sentence. After, Figure (1.3) displays this notion in the first section of the sentence (*some*). The final description of the NP is under the fourth and the last figure (1.4). It provides us with the last case in the NP that is about the numeral NP. (*fifty*), is a number and literally a NP at the same time.

A better way to discover how a noun phrase is emphasised is stated by Fabb (1994, p.58): "We have seen that a noun phrase can be headless when it does not immediately contain a noun. This makes possible a certain kind of Structure called a closed class word, has no head noun, and is followed by a PP."



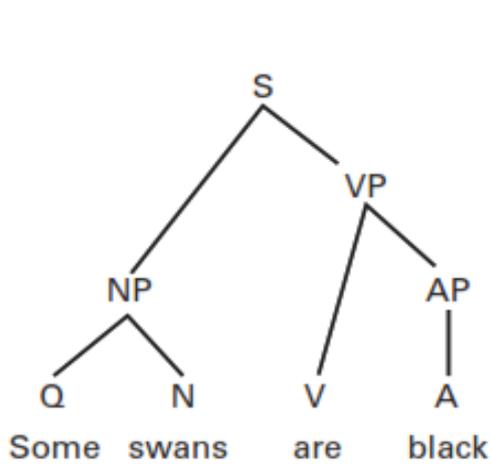
**Figure 1.1: Genitive NP Tree Structure Diagram**

Note: Reprinted from (Fabb 1994, p.56)



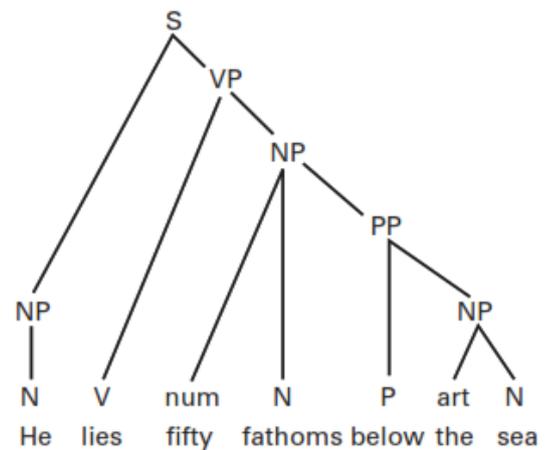
**Figure 1.2: Headless NP Tree Structure Diagram**

Note: Reprinted from (Fabb 1994, p.57)



**Figure 1.3: Quantifier NP Tree Structure Diagram**

Note: Reprinted from (Fabb 1994, p.57)

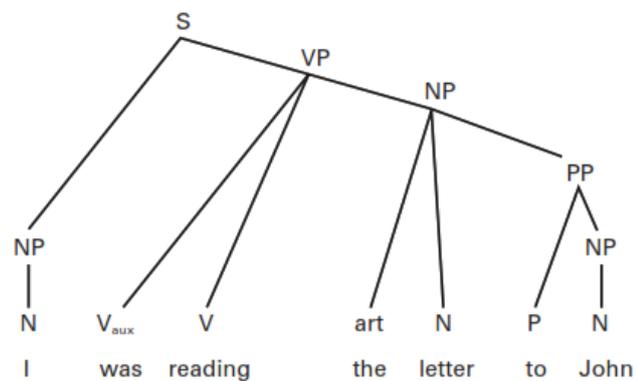


**Figure 1.4: Numeral NP Tree structure Diagram**

Note: Reprinted from (Fabb 1994, p.58)

### 1.3.1.2. Verb Phrase (VP)

Fabb (1994, p.33) demonstrates the VP's action into two performances. At first, the verb phrase format is interpreted in a way that it manages anything beyond it in the sentence, and this situation makes it acting like the head of the verb phrase. Unlike the agent or the subject, is the head of the whole sentence. Another feature of the VP is that it handles both modal verbs and auxiliary verbs that forego the verb. The downside tree (1.5) shows the interpretation of the VP in the sentence. Obviously, the VP in here possess' everything in the sentence excluding the NP.

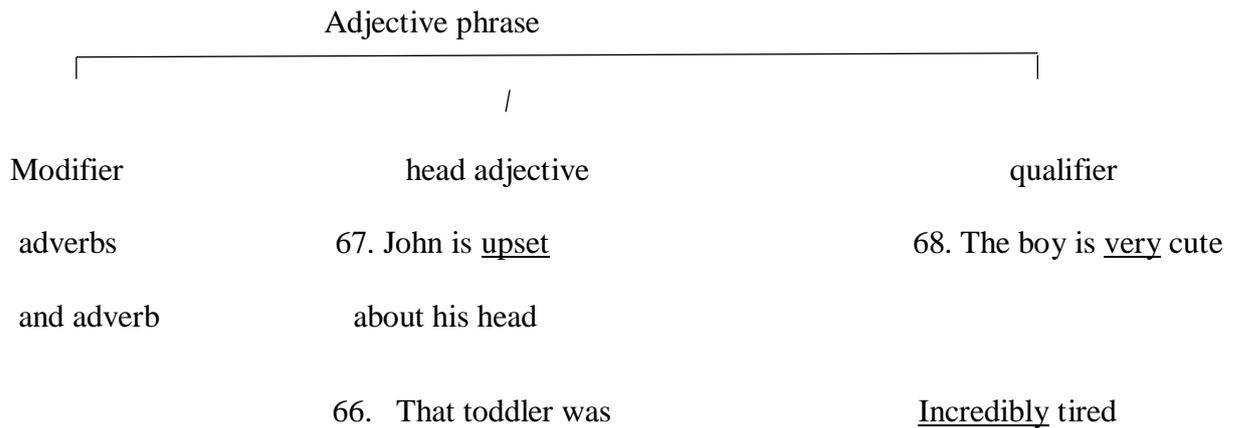


**Figure 1.5: VP Tree Structure Diagram**

Note: Reprinted From (Fabb 1994, p.33)

### 1.3.1.3. Adjective Phrase (AdjP)

Marques (2011, p.113), (as cited in Ismail Al Abbacy, 2019, p.10), argues that the AdjP comprises two morphological units. One of these stands for the function of the second unit known, as the head adjective. An adjective phrase accompanying with another modifier or a qualifier is often identified as an adverb (*extremely difficult*), or an adverb phrase (*very wonderfully peaceful*).



**Figure 1.6: AdjP Case Structure Diagram**

Note: Retrieved From (Marques 2011, p.113)

Carnie (2013, p.133) made up a great difference among the term adjectival phrase and adjective phrase. An adjectival phrase is a situational case in which a prepositional phrase employs and functions as an adjective as in (*Mr. John is a man of wealth*). Literally, in this sentence, there is no familiar adjective. But, instead, the prepositional phrase (*of wealth*) is acting and functioning as a real adjective that modifies (*a man*). A good method to clarify this matter is to transform this sentence by rewriting the adjective of the actual noun (wealth), resulting: (*Mr. John is a wealthy man*).

#### **1.3.1.4. Adverb Phrase (AdvP)**

Morley (2004, p.92), describes that “adverb phrases are the most complex in terms of the syntactic functions they represent. They may of course be single or multiple word element.” In fact, the pose of the AdvP gives in each different situation a different function in different sentences. These are some of varied sentences from the Online Cambridge dictionary (2020) that shows how an AdvP can modify a verb, an AdjP, a NP, PP, and determiners;

1. *Children grow up **really quickly**.*

(The AdvP in bold modifies the verb)

2. *I found it [ADV]**extremely** [adjective]difficult to talk to her.*

(the underlined AdjP is modified by the AdvP in bold)

3. *That's [ADV]**quite** [NP]a tree.*

(the AdvP in bold modifies the underlined NP)

4. *We climbed [ADV]**right** [pp]over the top of the hill and down again.*

(the underlined PP is modified by the AdvP in bold)

5. ***Only** half of my friends could come to my party.*

(the underlined determiner (quantifier) word is modified by the AdvP **only**).

### 1.3.1.5. Prepositional Phrase (PP)

This class is composing of one preposition or several other prepositions followed by a NP or other substituted categories. For instance, the preposition (*by*) as in (*by Monday out of the kitchen*) is almost covering the phrase, the noun, the complement and the object. Here, the PP takes the position of the head of what comes after. This depends on what the classification of both the preposition and the counterpart of the NP as it shows in this PP; (after breakfast), as it can be; (*Before breakfast*), (*since eating breakfast*), or (*before I had eaten breakfast*).

Matthews, (2007, p.316)

Ballard (2013, p.112,113) well expresses how a PP should be in both simple and complex cases. Constantly, the PP doesn't stand all by oneself and must go along with another component or a unit that completes and finishes the sentence in a right way. The example below clarifies and shows that the preposition (*in*) should be accompanied by another element

in which is the noun or the NP (*the cupboard*). The PP (*in the cupboard*) can be represented either as a PP in general or as a NP inside the PP as well.

NP          VP          PP

- Jackie was searching in the cupboard

It's been seen before that a PP stands alone in a sentence. These two examples will illustrate the matter of two other different situations so that the PP is part of NP in which cannot be out and independent from it, and vice versa.

- A large bouquet of roses is very romantic.
- Heidi cycled fifty miles for charity.

As it is shown above, the first matter clarifies the situational case that can be found in the NP that contains a PP inside it as describing previously. Indeed, a strong argument by Ballard is to demonstrate this possession is to reform the sentence into the plural form as to test if the PP (*of roses*) is the head or (*bouquet*), and the result is that the plural form (*of rosses*) can't modify the verb, but the singular word (*bouquet*) does, and that what makes the NP as a head of the phrase. The PP, in the second example, is independent despite the fact that it is part of the NP (*fifty miles for charity*) because of the different positions that the PP can take after the reformulation of the sentence as in (*For charity Heidi cycled fifty miles*).

## **PART TWO: ARABIC LANGUAGE SENTENCE STRUCTURE**

### **1.4. Introduction**

This second part attempts to flesh out the theoretical framework that cover the study of the Arabic language sentence structure. This section will first shed light on a general explanation of the Arabic syntax and its origin. Then, it will elaborate the major Arabic phrase classes, as well as the construction of these categories. At the end of the chapter, a smooth clarification will be focused on the level of the syntactic framework of the Arabic sentence to show its word order in a specific way.

### **1.5. Overview of Syntax in the Arabic Language**

This section exposes basic view and essential information of the Arabic language, such as the origin of the Arabic grammar and the famous Arab grammarians with their devotion to study Arabic grammar. Next, it explains the structure of some primary Arabic sentences.

#### **1.5.1. Origin of Arabic Grammar**

Considering the role of the Arabic grammar that has to play in the Qur'anic and Hadith sciences, it is important not only to learn grammar as it is commonly taught today and suffices with it, but also to understand its nature and its critical approach in order to further improvement and progress. According to Owens (2007), Classical Arabic is generated by the standardization of the language of the Qur'an and the poetry. At the time when Arabic was the language of an empire, with Islamic expansion in the seventh century, this standardization became inevitable. Besides that, there were ethnic spoken Arabic varieties, in addition to Classical Arabic.

### **1.5.2. Arab Grammarians, Predecessors of Chomsky**

Throughout this segment, we present Al Waer's views on "modern and Real sentential theory" of basic structures in Arabic (1983; and 1989). Contemporary classical linguistic systems should be combined to create a new, more practical, Comprehensive and more appropriate framework for the analysis of the Arabic sentences. In a first move, he defines Sibawayhi's logical idea of sentence structure with Chomsky's central core grammar (Chomsky, 1977) as he mentioned some differences namely: Lexical Arabic organisation does not apply for lexicalist theory of Chomsky. For instance, object NPs do not adhere to Chomsky's law of topicalization; in other terms, the original Arabic word order. (Ditters, 1992).

Since most Arab grammarians' interest was only about the analysis of the sentence, according to Al-Waer, they didn't take the study of the functional aspects of 'transformational' variations on the basic sentence structures. The only Arabic grammarian that didn't passed over is Al-Gurgäni. The latter made up a great explanation of the major changes in terms of functional roles similarly to those developed by Dik in his Functional Grammar (Dik 1978, Moutaouakil, 1989). (as cited in Ditters, 1992).

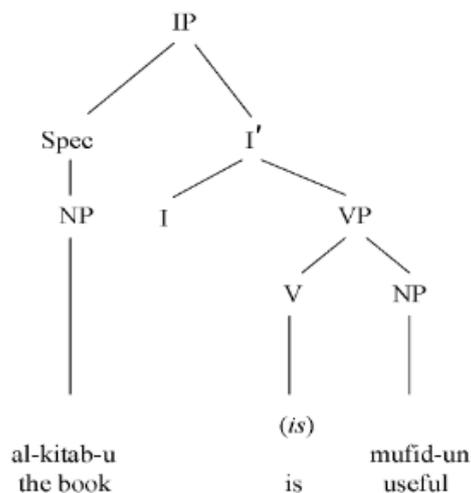
## **1.6. Syntactic Framework**

This section exposes the syntactic features of the hierarchical relations between heads and their surrounding constituents. It initiates the nature of the simple sentence construction in the MSA.

### **1.6.1. Sentence Structure**

Actually, the implementation of Arabic syntactic analysis is restricted to basic sentence structures that include the smaller phrase constituents as an example of NP, VP, AP, and PP. Starting by the NP, Bassam, et al., (2014) assume that there is somehow a hidden verb that

take the nature of the English verb *is* (to be) in the example of (al-kitab-u mufid-n) “The book is useful”. As a result, the verb hidden inside the sentence will lose its performance and function as a head. Therefore, these kinds of Arabic sentences are called Nominal Verbless Sentences.



**Figure 1.7: The Structure of a Typical Arabic Nominal Sentence**

*Note: Retrieved from (Bassam, Asma, Nadim, & Abeer, 2014)*

### 1.6.2. Phrase Class in the Arabic Language

Mostly, Arabic sentences are graded according to the location and the presence of the verb. This process yields two main types of sentences: verbal and nominal sentences. In Modern Standard Arabic, Verbal Sentences begin with a verb, while the Nominal Sentences do begin with a noun. Other categories such as Functional and non-Functional sentences are described as rare situations that can be faced in the Arabic language.

Later, Aoun, Choueiri, & Benmamoun, (2010) explained the complexity of the Arabic clause into several categories. The first issue is meant to be the structure of the clause

such as tense and negation. This issue, for instance, the Arabic verb doesn't only carry the action of the clause but the aspectual or the temporal morphology that is realized by the morphological agreement and the verbal templates. Thus, the Arabic verb has a specific vocalic melody that differs from both the present and the past tense with a suffixal agreement as it is shown below:

a. ya-ktub-na

3-write-fp

'They are writing.'

b. katab-na

wrote-3fp

'They wrote.'

### **Figure 1.8: Simple Arabic Sentence**

*Note: Reprinted from (Aoun, Choueiri, & Benmamoun 2010)*

#### **1.6.2.1. Nominal Sentence**

A nominal sentence must have two obligatory categories in Standard Arabic, *almubtda* and *alxabar*. The main features of the initial NP or *almubtda* are: it must have a determiner or [+DEF], it must be a Noun, and at last, it has to be a single phrase. Classical grammarians, at hand, explained that the state of a NP is with no further than a one word, and it can never be a clause or a full sentence. On the other hand, *alxabar* or what it is called in English *the predicate* can be written or shown as a single word, a clause, or a complete sentence (Abdullatif et. al., 1997, Abo Almkarm, 2007, Alrajhi, 2011, as cited in Lujain Alkhazy, 2016) The description below displays the components of the nominal sentence in MSA which contains the hidden verb as explained before, the initial NP as a one word in (*al-bayt-u*), (*ar-razul-u*). The predicate as in (*kabiir-un*), (*kaatib-un*).

a.	ʔal-bayt-u	kabiir-un	
	DEF-house-NOM	big-NOM	
	"The house is big."		
b.	ʔ ar-raʒul-u	kaatib-un	
	DEF-man-NOM	writer-NOM	
	"The man is a writer."		
c.	ʔar-raʒul-u	fii	l-bayt-i
	DEF-man-NOM	in	DEF-house-GEN
	"The man is in the house."		

**Figure 1.9: Simple Arabic Nominal Sentence**

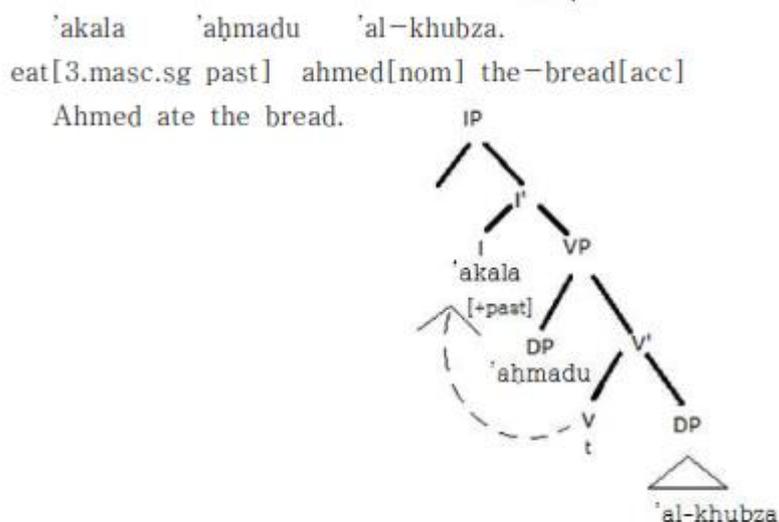
*Note: Reprinted from (Owens, 2013)*

#### 1.6.2.2. Verbal sentence

Eisele, (1990), Zollmann et al, (2006) state that the Arabic language has a very complex system especially at the level of the morphology of the verb namely the vocalic melody it contains to specify which tense used, person, number, and/or gender agreement, as well as, aspect, and modality. Clearly, this process differs from other languages as well as English language. Large number of studies were taken for the sake of the examination of this special component to clarify the differences between the process used in MSA and other languages. (as cited in Alasmari, J, Watson, J and Atwell, 2016).

A normal case of a simple verbal sentence is shown below to clarify one of the most sentences that can be faced in MSA. As it is shown, the subject *Ahmadu* has taken place and occurred in the specifier or the VP and not in the IP as it is remarkable in the English language.

Besides that, it takes a VSO construction where that the verb is been the basic component so that sentence is built on it (the head).



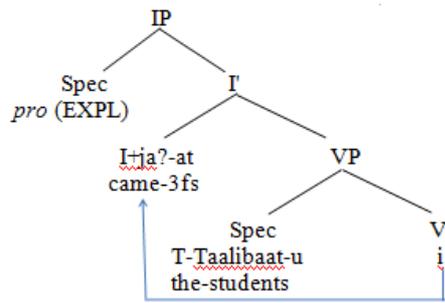
**Figure 1.10: Simple Arabic Verbal Sentence**

*Note: Reprinted from (Izza, 2016)*

### 1.7. SVO vs VSO Word Order

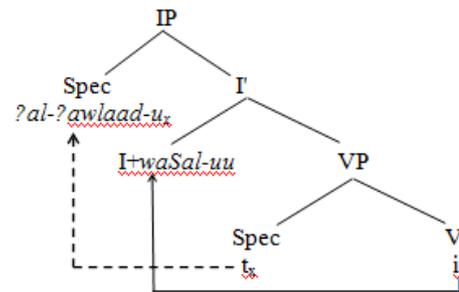
Standard Arabic has a very clear process about the V.S.O word order, in which the verb precedes the subject. The agreement between these two components is a bit different according to English language as it can be also similar to both languages. In other words, there is a situation in the Arabic language called “*taqdīm*” and “*ta’khīr*” (bringing forward or delaying). When the verb precedes the subject, the agreement here between the verb and the subject seems to be only in gender (partial agreement). But when giving the Arabic sentence an S.V.O word order by delaying the verb and bringing forward the subject, the agreement in here is not only in gender but also in number (full agreement). (Mohammad, 1990, as cited in Izza, 2016)

The description below clarifies the situation of partial and full agreement:



**Figure 1.11: Arabic VSO Word Order**

*Note: Reprinted from (Fakih, 2016)*



**Figure 1.12: Arabic SVO Word Order**

*Note: Reprinted from (Fakih, 2016)*

## 1.8. Conclusion

By reaching the end of this chapter, Standard English SE and standard Arabic SA are two different languages, though both of these two languages differ in many areas: Phonetics, Phonology, Morphology, Syntax, and origins. However, they share some linguistic feature within the same areas. This made a lot of both sides' grammarians do their studies in order to find solutions at so many levels.

## CHAPTER TWO: FORMAL THEORIES OF SYNTAX

### 2. Introduction

Syntax has a long tradition to look back on. But the interaction between syntactic theory and syntactic analysis has led to a rapid increase for the sake of the linguistic study, critics, and theoretical suggestions, particularly in the last 50 years. This chapter is the door to the model that is used in the practical part; that is phrase structure rules as applied by the linguist Chomsky Noam in his humble work by (1957). The chapter will first sheds light on the Generative Grammar perspective, and the basics of this theory. Then, it will elaborate on the fundamental principles and laws of the theory; that is used as a model, Phrase Structure Rules, as well as the formulation of the sentence. After that, the last part of the chapter tackles the advanced and the developed vision of the previous theory known as the X-Bar theory.

#### 2.1. Transformational Generative Grammar

In the middle of 1950s, the field of linguistics witnessed the biggest revolution made up by the American linguist Chomsky. His very known and famous work, that changed the concept of what is known now as syntax, was published under the title of SYNTACTIC STRUCTURES in (1957). Mathews (1981, p. 45) describes Chomsky's principle of the construction of the sentence into two categories. The first one is about the grammatical sentence while the other one is ungrammatical. The application of the first category in Mathews' instance is the sentence "I am busy". The latter shows that this sentence is well formed at the level of grammar rules, and also the meaning, or by what it is called semantics. If this sentence is reversed, in which is the second category, into "I busy am", it would be an

ungrammatical sentence so it can be also with the wrong agreement when saying “I busy are” or “I are busy”.

Previously, the case introduced by Mathews (1981) to present whether the sentence is grammatical or ungrammatical isn't only the main notion stressed by Chomsky in 1950s in Generative Grammar by itself. But another feature that Chomsky is revealing is the creativity of the language used by the human is about a set of infinite sentences that can be generated. To continue with, Chomsky (1957, p. 13) considered the idea of one, many or even much of the finite set of utterance(s) is/are about a limited number of phonemes or precisely alphabets, and by this finiteness it can be built, generated and constructed an infinitive set and numbers of sentences. For example, let's take the construction of “the boy behind the big, old, dismantled tree”. Certainly, no reader can remember the first time he heard this sentence, but relying on the morphosyntax analysis, the construction of the arrow is based on a limited set of phonemes in each morphological case to arrive with a non-finite and unlimited set of utterances or sentences.

## **2.2. Generative Syntax**

It is called originally “generative grammar”, but to make things clear a “generative syntax” is a bit understandable at the level of the abstract device in the brain discovered by Chomsky to generate an infinite set of sentences or, generally, utterances. According to Mathews (2007, p.155), it is a system of explicit rules that authorizes the correct and the wrong extent that the sentence must be. This theory is developed by Chomsky and his followers calls for the generativists or the generativist schools into the extent of Generalized Phrase Structure Grammar, Phrase Structure Grammar, transformational grammar, phrase structure rules were all under the big reference Generative Grammar.

### 2.3. Grammar and Syntax

The connection among these two words is not how it seems to be at first when reading this title. For instance, if we take the word Grammar back in the days of middle and secondary school, it is a set of rules that generates how words are meant to be conjugated. In fact, this kind of study is called “prescriptive grammar”. Tallerman, (2005, p. 1) shows that “Some people also use the term Grammar to mean the same as syntax, although most linguists follow the more recent practice, whereby the grammar of a language includes all of its organizing principles...”. Indeed, here, it is well said by this scholar that grammar is more than it thought to be. To make things clear, grammar in its real position, is the sphere or almost a zone that covers many sub-fields of linguistics. But one grammar of a one sub-field gives us another study. For instance, the grammar of the word is morphology, grammar of the sentence is syntax and so on about sound system phonology and phonetics, etc.

Furthermore, if we go deeper in the sense of this relation between Grammar and Syntax, a suitable question should be answered here; what is the real touch of grammar inside the sentence? In order to come up with an approval answer, Robert d. Van Valin jr and Randy J. LaPolla (1997, p. 242) states that “it is obvious that there are a lot of syntactic phenomena that relate to grammatical relations. For example, if one considers what the (-s) is doing on the third person singular present tense verb in English, it is clear that it is agreeing with the subject.” That is to say, a subject-verb agreement is a nice instance to show the role of grammar to make the components of the sentence in their right locations in order to have a grammatical sentence. A good example made by Yule, (2010, p. 83) to improve how grammar can affect sentence construction at the level of the morphology change of the verb and the meaning too in what we call semantics. To illustrate the example, when saying; “Cathy loves her dog”, the agreement of the verb “loves” with the subject “Cathy” is identical when

reversing the sentence into the passive voice. It is because the object is in the same condition with the subject (singular form). But the question is; what if the object in this situation is in the plural? Here, this sentence must be “the dogs were loved by Cathy”. Now we have an object-verb agreement in which is something very impressive to us. At last, that is what grammar do for the sake of having a very well-formed sentence or a sentence in which we can call grammatically correct.

#### **2.4. Chomsky’s Concept in Generative Grammar**

Generative syntax was firstly proposed and introduced by Chomsky (1957). Chomsky’s linguistic theory aimed for the sake of the description of syntax to indicate the grammatical rules by forming the foundation of the sentence construction. These generated sentences are infinite of numbers at the degree of all books and libraries in this world are to some extent incomparable to what it can be generated by the human brain. The independence of grammar in his famous meaningless and grammatical correct sentence (*colorless green ideas sleep furiously*). Furthermore, his aim, in his *Aspects of the Theory of Syntax*, (1965), isn’t dealing with syntax only, but he enlarges his generative idea into a linguistic relationship in the three sides or fields named the syntactic component at the level of the infinite number of sentences, the phonological component that describes these syntactical component at the level of sound structure, and the semantic component that simply illustrates the meaning of the generated sentences or the syntactical component.

#### **2.5. Phrase Structure Rules**

The description bellow shows the basic component of the sentence that Chomsky (1957, p.26) illustrates. Thus, from these rules, it will be very natural to the reader to understand the main three rules in the arrow (2.1). A sentence, generally, contains a NP and

VP and that is what in the first line. Then, a VP does have a verb followed by a noun phrase as it is inscribed in the second line, and so on with the NP in (3). Precisely, it is a way to unpack the general strings in the left-hand side into their constituents. To construct derivations from English sentences as it is in the arrow (8), we must go back into the basic three rules above in the first three lines in (2.1) to arrive to the terminal string (the+man+hit+the+ball). The rule (3) in (2.1) (NP→T+N) rewrites the elements in the (2.2) in both (iv) and (v) into (T+N), and then each component of both (T) and (N) will be specified into The as a (T) and (N) as (man). so on with the other strings.

- (1) S → NP + VP
- (2) VP → Verb + NP
- (3) NP → Det + N
- (4) Verb → Aux + V
- (5) Det → *the, a, ...*
- (6) N → *man, ball, ...*
- (7) Aux → *will, can, ...*
- (8) V → *hit, see, ...*

### Figure 2.1: Phrase Structure Rules

*Note: Retrieved from (Chomsky 1957, p.26)*

- (i) S
- (ii) NP + VP by rule (1)
- (iii) NP + Verb + NP by rule (2)
- (iv) Det + N + Verb + NP by rule (3)
- (v) Det + N + Verb + Det + N by rule (3)
- (vi) Det + N + Aux + V + Det + N by rule (4)
- (vii) *the* + N + Aux + V + Det + N by rule (5)
- (viii) *the* + N + Aux + V + *the* + N by rule (5)
- (ix) *the* + *man* + Aux + V + *the* + N by rule (6)
- (x) *the* + *man* + Aux + V + *the* + *ball* by rule (6)
- (xi) *the* + *man* + *will* + V + *the* + *ball* by rule (7)
- (xii) *the* + *man* + *will* + *hit* + *the* + *ball* by rule (8)

### Figure 2.2: Application of the (PSR)

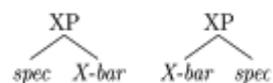
*Note: Retrieved From (Chomsky 1957, p.26)*

## 2.6. X-Bar theory

The X-Bar theory, at first, is suggested by Chomsky (1970), then developed and improved by Jackendoff in (1977). It is a theory that governs and displays the structure of the sentence into a very precise way so that the internal structure of this sentence will be converted into parts of speech. This operation is almost a dissection to the structure of the sentence. The theory at hand is applicable by many scholars and linguists these days.

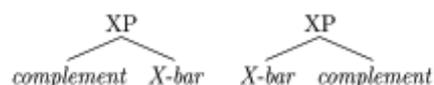
### 2.6.1. The Intent of the X-Bar Theory

The X-Bar theory is firstly built to designate the syntactic parts in which are common to all languages. Often, all languages do have similarities in the components of the sentence, and that is the reason behind the unknown (X) used for the “grammatical categories” as “parts of speech”. The same as (X Phrase) or (N) refers to the noun, an (P) for the preposition and so on with the other lexical categories. On top of that, the theory consists of three main rules. At first, the specifier rule shows that the XP is made up of an X-bar or (X’), following or followed by the specifier as an optional case. The second rule, or the adjunct rule, previously the (X’) consists of another (X’) following or followed by the adjunct. Ultimately, the third rule, or the rule of the complement, may consists of an (X) representing the head of the Phrase and following or followed by several or any of the complement (Urgelles-Coll, 2010, p.18).



**Figure 2.3: Rules of Specifier, Adjunct and complement**

*Note: Retrieved from Urgelles-Coll, 2010*



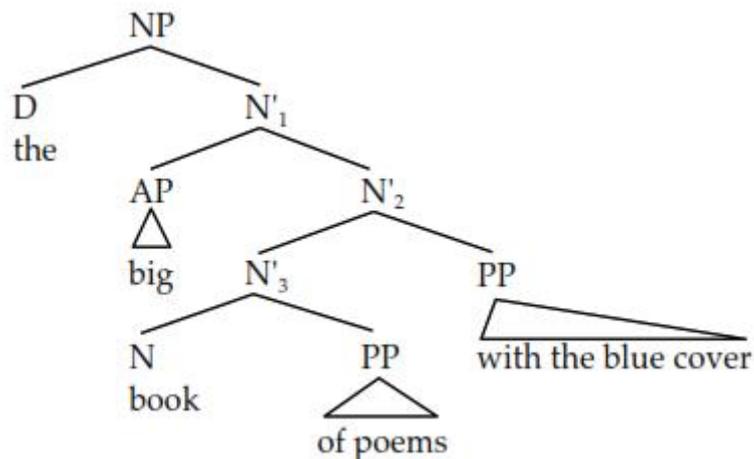
### 2.6.2. The Function of the X-Bar Theory

Carnie (2013, p.167,168) generalizes the basic rules of the X-Bar theory by mentioning the tree diagram of the NP structure as an instance of how this idea is functioning. Furthermore, he explains how these rules, on left the side, generate the hole tree. The first rule (1) generates the nude of the NP at the top of the tree. (D) and N' are the daughters of the NP. The first version of the second rule generates the N', in which AdjP and N'2 are the daughters of the N' itself. The second version of the second rule generates N'2, the sister of AP and the mother of N'3 and (PP). the last rule generates at last the N'3 as N and its sister (PP).

$NP \rightarrow (D) N'$   
 $N' \rightarrow (AdjP) N' \quad or \quad N' (PP)$   
 $N' \rightarrow N (PP)$

**Figure 2.4: Phrase Structure Rules According to the X-Bar Theory**

*Note: Reprinted from (Carnie 213, p.167)*



**Figure 2.5: Basic Tree Structure of the X-Bar Theory**

*Note: Reprinted From (Carnie 213, p.168)*

## **2.7. Conclusion**

By reaching the end of this chapter, syntax is an established and a huge field with its own terminologies and notions. It has gone through many developmental stages along with the evolution of the way linguists perceived and viewed the task of the sentence. Nevertheless, there remain some challenges and problems that are not yet dealt with especially that the language display different structures and spheres of study.

## **CHAPTER THREE: METHODOLOGY, RESULTS, AND DISCUSSION**

### **3. Introduction**

So far, the first chapter is divided into two parts. The first part is dealing with the English language sentence structure with the major formulations of the English sentences, and the second part with the Arabic language sentence structure as a basic and a formal description of how SA syntax is constructed. The second chapter, in the other hand, sheds light in the most notorious theories of syntax such as PSR that is going to be considered as a linguistic model in the practical side. Ultimately, the third chapter is dealing with the heart of the matter in which is the application and the analysis of the model described in the second chapter of Chomsky's phrase structure rules. This application is going to be applied on selected sentences from the holy Quran.

#### **3.1. Fundamentals of The Research**

The current research piece is focused on one central pillar which encompasses the most crucial aspect of the work, in other words, it is the interpretation of phrase structure rules to selected sentences from the Holy Qur'an. Thus, the concepts and principles of Chomsky's theory will be kept as it is when depicting the sentences in various trees diagrams constructions including English and Arabic languages. Whereas, some modifications are made in the side of the Arabic language in order to fit the structure. Hence, the present section moves the focus to the experimental procedure that supports the aims of the work, namely the examination of the approval or ignorance of Phrase Structure Rules while applying this theory on Quranic Arabic sentences. This mechanism will demonstrate which kind of sentences support the usual word order of PSR, and which sentences do not.

### **3.2. Methodology:**

The analysis at hand adheres to the both quantitative and qualitative method approaches. Through resorting to a corpus of 11 chosen sentences from different verses of the Holy Quran (Riwayat Hafs An Asim / Sahih International's translation) it has opted for representations of tree diagrams. A syntactic representation of each sentence on a tree diagram is given in both English and Arabic. Additionally, a linguistic analysis is paid to the extent of which types of sentences follow the word order regarding the theory of phrase structure rules, and if they respect the theory as well.

### **3.3. Data Collection: Methods and Tools**

The experimental analysis has been conducted using Chomsky's PSR analysis model on 11 different Holy Qur'an sentences. The choice of the Holy Quran as a case study is because of the interest of the researcher in Quranic studies. Another reasoning is that The Quran has been selected as a source language text because it is the most perfect manifestation of the Arabic language. The linguistic model used was developed in the interests of a given languages' syntax, so this makes it possible to include Quranic Arabic as a topic of research.

The data management process was made possible by Kais Dukes' online Quranic Arabic Corpus (QAC), an online database which maintains a grammatical and syntactic version for each sentence of the Holy Qur'an. The analyst used the referring sentences system of the QAC, and their translation of Sahih International. The task of organizing the data has been facilitated by providing sentence's major components, the source of the phrase or the sentence shown by two numbers between parentheses (Sourah: verse), an English translation and some grammatical information (Dependency graphs and grammar).

The data collection consists of a total of 11 Holy Qur'an sentences. In order to stay relevant to the research study, they were thoughtfully selected from different Surahs: to highlight instances where PSR's application works effectively, and other instances where the theory faces problems and issues, mainly with the complexity of the Arabic language. The sentences collected belong to different and dissimilar classes. The selected sentences are:

Chapter (2) surat I-baqarah (The Cow)

Verse (2:9)

**They deceive Allah**

Chapter (2) surat I-baqarah (The Cow)

Verse (2:15)

**Allah mocks them**

Chapter (12) surat yusuf (Joseph)

Verse (12:51)

**Allah does not guide the plan of betrayers**

Chapter (87) surat I-aʿla (The Most High)

Verse (87:19)

**The scriptures of Abraham and Moses**

Chapter (98) surat I-bayinah (The Clear Evidence)

Verse (98:2)

**A Messenger from Allah, reciting purified scriptures**

Chapter (87) surat I-aʿla (The Most High)

Verse (87:1)

**Exalt the name of your Lord, the Most High**

Chapter (2) surat I-baqarah (The Cow)

Verse (2:43)

**establish prayer**

Chapter (92) surat I-layl (The Night)

Verse (92:5)

believes in the best reward

Chapter (2) surat I-baqarah (The Cow)

Verse (2:129)

send among them a messenger

Chapter (2) surat I-baqarah (The Cow)

Verse (2:284)

To Allah belongs whatever is in the heavens

Chapter (113) surat I-falaq (The Daybreak)

Verse (113:2)

From the evil of that which He created

It should be stated that no further specifications would fall beyond the scope of this study but the structure and the construction of the sentence. Therefore, thanks to the online Syntax Tree Generator [ironcreek.net/syntaxtree/](http://ironcreek.net/syntaxtree/) a web application developed for Linguists which helps the user the create graphs and trees that will update automatically once a matching number of brackets is detected.

the researcher recommends the use of tree diagrams of each sentence in one table which provide all the relevant data about the sentence construction. Then, all sentences (both translations) are taken from the website of QAC. Each sentence is constructed in both source language (Arabic Language) and target language (English Language). A few modifications on the part of the researcher for the sake of meaning accuracy for the reader.

Thereby, the PSR's representation in the tree diagrams is divided into two sections. the first section is translated into English in the left side and defined from bottom to top, the basic

components of the sentence or the word order, the phrase class, and the rule taken from the sentence. Part two is represented, in the right side, totally like the first section but translated into Arabic. The researcher invites the reader to compare the structure of the inquiry to see whether the construction of both languages respects the usual word order or not, considering the rules that the theory brings.

### **3.4. Data Analysis: Applying Chomsky's (FSR) Model on The Collected Data**

The linguistic model proposed by the researcher is been done for the sake of the linguistic study of a major twelve 11 simple sentences taken from the Arabic of the holy Quran. Then, analysis of the results is divided into several parts, providing a linguistic analysis of the findings for each rule taken from the selected sentences. These rules are as follows; (S=NP+VP) (NP=N+VP) (VP=V+NP) (VP=V+PP) (PP=P+NP). The syntactic representations of these sentences will be viewed in two sides; Based on whether or not these rules were effective, considering the word order of these two languages.

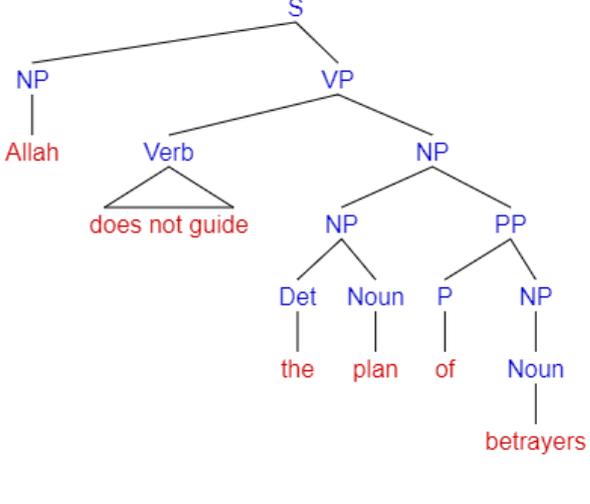
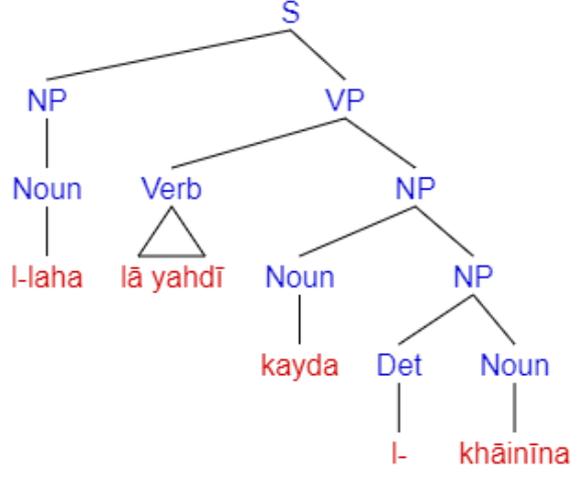
**Note:** previously, in the second part of the first chapter, it has been stated that the Arabic Syntax contains only two major kind of sentences; the Nominal Sentence and the Verbal Sentence regardless the parts of speech and the grammatical categories it contains. That is why the representations of the selected sentences (in the Arabic version of the tables) mention only the alphabet (S) as in each rule (S=...), and also in each tree so that it represents the Arabic exception. By contrast to the English version, each rule will stay as it is to represent the English sentence or phrase taken from the translation of the source language (Arabic sentences). this issue clarifies the first difference among these two languages. In other words, each rule of phrasal categories such as (VP=V+NP) or (NP=N+VP) in the English language is considered as a Sentence type in the Arabic language and represented in (S=V+NP), (S=N+VP).

English Version	Arabic Version
S = NP + VP	S = VP + NP
<pre> graph TD     S --&gt; NP1[NP]     S --&gt; VP1[VP]     NP1 --&gt; Noun1[Noun]     Noun1 --&gt; They[They]     VP1 --&gt; Verb1[Verb]     Verb1 --&gt; deceive[deceive]     VP1 --&gt; NP2[NP]     NP2 --&gt; Noun2[Noun]     Noun2 --&gt; Allah[Allah] </pre>	<pre> graph TD     S --&gt; VP2[VP]     S --&gt; NP3[NP]     VP2 --&gt; Verb2[Verb]     Verb2 --&gt; yukhādi[yukhādi']     VP2 --&gt; NP4[NP]     NP4 --&gt; Noun3[Noun]     Noun3 --&gt; ūna[ūna]     NP3 --&gt; Noun4[Noun]     Noun4 --&gt; l-laha[l-laha] </pre>

Table 3.1 The Syntactic Representation of (2 : 9)

English Version	Arabic Version
S = NP + VP	S = NP + VP
<pre> graph TD     S --&gt; NP5[NP]     S --&gt; VP3[VP]     NP5 --&gt; Noun5[Noun]     Noun5 --&gt; Allah[Allah]     VP3 --&gt; verb[verb]     verb --&gt; mocks[mocks]     VP3 --&gt; NP6[NP]     NP6 --&gt; Noun6[Noun]     Noun6 --&gt; them[them] </pre>	<pre> graph TD     S --&gt; NP7[NP]     S --&gt; VP4[VP]     NP7 --&gt; Noun7[Noun]     Noun7 --&gt; al-lahu[al-lahu]     VP4 --&gt; Verb3[Verb]     Verb3 --&gt; yastahzi-u[yastahzi-u]     VP4 --&gt; PP[PP]     PP --&gt; P[P]     P --&gt; bi[bi]     PP --&gt; Noun8[Noun]     Noun8 --&gt; him[him] </pre>

Table 3.2 The Syntactic Representation of (2 : 15)

English Version	Arabic Version
S = NP + VP	S = NP + VP
	

**Table 3.3 The Syntactic Representation of (12 :51)**

Thanks to Chomsky's linguistic model, the syntactic representation of the first three sentences is introduced in a typical way. Closer attention to the findings shows that the FSR theory tends to provide a clear description of sentences in different sides. The first case shows the normal word order (S.V.O) of the English sentence as the rule (S = NP + VP) manages, whereas, the Arabic version of this case is not the same. The tree diagram displays a (V.S.O) word order of the same sentence to represent the first situation in which both languages can be different in. That is to say, the rule (S = NP + VP) doesn't work effectively to this kind of Arabic sentences that start with a verb.

The second case presents a very similar classification in the word order and again in the rule of (S = NP + VP) to both languages. It is the case when there is "*taqdīm*" of the subject and '*ta'khīr*' of the verb in Arabic sentences as in the second and the third tables. Despite the fact that the first sentence is affirmative and the second is negative, that didn't cause any problem to the construction of both translations.

English Version	Arabic Version
NP = N + PP	S = N + NP
<pre> graph TD     NP1[NP] --- NP2[NP]     NP1 --- PP1[PP]     NP2 --- Noun1[Noun]     NP2 --- Det1[Det]     Noun1 --- the[the]     Det1 --- scriptures[scriptures]     PP1 --- P1[P]     PP1 --- NP3[NP]     PP1 --- Conj1[Conj]     PP1 --- Noun2[Noun]     P1 --- of[of]     NP3 --- Noun3[Noun]     Noun3 --- Abraham[Abraham]     Conj1 --- and[and]     Noun2 --- Moses[Moses]         </pre>	<pre> graph TD     S[S] --- NP1[NP]     S --- NP2[NP]     NP1 --- Noun1[Noun]     Noun1 --- suḥufi[suḥufi]     NP2 --- NP3[NP]     NP2 --- Conj1[Conj]     NP2 --- NP4[NP]     NP3 --- Noun2[Noun]     Noun2 --- ib'rāhīma[ib'rāhīma]     Conj1 --- wa[wa]     NP4 --- Noun3[Noun]     Noun3 --- wamūsā[wamūsā]         </pre>

**Table 3.4 The Syntactic Representation of (87 : 19)**

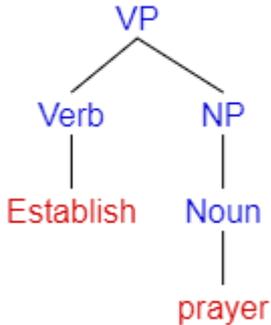
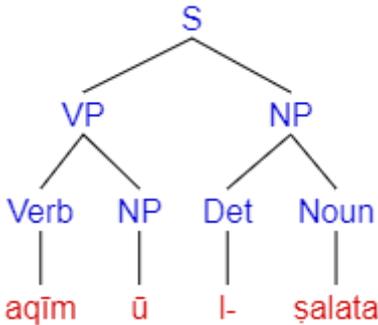
English Version	Arabic Version
NP = N + PP	S = N + PP
<pre> graph TD     NP1[NP] --- NP2[NP]     NP1 --- PP1[PP]     NP2 --- messenger[A messenger]     PP1 --- P1[P]     PP1 --- NP3[NP]     P1 --- from[from]     NP3 --- Noun1[Noun]     Noun1 --- Allah[Allah]     NP3 --- Verb[Verb+ing]     Verb --- reciting[reciting]     NP3 --- NP4[NP]     NP4 --- Adj1[Adj]     Adj1 --- purified[purified]     NP4 --- NP5[NP]     NP5 --- Noun2[Noun]     Noun2 --- scriptures[scriptures]         </pre>	<pre> graph TD     S[S] --- NP1[NP]     S --- PP1[PP]     NP1 --- rasūlun[rasūlun]     PP1 --- PP2[PP]     PP1 --- NP2[NP]     PP2 --- P1[P]     PP2 --- Noun1[Noun]     P1 --- mina[mina]     Noun1 --- I-lahi[I-lahi]     NP2 --- Verb[Verb]     Verb --- yatū[yatū]     NP2 --- NP3[NP]     NP3 --- NP4[NP]     NP3 --- AdjP[AdjP]     NP4 --- Noun2[Noun]     Noun2 --- ṣuhufan[ṣuhufan]     AdjP --- Adj[Adj]     Adj --- muṭahharatan[muṭahharatan]         </pre>

**Table 3.5 The Syntactic Representation of (98 : 2)**

Moving on to the representations of the second rule (NP=N+PP). This section shows that the Arabic sentence has two possibilities when applying this rule. The first one is (NP=N+NP), while the second is (NP=N+PP). In this case, one issue that made some shifts within the fourth sentence. when two NPs follow each other in the Arabic Nominal sentence, the English translation won't give the same rule structure. In other words, the construction of (NP=N+NP) is not reasonable in the English syntax. That is why the previous rule would be (NP=N+PP) as in “*the scriptures of Abraham*”. Whereas, the structure of (NP=N+PP) in the Arabic version do share the same rule construction but not all the word order. Another issue in the representation of the **table 3.5** is that within the NP of the Arabic version, the noun precedes the adjective while in the English side, it is the adjective that precedes the noun.

English Version	Arabic Version
VP = V + NP	S = V + NP
<pre> graph TD     VP1[VP] --- VP2[VP]     VP1 --- NP1[NP]     VP2 --- Exalt[Exalt]     NP1 --- NP2[NP]     NP1 --- PP[PP]     NP2 --- Det[Det]     NP2 --- Noun[Noun]     Det --- the[the]     Noun --- name[name]     PP --- P[P]     PP --- NP3[NP]     P --- of[of]     NP3 --- your[your]     NP3 --- lord[lord]     NP3 --- AdvP[AdvP]     NP3 --- Adj[Adj]     AdvP --- Most[the Most]     Adj --- High[High] </pre>	<pre> graph TD     S[S] --- VP[VP]     S --- NP1[NP]     VP --- sabbihji[sabbihji]     NP1 --- NP2[NP]     NP1 --- NP3[NP]     NP2 --- Noun[Noun]     Noun --- isma[is'ma]     NP3 --- rabbi[rabbi - ka]     NP3 --- AdjP[AdjP]     AdjP --- Ialā[I-a'lā] </pre>

**Table 3.6 The Syntactic Representation of (87 : 1)**

English Version	Arabic Version
VP = V + NP	S = V + NP
 <pre> graph TD   VP[VP] --- Verb[Verb]   VP --- NP[NP]   Verb --- Establish[Establish]   NP --- Noun[Noun]   Noun --- prayer[prayer] </pre>	 <pre> graph TD   S[S] --- VP1[VP]   S --- NP1[NP]   VP1 --- Verb1[Verb]   VP1 --- NP2[NP]   Verb1 --- aqim[aqim]   NP2 --- u[u]   NP1 --- Det[Det]   NP1 --- Noun[Noun]   Det --- Iminus[I-]   Noun --- salata[salata] </pre>

**Table 3.7 The Syntactic Representation of (2 : 43)**

Later then, the remaining tables display two examples of syntactic representations where the command sentences or imperative sentences of both versions do respect the rule of (VP=V+NP). After, what has been noticed is that the AdvP which contains two grammatical categories in the English version in the **table 3.6** (*the most high*) is been translated from one word in the Arabic language since it is described in the tree diagram as an Adverb only. Secondly, the syntactic representation of the **table 3.7** illustrates that the verb (*establish*) in the imperative case doesn't need a noun or a pronoun as long as it is clearly identifying the personal pronoun *you* either in the singular or the plural form. By contrast to the Arabic version, the compound verb (*aqim-u*) identifies only the second personal pronoun plural. That is to say, the Arabic language is a huge language that contains a wide orthography so that this kind of issues in which an Arabic compound verb effects the construction of the sentence when translating it to the English language.

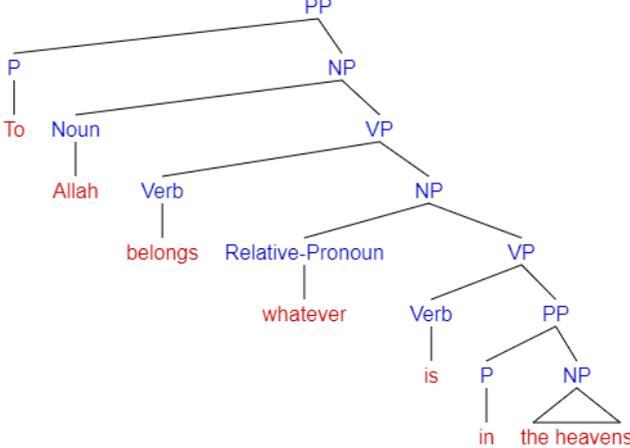
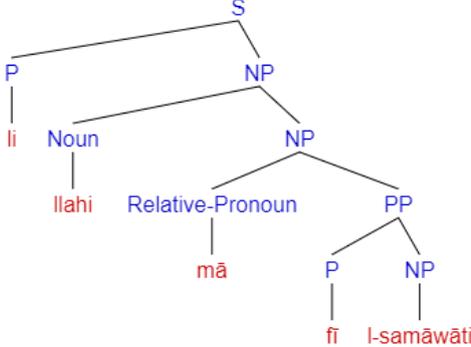
English Version	Arabic Version
VP = V + PP	S = V + PP
<pre> graph TD     VP --&gt; Verb[Verb]     VP --&gt; PP[PP]     Verb --&gt; believes[believes]     PP --&gt; P[P]     PP --&gt; NP[NP]     P --&gt; in[in]     NP --&gt; AdjP[AdjP]     NP --&gt; Noun[Noun]     AdjP --&gt; the_best[the best]     Noun --&gt; reward[reward] </pre>	<pre> graph TD     S --&gt; VP[VP]     S --&gt; PP[PP]     VP --&gt; Verb[Verb]     Verb --&gt; ṣaddaqa[ṣaddaqa]     PP --&gt; P[P]     PP --&gt; NP[NP]     P --&gt; bi[bi]     NP --&gt; Det[Det]     NP --&gt; Noun[Noun]     Det --&gt; l[l-]     Noun --&gt; ḥus'nā[ḥus'nā] </pre>

**Table 3.8 The Syntactic Representation of (92:5)**

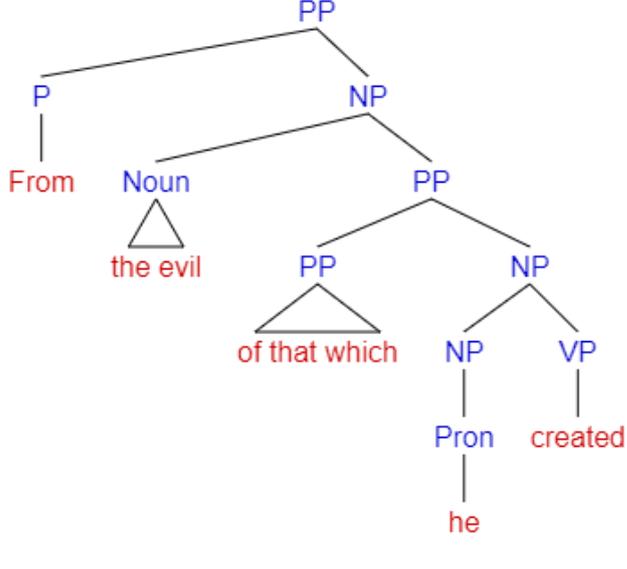
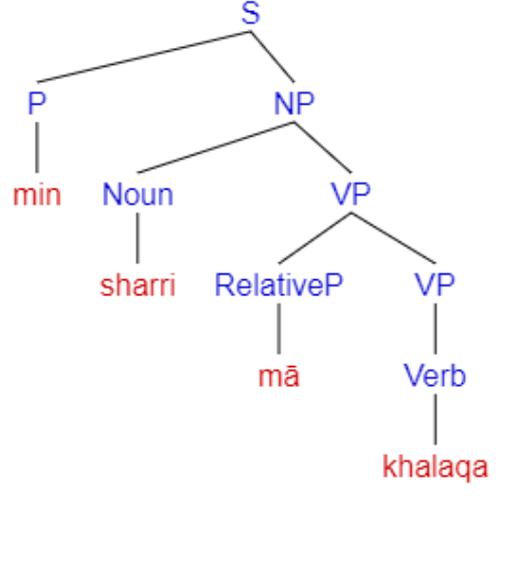
English Version	Arabic Version
VP = V + PP	S = VP + PP
<pre> graph TD     VP --&gt; Verb1[Verb]     VP --&gt; PP[PP]     Verb1 --&gt; Verb2[Verb]     Verb2 --&gt; send[send]     PP --&gt; P[P]     PP --&gt; NP[NP]     P --&gt; among[among]     NP --&gt; them[them] </pre>	<pre> graph TD     S --&gt; VP[VP]     S --&gt; PP[PP]     VP --&gt; Verb[Verb]     Verb --&gt; ib'ath[ib'ath]     PP --&gt; P[P]     PP --&gt; NP[NP]     P --&gt; fī[fī]     NP --&gt; him[him] </pre>

**Table 3.9 The Syntactic Representation of (2:129)**

Coming up to the fourth rule (VP=V+PP) that is represented in two different sentences with two different tables. Despite the fact that the two tree diagrams in **Table 3.8** at hand show a previous issue of (Adj+Noun) translated from one Arabic word “*l-hus’na*” as mentioned before, it still provides a satisfactory structure and a respectful way to the theory. Furthermore, the two representations of the **Table 3.9** in the other hand show that they are identical to each in every phrase class, grammatical category and even the word order, which makes it a good sign that these two languages do share some syntactic features and infers that Chomsky’s model is to some extent appropriate and effective to account for Arabic sentences.

English Version	Arabic Version
PP = P + NP	S = P + NP
	

**Table 3.10 The Syntactic Representation of (2:284)**

English Version	Arabic Version
PP = P + NP	S = P + NP
	

**Table 3.11 The Syntactic Representation of (113:2)**

By reaching to the last two sentences including the rule (PP=P+NP), let's start with the sentence in **Table 3.10**. By looking at the structure of the two trees, it is easily seen that the Arabic nominal sentence, as stated previously in the second part of the chapter one ( the case of the hidden verb), is free of verbs but appearing in the English version of the sentence which makes the theory this time been somehow rejected because of the this big difference among these two languages. On the flip side, the last representations of the **Table 3.11** in the Arabic version, it is the subject which is absent since this situation makes it normal for the Arabic language. Unlike the English version, the subject does appear in a category of a personal pronoun as long as it is not originally mentioned in the Arabic version.

### **3.5. Discussion of the Findings**

This part discusses the researcher's findings that has been analysed previously and answers the rational of the research, as it validates the hypotheses suggested by the researcher: Starting with the first question, it can be concluded that the theory suggested by the linguist Chomsky of phrase structure rules cannot covers all sentences types of the Arabic language or Quranic Arabic, because the Standard Arabic and especially the holy Quran language has a very complex language comparing it with the English language, as it can be simple too in other special cases. Still with the first question, the data collected shows that Quranic Arabic do cover all phrase structure rules, and besides that it has extra sentences constructions regarding of what PSR provides. Besides that, the Arabic language is all known by its structure of the V.S.O word order which makes the English construction doesn't accept this kind of structure. Coming up to the second question, the Arabic Nominal Sentence that contains two NPs (NP+NP) following each other is going to as (NP+PP) when translating it to the English language. Moreover, in spite of the large difference between these two languages, the findings show that they do have in common some situations that we can find similarities in the sentence structure namely the case of bringing forward the subject and delaying the verb in the Arabic version. The translation of the Arabic sentence into the target language (English language) gives a satisfactory and similar construction for both languages.

### **3.6. Recommendations and Suggestions**

There have been several issues and problems during the application of PSR theory to compare the two languages. Sometimes the model works in a suitable way so that the two languages share one circle. While other times, it is needed to change the structure of the rules to come up with the right construction of the sentence that doesn't support the original rule.

Furthermore, based on the results of the study conducted, it is recommended to other future researchers, who want to analysis the syntactic structure, to work on the major types of sentences used in the Quranic Arabic. This study will help the readers to understand more about the mechanism found in the language of the holy Quran. Moreover, it will be valuable for those who want to pursue similar studies in this field.

Nevertheless, the researcher suggests for the sake of future studies an adding of the different types of sentences of the Arabic language to the theory applied in this humble work so that it will be a valid rule which includes all possible sentences and phrases constructions which also widen the principles of theory. That is, an outcome to be proposed is to have some sort of unified theory of all previous studies in this field, a case in which we take all the positive aspects in each language to develop a valid model, especially in the Arabic language.

### **3.7. Limitations of the Research**

The research faced multiple limitations as every other study did. These factors are identified as follows:

- Lack of previous research studies especially at the level of the Arabic construction. In fact, the researcher had to seek for English documentaries and articles that deal with the structure of the Arabic sentence. In other words, the researcher's purpose is to deal with resources that are published in the English language so that it will be easy for different people of different speaking languages to comprehend the thus piece of research since the English language is a worldwide language.
- The researcher also has faced some strictly theoretical problems. Actually, the rules introduced by Chomsky didn't cover all the constructions of the Arabic sentences. Moreover, this situational problem pushed the researcher to do some modifications at

the level of phrase structure rules in order to arrive into a suitable representations for both sides. Especially, these two languages do belong to different language families.

- Another obstacle that has been faced in this study is the complexity of the Quranic language. Truthfully, the language used in the Quran is a very complex language with high and special vocabulary which made the researcher spend a lot of time to find simple sentences that fit the aim of this research.
- After all, this research is limited to the sample of the study.

### **3.8. Conclusion**

The current chapter offered the analysis and the discussion of the collected data by means of applying Chomsky's model on the two languages. Additionally, both Arabic and English languages are inflectional languages whereas the English language is more flexible when comparing it to Arabic. Lastly, it is confirmed that in spite of the huge difference among these two languages, surely there are some common linguistic features that put them in one circle.

## GENERAL CONCLUSION

At last, this piece of research was developed for the purpose of a comparative study between two different languages from two different families. Moreover, this dissertation encompasses two chapters that deal with the theoretical background. Then, the first chapter is divided into two parts where the first part includes the English language sentence structure, whereas the second part is about the Arabic language sentence structure. In other words, the previous inquire is the overview of how these two languages' syntax works in brief. Afterwards, the second chapter includes the most notorious theories of syntax in the current period. These theories contain the model that is used in the practical side namely; PSR introduced and developed by Chomsky in the 1950s. Coming up to the last chapter, this latter holds ground of the analysis of the Quranic selected sentences by applying the chosen model described in the previous chapter.

Overall, the results reveal that inspite of the differences between the Arabic and the English languages in the word order, somehow, they do share some grammatical conditions that make the word order of both languages appear to be similar and comparable to each other. Otherwise, there still be some considerable issues that can create a huge difference at the level of the sentence structure between the two languages namely the extra-large vocabulary of the Arabic language in which one Arabic word can be considered as a hole phrase or a sentence when translating it into the English language.

Finally, a linguistic study is the way to discover, solve, create, develop and even criticize others' work. That is to say that PSR theory applies to Quranic sentences into a significant extent, considering the challenges that have been faced. In addition, it could be reviewed to figure out how to deal appropriately with even more grammatical situations.

Therefore, it is particularly important that more structural rules to be handled in order to arrive at a broad theory which assembles different languages.

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- <http://corpus.quran.com/>
- <https://ironcreek.net/syntaxtree/>

# Appendix

The Quranic Arabic Corpus - Wo x +

Not secure corpus.quran.com/treebank.jsp?chapter=1&verse=1&token=1

## Verse (1:1) - Quranic Syntax

Welcome to the [Quranic Arabic Corpus](#), an annotated linguistic resource which shows the Arabic grammar, syntax and morphology for each word in the Holy Quran. Click on an Arabic word below to see details of the word's grammar, or to suggest a correction.

Chapter (1) sūrat I-fātihah (The Opening)

Verse (1:1) Go

### Chapter (1) sūrat I-fātihah (The Opening)

(1:1:4) I-rahīmi	(1:1:3) I-rahmāni	(1:1:2) I-lahi	(1:1:1) bis'mi
the Most Merciful.	the Most Gracious.	(of) Allah.	In (the) name

jsSyntaxTree

ironcreek.net/syntaxtree/

sans-serif 16 Color Auto subscript Triangles Align at bottom

Phrase (labelled bracket notation)  
[S [NP jsSyntaxTree][VP [V creates][NP nice syntax trees]]]

Tip: The graph will update automatically once a matching number of brackets is detected.

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Idea and linguistic guidance - Mei Eisenbach  
Coding & design - André Eisenbach  
<https://github.com/int2str/jsyntaxtree>

