A SYNTACTIC ANALYSIS ON THE ENGLISH TRANSLATION OF SURAH AL QIYAMAH USING TREE DIAGRAMS

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Abstract
In this research, the researcher analyzed syntactical patterns of the whole verses (ayah) in the English translation of surah Al Qiyamah, which has 40 ayah, using tree diagrams theory to be able drawing and seeing hierarchical syntax structure of the verses in the surah. After analyzing the data, the researcher finally found twenty four syntactic patterns of the surah: there are sixteen patterns of sentence and eight patterns of phrases. The phrases patterns are: a) the pattern of noun phrase appears in one position, b) the patterns of verb phrase appear in three position, c) the patterns of adjective phrase appear in two position, d) the pattern of prepositional phrase appear in two position, d) the pattern of prepositional phrase appears in one position, and e) the pattern of complement phrase appears in one position.

INTRODUCTION

In linguistics, study about the sentence of a language is called syntax. Syntax focused on the ways in which words are placed and combined together as one sentence. Once we have structural knowledge of English sentences, it is easy to get the meaning and the purpose of certain sentence and utterance correctly. It
helps us to avoid or decrease misunderstanding in speaking and reading comprehension.

In this research, the researcher chose Tree Diagrams as a mean to analyze verses in the English translation of *surah Al Qiyamah* by T.B Irving. Tree diagram is one of popular theory of syntactic analysis. It is very interesting if we are able to analyze sentences using tree diagrams. Tree Diagrams is sentences analysis by using internal hierarchical structure of sentences as generated by set of rules. There are some advantages of using Tree Diagrams. Bornstein (1977, p. 48) states that a sentence is the basic unit of syntactic analysis which is easier to see the parts of phrases and subparts (parts of speech) of the sentence in a tree diagram. Finch (1998, p. 107) states that the advantage of tree diagrams is that they enable us to see at a glance the hierarchical structure of sentences.

All of the translations of the holy Qur’an have grammatical rule. It contains phrase, clause, and sentences. Each of them must be in language as the structure in order to avoid misunderstanding between translators and readers. It is very impossible for the existence of translation without any structural form. In the structural form, the message can be accepted easily and the intention can be understood effectively. For example, in the English translation of *surah Al Qiyamah* ayah 1:

I do swear by Resurrection Day,

The formula of the diagram : S $\rightarrow$ NP + VP
The pattern of the sentence consists of noun phrase (pronoun) “I” followed by verb phrase consists of verb “do” and followed verb phrase which consists of verb “swear” and followed by prepositional phrase that consists of preposition “by” and followed by noun phrase which consists of N1 “Resurrection” and N2 “Day”.

Syntax

In Oxford Advanced Learners Dictionary (1995, p.1212) syntax is defined as the rule of grammar for the arrangement of words into phrases and of phrases into sentences. While in Webster (1988, p.1359), syntax is defined as a branch of linguistics which studies the arrangement of and relationship among words, phrases and clauses forming sentences. Bornstein (1977, p. 246) explained that syntax is the processes by which words and grammatical categories are combined to form phrase, clause and sentences in language. Then, Chomsky (1966, p. 1) said that syntax is the study of the principles and process by which sentences are constructed in particular languages. A linguistics level such as phonemics, morphology, phrase structure is essentially a set of descriptive devices which are made available for the constructions of grammars, it constitutes a certain method for representing utterances.

Laurel (2000, p. 167) states that the study of syntax is the analysis of the constituent parts of a sentence: their form, positioning, and function. Constituents are the proper subparts of sentence. In addition, Herman and Haegeman (1989, p. 3) said that syntax or syntactic analysis may be defined as: (a) determining the relevant component parts of the sentence, (b) describing these parts grammatically. The component parts of a sentence are called constituent. In other words, Matthews (1974, p. 154) explained that syntax is concerned with their external functions and their relationship to other word within the sentence.

Based on those definitions which are stated by the experts above, the researcher concludes that syntax is one of linguistics branch which is very important to be used while analyzing sentences. By using syntactic analysis, we are able to know the sentence patterns of the sentence such as N, VP, V, DET, and AUX. Furthermore, it can be concluded that syntax is the science which studies
about the arrangement and relationship among words, phrases, and clauses forming sentences or larger constructions based on grammatical rules.

Transformational Grammar

There are a lot of definition of transformational grammar based on some sources and experts. According to Websters New World College Dictionary (1996, p. 1420), transformational grammar is a system of grammatical analysis that posits the existence of deep structure and surface structure and uses a set of transformational rules to derive surface structure forms from deep structure. In addition, Bornstein (1977:97) states that the term transformation is given a specialized technical meaning: it is a grammatical process that operates on a string of words and symbols with a particular constituent structure and converts it into a new string with a new derived constituent structure. Also, Matthews (1974, p. 177) says that the rules of correspondence (rules relating deep and surface structure) are transformation, and it is from these that transformational syntax takes it name.

Chomsky (1972, p. 17) defines that the grammar of a language must contain a system of rules that characterizes deep and surface structure and transformational between them. We should use grammatical transformations of the sort described to convert deep structure to surface form. Moreover, Chomsky (1972, p. 155) also states that the grammar of a language must allow for infinite use of finite means, and we assigned this recursive property to the syntactic component, which generates an infinite set of paired deep and surface structures.

Deep and Surface Structure

Based on Yule’s book (2008, p. 87-88), he gives explanation of deep and surface structure by showing example of two superficially different sentence as follows:

Charlie broke the window.

The window was broken by Charlie.
In traditional grammar, the first is called an active sentence, focusing on what *Charlie* did, and the second is a passive sentence, focusing on *The window* and what happened to it. The distinction between them is a difference in their surface structure, that is, the different syntactic forms they have as individual English sentence. However, this superficial differences in form disguises the fact that the two sentences are very closely related, even identical, at some less superficial level.

This other ‘underlying’ level, where the basic components (noun phrase + verb + noun phrase) shared by the two sentences can be represented, is called their deep structure. The deep structure is an abstract level of structural organization in which all the elements determining structural interpretation are represented. That same deep structure can be the source of many other surface structures such as *It was Charlie who broke the window* and *Was the window broken by Charlie?* In short, the grammar must be capable of showing how a single underlying abstract representation can become different surface structure.

**Phrase Structure Rules**

According to Bornstein (1977, p. 39-46), in Transformational Grammar (TG) that the phrase structure rules are illustrated by means of tree diagrams that are called phrasemakers, which show the hierarchical structure of sentence. Bornstein further symbolizes some of the common symbols used in phrase structure rules as follows:

\[
\begin{align*}
S & : \text{sentence} & PP & : \text{prepositional phrase} \\
NP & : \text{noun phrase} & VP & : \text{verb phrase} \\
N & : \text{noun} & V & : \text{verb} \\
D or Det & : \text{determiner} & Pron & : \text{pronoun} \\
\text{Prop N} & : \text{proper noun} & \text{Pred} & : \text{predicate} \\
\text{Adv. P} & : \text{adverb phrase} & C & : \text{complement} \\
\text{Vt} & : \text{transitive verb} & \text{Vi} & : \text{intransitive verb} \\
\text{VL} & : \text{linking verb} & \text{Prep} & : \text{preposition} \\
\text{Adj. P} & : \text{adjective phrase} & \text{Pres} & : \text{present}
\end{align*}
\]
M : modal  Be : the verb be

In transformational grammar, phrase structure rules are described by means of tree diagrams called phrase-makers which show the hierarchical structure of the sentence. We begin with S (sentence) as the highest level, and go down to the lower levels until we get to maximally specific of terminal level where no additional symbols that can be written. This process is called a derivation of sentence.

Below are steps of derivation of a sentence:

a. $S \rightarrow NP + VP$

```
  S
 /   \
NP   VP
 |   |
Det N V
 |   |
the kid slept
```

b. $NP \rightarrow Det + N$

```
  S
 /   \
NP   VP
 |   |
Det N
 |   |
the kid
```

c. $VP \rightarrow Aux + Vt + NP$

```
  S
 /   \
NP   VP
 |   |
Det N Aux Vt NP
 |   |
The student will buy a book
 |   |
det
```
d. \[ AP \rightarrow \text{Adj} + \text{PP} \]

\[ \text{S} \]

\[ \text{NP} \quad \text{VP} \quad \text{AP} \]

\[ \text{det} \quad \text{N} \quad \text{adj} \quad \text{PP} \]

\[ \text{V} \quad \text{prep} \quad \text{pron} \]

The kid is angry with you

e. \[ \text{AdvP} \rightarrow \text{adv} + \text{AdvP} \]

\[ \text{S} \]

\[ \text{NP} \quad \text{VP} \quad \text{AdvP} \]

\[ \text{pro} \quad \text{V} \quad \text{Adv} \quad \text{advP} \]

He swims very well

f. \[ \text{PP} \rightarrow \text{P} + \text{NP} \]

\[ \text{S} \]

\[ \text{NP} \quad \text{VP} \quad \text{PP} \]

\[ \text{Det} \quad \text{N} \quad \text{V} \quad \text{P} \quad \text{NP} \]

\[ \text{The} \quad \text{girls} \quad \text{laughed} \quad \text{at} \quad \text{the} \quad \text{monkey} \]
The tree diagrams above can be explained more detailed as follows:

1. S consists of NP and VP
2. NP consists of Det (determiner) and N
3. VP consists of Aux, Vt/Vi, NP
4. AP consists of adj and PP
5. AdvP consists of adv and advP
6. PP consists of P (preposition) and PP

Sentence and the Types

According to its purpose, sentence can be classified into four kinds; declarative, imperative, interrogative, and exclamatory.

a. Declarative Sentence

This sentence kind makes a statement and ends with a period (.).

Example:

Every person, man or woman, **faithful** to Islam, must make “hajj” pilgrimage, at least once during his life-time, unless hindered by poverty, ill-health or other reasonable cause.

b. Imperative Sentence

It gives a command or makes a request. Most imperative sentences end with a period. A strong command ends with an exclamation point.

Examples:

Please listen to me. [request]

Listen to me. [command]

Stop talking! Listen to me! [strong command]

c. Interrogative Sentence

It asks a question and ends with a question mark.

Examples:

Who is the President of Indonesia?

Have you been to Paris?

d. Exclamatory Sentence
It shows excitement or expresses strong feeling and ends with an exclamation point.

Examples:
What a wonderful world!
How happy it is to see you again!
How sad you look!

According to Bornstein (1977, p. 52), sentence must have noun phrase and verb phrase (S NP + VP). Meanwhile, Marcella (1972, p. 276) said that there are three types of sub clause, and those are have the name differently according to their function in the sentence. They are: 1) noun clause, 2) adjective clause, and 3) adverbial clause. The explanation of the three sub clauses as follow:

Noun Phrase

In transformational grammar, Bornstein (1977, p. 242) states that noun is defined as the name of a person, place, thing, or quality. Noun phrase is a group of words in which the head word (main word) is a noun or pronoun. Then, a noun phrase can consist of a single noun or pronoun, or of noun or pronoun with modifiers (Bornstein, 1977, p. 55). Noun phrase can be in the form on the following examples:

a. NP → N (broom, blanket)
b. NP → Pron (I, you, they)
c. NP → Prop. N (Banjarmasin, Muhyiddin)
d. NP → Det + N (the television, a map)
e. NP → NP + S (the woman who is watering flowers)
f. NP → S (she goes to campus)

Verb Phrase

Transformational grammarians define that verb as the head word in the verb phrase (Bornstein, 1977, p. 77). The rules for rewriting the verb phrase, one at a time:
a. VP \(\rightarrow\) V (run, sang, walked, caught)
b. VP \(\rightarrow\) V + NP (lifted 50 pounds, meet his students)
c. VP \(\rightarrow\) V/VP + PP (walked through the park, meet his students in the class)
d. VP \(\rightarrow\) VP + adv (read the book loudly, say politely)
e. VP \(\rightarrow\) V + S (warned us that storms were coming)
f. VP \(\rightarrow\) V [aux+] VP (will feel happy, must study English)
g. VP \(\rightarrow\) V + CP (want to run)

Adjective Phrase

The most common environment where an adjective phrase (AP) occurs is in ‘linking verb’ constructions as in:
Masruroh feels ________.

Expressions in the following paragraph can occur in the blank space above as follows: happy, uncomfortable, terrified, sad, proud of him, proud to be his student, proud that she passed the exam, etc.

Since these all include an adjective (A), we can safely conclude that they all from an AP. Looking into the constituents of these, we can formulate the following simple phrase structure rule for the AP:

\[
\text{AP} \rightarrow A (\text{PP/VP/S})
\]

This simple AP rule can easily explain the following:

b. Masruroh felt proud that her son won the game.
c. Masruroh sounded *happily/*very/*the student/*in the park

The verb sounded requires an AP to be followed, but in example (c) we have no AP. In addition, observe the contrasts in the following example:

a. *The employees seem (want to leave the meeting).
b. The employees seem (eager to leave the meeting).
c. *Sari seems (know about the theater).
d. Sari seems (certain about the theater).
These examples tell us that the verb *seem* combines with an AP, but not with a VP.

**Adverb Phrase**

Another phrasal syntactic category is adverb phrase (AdvP), as exemplified in the following: soundly, well, clearly, extremely, carefully, very soundly, almost certainly, very slowly, etc.

These phrases are often used to modify verbs, adjectives, and adverbs themselves, and they can all occur in principle in the following environments:

a. Cici behaved very ________.
b. They worded the sentence very ________.
c. He treated her very ________.

Phrases other than AdvP cannot appear here. For example, an NP the student or AP happy cannot occur in these syntactic positions. Based on what we have seen so far, the AdvP rule can be given as follows:

\[
\text{AdvP} \rightarrow (\text{AdvP}) \text{Adv}
\]

**Preposition Phrase**

Another major phrasal category is preposition phrase (PP). PPs like those in the following are generally consist of a preposition plus an NP: from Seoul, in the box, in the hotel, into the soup, with Sarah and her cat, under the table, etc.

These PPs can appear in a wide range of environments:

a. Rina came from Seoul.
b. They put the book in the box.
c. Wahdah, Atma, and Kiya stayed in the hotel.
d. The fly fell into the soup.

One clear case in which only a PP can appear is the following: the squirrel ran straight/right.
The intensifiers *straight* and *right* can occur neither with an AP nor with an AdvP:

a. The squirrel ran straight/right up the tree.
b. *The squirrel ran straight/right angry.*
c. *The squirrel ran straight/right quickly.*

From the examples above, we can deduce the following general rule for forming a PP:

$$\text{PP} \rightarrow \text{P NP}$$

The rule states that a PP consists of a P followed by an NP. We cannot construct unacceptable PPs like the following:

*in angry, *into sing a song, *with happily ….

Modal

According to Laurel (2000, p. 199) that the second in the verb group is modal (M). The modal auxiliary is the first independent in the verb group, but it need not be present because modal is optional. If a modal is present, it carries tense (however, past tense forms of the modals do not usually express past time). The form of the auxiliary (be or have) or main verb which follows the modal is the basic stem form.

The negative item to appear under the auxiliary is modal. Since it is optional, it is placed within parentheses which are used to indicate that an item may or may not be chosen:

$$\text{Aux} \rightarrow \text{M}$$

$$\text{Be}$$

$$\text{Have}$$

The negative form indicated by the word ‘not’ appears under the auxiliary. The helping verb in which precedes the word ‘not’ also come from the auxiliary.

You do not hear
Auxiliary

According to Bornstein in her book entitled *An Introduction to Transformational Grammar*, does not divide noun phrase, verb phrase, and auxiliary into equal segments. The auxiliary tends to be more closely associated with the main verb. That is why, in this grammar, the auxiliary will be considered to be the first constituent in the verb phrase. The following phrase structure rule states that a verb phrase consists of an auxiliary and a verb:

\[
\text{VP} \rightarrow \text{Aux + V} \quad \text{(will run, shall go)}
\]

Mostly in the models of transformational grammar, the auxiliary is presented as a separate constituent. This method is more effective in accounting for the structure of the verb phrase and for the negative, interrogative, and emphatic transformations in English. Therefore, this grammar will represent the auxiliary as a separate constituent which is part of the verb phrase. Some models of transformational grammar separate the auxiliary from the verb phrase and divide the sentence into tree parts. The following rule is used for rewriting of S:

\[
\text{S} \rightarrow \text{NP + Aux + VP}
\]

However, such a division does not seem to conform to the natural intonation patterns of the language. Most people would say:

You / will study
But not
You / will / study
Generally, modal auxiliaries express a speaker’s attitudes or “moods”. For example, modals can express that a speaker feels something is possible or probable, necessary, permissible, or advisable; they can convey the strength of these attitudes.

Bornstein (1977, p. 40) states that the Aux (auxiliary) can be rewritten as a modal auxiliary (can, must, will), one of the “helping verb” (do, be, have) of traditional grammar, but it also includes tense (present or past) as its first element. Tense must appear under the auxiliary:

\[
\text{Aux} \rightarrow \text{Tense}
\]

Tense must be rewritten as either present or past. This is indicated by placing these two items within brackets. When brackets are used, one and only one item from within the brackets must be selected:

\[
\text{Tense} \rightarrow \begin{cases} \text{Present} \\ \text{Past} \end{cases}
\]

The next item to appear under the auxiliary is modal. Due to that it is optional, it is placed within parentheses which are used to indicate an item may or may not be chosen:

\[
\text{Aux} \rightarrow \text{Tense (M)}
\]

If the optional modal is chosen, tense is joined to the modal. The sequence “pres + M” leaves the form of the modal unchanged:

\[
\text{Lailatun will leave} \quad \text{Aux} \rightarrow \text{pres + M}
\]

If a modal or another auxiliary (“have”, “be”, or “do”) is not present, the tense ending will be attached to the main verb:

\[
\text{Lailatun leaves} \quad \text{Aux} \rightarrow \text{pres}
\]

When present tense is selected, a form change on the verb appear only for third person singular (he, she, it), and not at all for modals. Then, when past tense is selected, a form change is produced to modals and for main verbs for all persons:

\[
\text{Lailatun would leave} \quad \text{Aux} \rightarrow \text{past + M}
\]

\[
\text{Lailatun left} \quad \text{Aux} \rightarrow \text{past}
\]
The next item to appear under the Aux is the perfect aspect which introduces “have” plus the past participle ending into the sentence. Since perfect aspect is optional, it is placed within parentheses:
Aux \rightarrow tense (M) (have + -en)

If the perfect aspect is chosen and there is no modal, tense attaches to “have”, and the past participle ending is placed on the main verb:
Lailatun has left \quad \text{Aux} \rightarrow \text{tense} (\text{have} + -\text{en})

The last item to appear under the Aux is the progressive aspect which introduces “be” plus the present participle ending into the sentence. Like the perfect aspect, it is optional and is placed within parentheses:
Aux \rightarrow \text{tense} (M) (\text{have} + -\text{en}) (\text{be} + -\text{ing})

If the progressive aspect is chosen, modal and the perfect aspect are not chosen, tense is attached to “be”, and the present participle ending is placed on the main verb:
Lailatun is leaving \quad \text{Aux} \rightarrow \text{pres} + (\text{be} + -\text{ing})

Tree Diagrams

Based on Bornstein’s theory (1977, p. 39), a tree diagram shows the hierarchical structure of the sentence. The sentence is considered the basic of the syntactic system. Instead of beginning with actual sentences, we begin with directions for generating or producing structural descriptions of sentences, which are set forth in phrase structure rules. The rules should be interpreted as an instruction to rewrite or expand the symbol on the left of the arrows as the sequence on the right.

In $S \rightarrow NP + VP$, $S$ stands for sentence, $NP$ (Noun Phrase) and $VP$ (Verb Phrase). The item on the left dominates the elements on the right. Diane Bornstein starts with $S$ as the highest level and works down to lower level until she comes to the maximally specific level, where in addition symbol can be written. This process is called derivational in the sentence.
Bornstein (1977, p. 44-45) points of juncture in tree diagrams are called nodes. If one node is immediately by another, it is called a daughter node. If two nodes are immediately dominated the same node, they are called sister nodes. In the following diagram, the nodes NP and VP are daughter nodes of S and sister nodes to each other. NP is the left sister, whereas VP is the right sister:

![Tree Diagram](image)

In the next diagram, Aux, Vt and NP are daughter nodes of VP and sister nodes to each other:

![Tree Diagram](image)

The term daughter node and sister node are used in transformational rules, which provide directions for moving constituents in the deep structure. Tree diagram has two ways to analyze a sentence by using surface structure and deep structure. Both of them have meaning each other. Bornstein (1977, p. 37) explained that a deep structure that represent the meaning and a surface structure that represent the sound.

Will he come here tomorrow? (Surface structure) → based on the form
Will he come here tomorrow? (Deep structure) → based on the meaning

Bornstein (1977, p. 37) said that deep structure and surface structure are produced by two types of rules. Phrase structure rules generate the sentences that are found in the deep structure. Transformational rules change around these sentences, making them into surface structure.

**METHOD**

The type of this research is descriptive qualitative because the data are in the forms of words rather than numbers. The researcher describes the syntactic patterns in the English translation of *surah Al Qiyamah* using theory of tree diagrams descriptively. Miles (1985, p. 1) states that qualitative data tends to be
in the form of words than series of number. This research does not present data and result in the form of digit or static but it yields the data and the result in the form phenomena description.

Subject

The subject of this research is the English translation of *surah Al Qiyamah* by T.B Irving.

Object

The object of this research is syntactical analysis of the whole *ayah* in the English translation of *surah Al Qiyamah* by T.B Irving which will be analyzed using theory of tree diagrams proposed by Diane Bornstein.

Data and Source of Data

The data used in this research is the English translation of *surah Al Qiyamah* and the data source in this study the English translation of *surah Al Qiyamah* which is translated into English by Thomas Ballantine Irving. The researcher took English translation of the Holy Qur’an *surah* because it has grammatical rule and all of them are analyzable. Moreover, the structures of the sentences in the *surah* have different patterns so that the researcher wants to analyze deeply about the syntactic patterns of the sentences.

Data Collection Procedure

The steps to collect the data are: finding T.B Irving’s English translation of *surah Al Qiyamah*, reading the English translation of the *surah*, and presenting it as the data.

Data Analysis Procedure

After collecting the data, several steps will be done as follows: First, drawing tree diagram of the whole *ayah* in *surah Al Qiyamah*. Second, analyzing the data using Bornstein’s theory of tree diagrams. Third, describing the diagrams
FINDINGS AND DISCUSSIONS

Datum 1 (ayah 1): I do swear by Resurrection Day,

The formula of the diagram : S \rightarrow NP + VP

The pattern of the sentence consists of noun phrase (pronoun) “I” followed by verb phrase consists of verb “do” and followed verb phrase which consists of verb “swear” and followed by prepositional phrase that consists of preposition “by” and followed by noun phrase which consists of N1 “Resurrection” and N2 “Day”

Datum 2 (ayah 2): as I swear by the rebuking soul,

The formula of the diagram : PP \rightarrow P + NP + VP

The pattern of the prepositional phrase consists of conjunction “as” and followed by a sentence which consists of pronoun (noun phrase) “I” and followed
by verb phrase which consists of verb “swear” and followed by prepositional phrase consists of preposition “by” and a noun phrase consists of article “the” as determiner and followed by a noun phrase which consists of an adjective “rebuking” and noun “soul”.

Datum 21 (ayah 21): While you neglect the hereafter!

The diagram formula: CP  com + S

This ayah is a complement phrase which is consists of complement “while” and followed by a sentence. The sentence in this ayah consists of pronoun “you”, verb “neglect”, determiner “the”, and noun “Hereafter”.

Datum 23 (ayah 23): Looking toward their Lord

The formula of the diagram: NP  N + PP

This ayah is a noun phrase consists of noun “Looking” which is an verb- ing and followed by a prepositional phrase consists of preposition “toward”, determiner “their”, and noun “Lord”.

Datum 25 (ayah 25):

thinking that some impoverishing blow will be dealt them
The formula of the diagram: VP → V + CP

This ayah is a verb phrase, consists of verb “thinking” and followed by a complement phrase consists of complement “that” and a sentence. The sentence consists of determiner “that” and noun “impoverishing blow” as noun phrase and followed by verb phrase consists of auxiliary “will be”, verb “dealt”, and noun “them”.

Datum 34 (ayah 34): (though) closer to you and even closer!

The diagram formula: AP → Con + AP

This ayah is an adjective phrase consists of conjunction “though” and followed by adjective phrase. The adjective phrase consists of adjective “closer”, complement “to”, pronoun “you”, conjunction “and”, and adjective “even closer”.
CONCLUSIONS AND SUGGESTION

Based on the result, there are twenty four syntactical patterns found in the English translation of *surah Al Qiyamah* which are described into several parts appropriate with the types as follows:

a. There are sixteen patterns of sentence
   1. \( S \rightarrow NP + VP \)
   2. \( S \rightarrow PP + NP + VP \)
   3. \( S \rightarrow AP + NP + VP \)
   4. \( S \rightarrow AdvP + NP + VP \)
   5. \( S \rightarrow Adj + NP + VP \)
   6. \( S \rightarrow Adv + NP + VP \)
   7. \( S \rightarrow NP + VP + VP \)
   8. \( S \rightarrow Con + NP + VP \)
   9. \( S \rightarrow PP + NP1 + VP1 + VP2 + NP2 \)
   10. \( S \rightarrow NP + VP + NP \)
   11. \( S-\text{inv} \rightarrow VP + NP + VP \)
   12. \( S-\text{inv} \rightarrow VP + NP \)
   13. \( S-\text{inv} \rightarrow VP + NP + AP \)
   14. \( S \rightarrow Adv + NP + VP + Adv + NP + VP \)
   15. \( S \rightarrow PP + S-\text{inv} \)
   16. \( S-\text{imp} \rightarrow VP1 + VP2 + CP \)

b. There is one pattern of noun phrase
   1. \( NP \rightarrow N + PP \)

c. There are three patterns of verb phrase
   1. \( VP \rightarrow V + CP \)
   2. \( VP \rightarrow Con + VP + Con + VP \)
   3. \( VP \rightarrow Con + VP + PP \)

d. There are two patterns of adjective phrase
   1. \( AP \rightarrow Con + AP \)
   2. \( AP \rightarrow Adv + Adj + PP \)

e. There is one pattern of prepositional phrase
1. **PP → P + NP + VP**

f. There is one pattern of complement phrase

1. **CP → Com + S**

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