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A Study of the Patterns of Noun Phrase in Pakistani English Journalese: A Syntactic Perspective

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Abstract

The present research pioneering a new trend would espouse the contemporary theories of generative grammar, i.e. a study of noun phrases in Pakistani English (PE) of journalese applying universal and generative theories of grammar, especially X-bar theory. The analysis will also have another specific advantage by moving the focus from sentential to phrasal level and constituent level in a generative perspective. The sentential/phrasal explanation in PE is unquestionably in line with the concept that 'movement in constituents' is arranged as an ongoing series of lexical items. However, 'movement' in constituents is espoused, i.e. the changes in positions are observed, and the order of their occurrence is discussed in reference to peculiarities in the occurrence of constituents in NP according to 'parameters' to suit a communicative purpose. Therefore, data analysis is being done quantitatively by measuring frequencies concerning the occurrence of NPs using an adapted multi-method approach, especially for the study of descriptive linguistics preferred by de Mönnink (2000). To date, 'movement' in phrasal constituents has been investigated using self-made examples by many linguists (see de Mönnink, 2000) in the case of Standard English. Adopting the formal approach, the researchers have investigated movement and discussed it through analyses in the generative framework. Thus, an utterly transformational approach toward a more surface-structure perspective has originated; the number of movement rules to one broad movement principle (move a) has shrunk. The directionality of 'move a' to leftward movement has been restricted in the framework of this study. The study shows that weight and information value are the basic principles that explain movement from a functional perspective. When discussing how to treat NP movement, the most famous constructions are focused on the formal and functional approach (i.e. discontinuous AJPs, FDPM, and [floating] deferred determiners). In addition, fronted pre-modification is analysed because that is the only NP structure that involves movement to the left of an Immediate Constituent (IC). The study's findings fully conform to the view that a language learner would learn and teach a language better with a clear understanding of constituents.

Keywords: noun phrase, generative grammar, movement, movement at phrasal level, movement in constituents, Pakistani English

Introduction

Noun Phrase assumes an essential role in Universal Grammar (UG). Chomsky (1957, 1981, and 1995) proposed this grammar paradigm, which he then illustrated in numerous ways. Chomsky's Standard Theory (1957) was followed by Government and Binding (1981), which culminated in the Minimalist Programme (1995), in which the Principles and Parameters framework drew much attention in order to comprehend language (See, for example, Haegeman 1994; Radford, 1988). Theoretical suggestions are based on recent works in syntax, such as i) the X-Bar Theory (Chomsky, 1970 and 1994; Jackendoff, 1977) and ii) the Minimalist Programme (Chomsky, 1995; Radford, 1997, 2000; Adger, 2003; Lasnik et al., 2005). According to Generative Grammar, all-natural languages/varieties have standard syntactic norms and are structure-

dependent. Variations at the surface level occur owing to the change in the position of the head in the phrase.

Universal Grammar

Chomsky (1957, 1981, and 1995) occupies the most privileged and honoured position and is most frequently cited for illustrative work on UG theory. The theory as a whole is a proportional division of ideas, such as Chomsky's (1971) statement that "it is quite possible for a person to go through life without having heard any of the relevant examples that would choose between the two principles" (as cited in Perfors et al., 2006, p.1) and the concept that every language in the world is somehow related to the other languages in terms of syntax, i.e. lexical and phrasal categories. The concept of a *blank slate* has tremendously been opposed; experience (of one's culture, language, etc.) does not fill a *blank slate* but instead interacts with innate properties to form *competence* in these different systems of knowledge (Stark, 1998), that it results in the formation of a significant component of UG Theory. The conclusion of the theory, which reflects the importance of Chomsky's work on this aspect of grammar, is that the observational factors and acquisition-al differences are the main discriminators in viewing the relationship of language with the nativism of an individual.

Bacon (1214-94) was the first to trace the roots of the UG; even though there are some variables in his theory, he is believed to have discovered common grammar in all languages, making cognitive psychology a basis for the theory. Some accidental variations are found in the 13th century when almost all the languages underwent reformation, and the grammar was paralleled a little. There are some great figures like Beattie (1735-1803), Blair (1718-1800), Burnett (1714-99), and Smith (1723-90) who joined hands to work under a single platform as they served under the same Scottish school of the 18th century. The school worked on developing the concept of *Universal Grammar* and the prosperity of UG itself. Another trace back, which is significant in this respect, is the mentioning of UG under the Grammar portion of an extensive and historical work, Encyclopedia Britannica (1771) explains:

> "We may think of UG as an intricately structured system, but one that is only partially 'wired up'. The system is associated with a finite set of switches, each with a finite number of positions (perhaps two). Experience is required to set the switches. When they are set, the system functions" (as cited in Masher and Groves, 1996, p. 106).

The Idea got a boost in its developmental perspective as it became the focus of modern theorists like Chomsky (1965, 1976, and 1995) and Montague (1930-1971 as cited in Partee, 2006) and the concept thus got a promotion to its utmost awareness to the world after being a part of the *Linguistic Battle* and other significant discussions.

Chomsky's theory. Chomsky's (1965) theory relates to biological psychology as it depends on the structure of the human brain. He argues that as the brain structure is designed on the same plan, the ability to adopt a language and learn its pros and cons is equal for every language speaker. He believes there are built-in and limited sets of rules for every language in the brain, which are responsible for the organisation and acquisition process of the language. The concept is well elaborated by Chomsky (1968) as "an abstract system underlying behaviour, a system constituted by rules that interact to determine the form and intrinsic meaning of a potentially infinite number of sentences" (as cited in Blunden, 1998). In other words, the concept can be elaborated because every language has its basic syntax that is familiar to other languages.

Chomsky (1957) opines, "I think, yet the world thinks in me", and these words are crucial to understanding the whole theory as he wants to explain that the whole world has something he

also possesses. The way of acquiring language is the same as in the traditional acquisition. As a biological belief, the ability to learn is the same in all the brains in the world, with a slight variation on an individual basis, regardless of any culture or civilisation.

The subconscious state of a proficient language speaker teaches one both the acceptable and non-acceptable utterances of society, as speakers naturally vary in their speech production even though the kernel sentences remain the same. The question that Chomsky (1968) pertains to the factor that teaches a person such a motive. Moreover, if it is like a person, then the concept of the *blank slate* could be recalled. These questions are, to an extent, logical and form a debate which gives little priority to Chomsky's (1968) theory and promotes it. Skinner's (1953) *behaviourist perspective* is also opposed by this theory when the researchers give details on the *Poverty of Stimulus* to justify their point.

The organisational cells stored in the brain biologically are active till the age of psychological development, and they are later useless for native speakers of language learning. They occasionally become active when individuals tend to learn another language and find it challenging to quit the grammatical features of their native language and instantaneously adopt the new syntax. The issue of *poverty of stimuli* was resolved by the theorists who worked on UG and later put some restrictions on the syntax of languages internationally, which helped in the acquisition/learning of the second language. Usually, language learners hold their views on this aspect, and most learners do not follow the guidelines set by the theories and researchers. This concept is further subdivided into topics, which also include *Generative Grammar*.

Generative Grammar. To carry out a syntactic study on a language (as claimed in UG), especially in theoretical linguistics, a particularly approved and repeatedly used approach to investigate syntactic or morph-syntactic features is called generative grammar. Significantly, in rule-governed languages, generative grammar correctly predicts combinations of lexical items to generate well-formed grammatical and morphological structures of sentences. "The generative grammarian's task is ideally not just to define the interrelation of elements in a particular language, but also to characterise universal grammar—that is, the set of rules and principles intrinsic to all natural languages, which are thought to be an innate endowment of the human intellect" (as cited in Online Merriam Webster Dictionary's Concise Encyclopaedia). On *Generative Grammar* as a broader term, many linguists practised several versions of generative grammar as a theoretical basis in linguistic studies along with other prominent theories of Chomsky (1965, 1976, 1981, 1995, 2001), i.e. Government and Binding, Minimalist Program, Phrase Structure Grammar, Tree-adjoining Grammar and also by the proponents of other grammatical models like functional, behaviourist or cognitive.

X-bar theory. X-Bar theory directly relates to linguistic theory, and its central perspective is that there are not only some but many common syntactic structures in all the languages in the world. There is a complex root of presumed and presupposed substances in this theory, which, when mentioned in 1965, concludes Chomsky's thought comprehensively. Kornai and Pullum (2007) explain that "One of the primary tasks of syntactic theory is to explain how sentences are built from words" (p. 2). This explanation is generally conceived of in terms of assigning syntactic structures to sentences.

The X-Bar Theory states that no matter which language it is, it has a thing in common, which is found in all languages. X-Bar is an especially necessary component in all naturally occurring languages. Chomsky (1970) not only propounded the theory but defended it well; it was later developed by Jackendoff (1977). The application and evaluation of the X-Bar Theory

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are not supported in the case of dependency-based grammar. Instead, it only works in the specific case of *constituency-based grammar*.

The letter X plays a part in a valid variable and works on lexical categories and occurrences in some specific cases; some specific constants are assigned to the variable. It may also be said that X may change into other variables depending on the condition, for example, letters N, V, A, and P, respectively, for Nouns, Verbs, Adjectives and prepositions. Three basic symmetrical rules join and become the base of X-Bar theory, which may be seen in *the immediate dominance rule for the native language, the NLP or Natural Language Processing for neutral language or visually as a parse tree* for generalisation.

The X-Bar theory is preceded by the Government and Binding theory to develop it further and give it a unique approach.

Government and Binding Theory. Chomsky (1981 & 1986) maintained his principal position by working more and more on Transformational-Generative Grammar and by opposing the traditional views, the theory of dependency grammar, as he worked tirelessly on the GB theory and the Phrase-Based grammar, developing his grip over the use and debate of syntax. According to Chomsky (1981, 1986), no new ideas were added to his work. The theory went smoothly, clearing the older points, developing the concepts in them and defending them well against criticism, which he also elaborated further in one of his most famous theories in *the Minimalist Program* in 1995 and later became the guardian of the concept through the armours of Three Factors in Language Design (Chomsky, 2005). The GB Theory is mainly attached to Chomsky and is generalised by his name. Different linguists later carried out a great deal of work on this topic.

The idea in GB theory is exactly like the way a governmental body is subdivided into two houses commonly; the GB theory is also controlled in a *count-down way* as it splits attorneys gradually into the *government sub-theory*, assuming it typically as the upper house and *binding sub-theory*, assuming it usually as a lower house in a democratic state. The division of responsibility between nouns, pronouns, anaphors and other referential expressions is controlled by *the Government* and *Binding* individually. The study on the GB infuses excellent interest among the researchers. That further enthuses them to work on the details discussed by Chomsky in *Principles and Parameters* and *the Minimalist Program.*

Principles and Parameters. *Principles and parameters (PP)* are a way of modifying a natural language to change a little to make it generally understandable and to determine the position of language to fit the global grammar as envisioned in the theory. The *Principles* and *Parameters* relate to meaning and rules governing communication- Principles being the societal regulations set for a language for which a language is bound, and Parameters being the switches and kinds of modes employed in a language, which can vary for other languages; however, the rules of regulations may differ in other languages. Parameters determine the use of heads in phrases in a language, which can be an example of the functionality of the Principles and Parameters theory.

Most languages and varieties like PE conform to the theory and investigation in this respect. Universal grammar seems to be a logical conclusion if most languages bear out this fact. Lasnik (2005) and Chomsky (1995) are the leading proponents of the theory and the study of parameters in universal syntax. Apart from these two figures, the concept relates to other great

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researchers who worked their best to contribute to developing international grammar. Some critics classify this theory from the GB theory's perspective and relate it directly and so straightforwardly that a beginner can usually not feel any difference between them. The terms Principle and Parameters directly relate to the components of linguistic terminology, Government and Binding, and they cannot be differentiated as they are both under the same branch of Generative Grammar, *Phrase Structure Grammar*.

Headedness Concept. Principles and Parameters are premised upon the idea that a small number of innate principles are standard to every human language (e.g. phrases are oriented around heads) and that these general principles are subject to parametric variation (e.g. the order of heads and other phrasal components may differ). In this theory, the dependency relation between heads, complements, specifiers, and adjuncts is regulated by the X-bar theory, (see Jackendoff, 1970s). The complement is sister to the head, and they can be ordered in one of two ways: A head-complement order is called a *head-initial structure*, while a complement-head order is called a *head-final structure*. These are exceptional cases that Tesnière (1893-1954) referred to it as centripetal and centrifugal structures since the model considers only complements, he considered all of them as dependents.

In the PP theory, a head-directionality parameter is proposed to classify languages. A language that has head-initial structures is considered to be a head-initial language, and one that has head-final structures is considered to be a *head-final language*. It is, however, found that very few, if any, languages are entirely in one direction or the other. Linguists have devised several theories to explain the inconsistencies, sometimes positing a more consistent underlying order, with phrasal movement used to explain the surface deviations.

The Noun Phrase in the Perspective of Generative Grammar

Critics of Phrase Structure or Generative Grammar argue that it lacks descriptive, observational or explanatory adequacy. The present study seeks to provide an independent view of this grammar through its application to PE. So, bounding to a generative framework that has many constant incarnations, agreeing on the endocentricness of the syntactic structure of headedness, the research will apply X-bar theory (for any maximal projection in generative perspective (XP) must be enclosed with a head (X)). Syntactic analyses would be made using Chomsky's (1995, 2001) IC analysis.

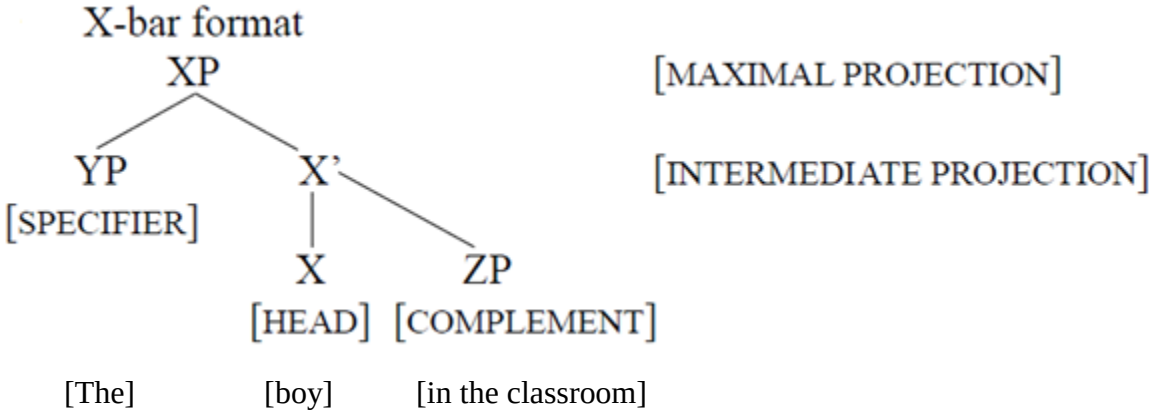

Figure 1. X-bar format projection

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In the above Fig. 1, XP represents a phrasal maximal projection where X is the 'head' of constituent XP. At the level of 'Intermediate projection', X' and YP (nodes) are further expedition of XP at a lower level, and ZP can represent another phrase (PP, CP) (derived from Alexiadou *et al*., 2007, p. 11). Likewise, some more parsing of the phrases will be drawn in the analysis section for further explanation in both source and target varieties of the English language, as given below:

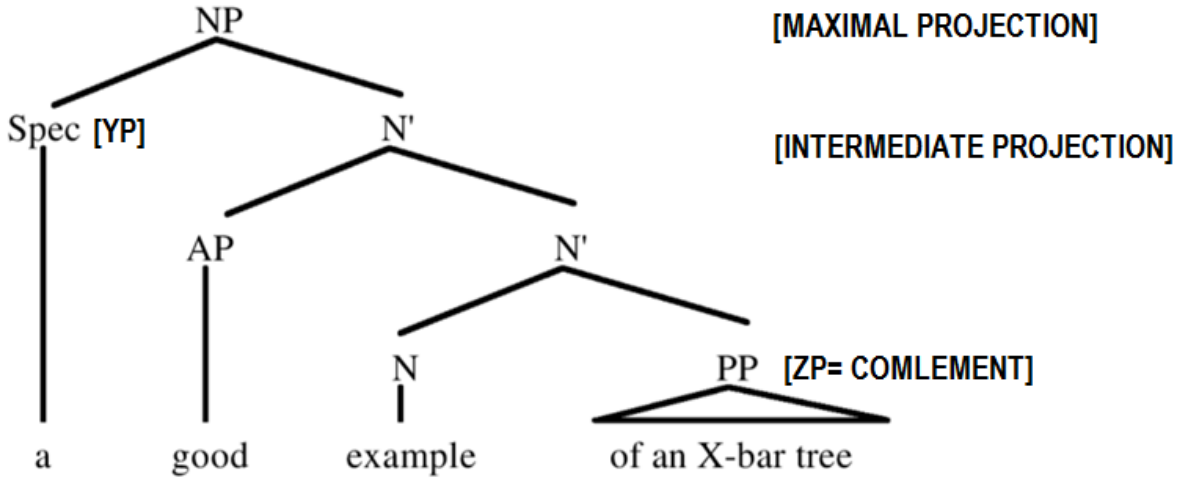

Figure 2. NP structure according to X-bar theory

Describing the English Noun Phrase (NP)

In this section, the noun phrase (NP) in the English language is described, as it can be found in the current descriptive custom, to get to an overall portrayal of the noun phrase (NP): the prototypical noun phrase structure. This NP portrayal means that constituents are developed out of a consistent succession of words. Nonetheless, even in strict word order language, for example, English, constituents can '*move*'; they can appear in various positions from the one they usually take. Up to this point, little is thought about the movement of phrasal constituents. There will be an exploration into how versatile immediate constituents are in the NP in contemporary British English. In the meantime, investigating the '*movement*' of constituents at the NP level is helpful as a contextual analysis for a multi-method approach to deal with the information. It is contended that, from a methodological perspective, descriptive studies enhance understanding impressively if they utilise such a multi-method viewpoint to deal with the information, most particularly if they mix corpus and experimental information.

The NP and Generative Grammar

In generative language structure, the investigation of the inner structure of the NP has, for the most part, served the more extensive dialogue on the syntactic theory and has not been a theme of study in its own particular right. In the X-bar hypothesis, each maximal projection (XP) needs to have a head (X). Determiners and modifiers to the NP are incorporated by including a specifier and supplement position to the main structure or, on account of outer arguments, by adjunction. Specifier is not obligatory, as is adjunction. The sub-categorisation rules control supplements. In English, inner structures (for instance, subcategorised PPs) are anticipated to the right side of the head in the D(eep) – structure. In contrast, outer structures (e.g. predicative descriptors) are moved to the left. The constituent's sequence can change according to the *movement* necessities. Figure 3 gives a case of an NP examination in the generative system.

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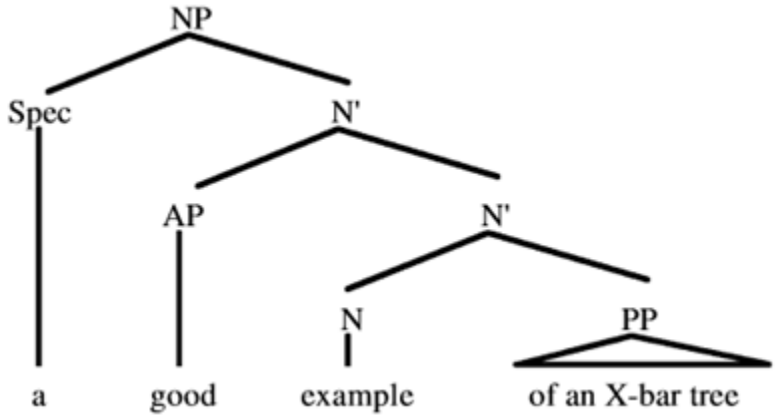

Figure 3. NP Structure according to X-bar theory

Based on Case Theory, the structure of the NP is considered as a reflection of determiners of function selecting a completely lexical NP supplement, bringing about the following advanced construction:

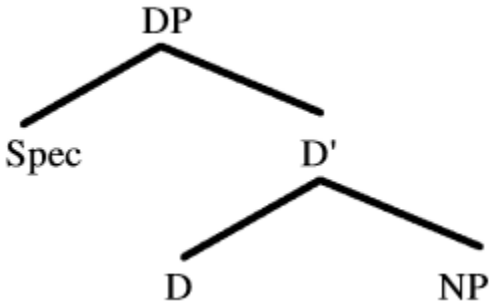

Figure 4. DP structure

This structure makes it likely to allot cases to genitive NPs. It offers the option to manage the appropriation of exposed NPs (without a determiner) and make the determiner phrase's interior structure bigger.

The study is quantitative in nature and descriptive in approach. Descriptive research seeks to describe and explore the existing theory and verify its formulated hypothesis about the present situation. Best and Kahn (2000) opine on descriptive research:

> The descriptive study describes and interprets what is. It concerns the conditions or relationships that exist, opinions that are held, processes that are going on, evident effects, or trends that are developing. It is primarily concerned with the present, although it often considers past events related to current conditions" (p. 118).

The primary aim of this study is to investigate and ascertain the average and typical practice of phrase formation in Pakistani English as is used in newspapers, namely DAWN (a widely circulated newspaper in English as is evident from its circulation across the country and wide range popularity among the educated). Quantitative research involves collecting primarily

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numerical data from NPs, as in the present case (Heigham & Croker, 2009, p. 4-5). Data in 100 well-formed sentences was collected from web sources and later parsed and chunked into constituents to separate the NPs for their analysis. For the purpose above, two online software, phpSyntaxTree and EzTreeSee, were used. Thus, data analysis is being done to see frequencies concerning the occurrence of NPs and subsequent analysis of NP applying X-Bar at two levels – projection and structural slot levels. NP is applying a) the occurrence of NPs in a sentence and b) the occurrence of constituents of NP at various levels. A subsequent analysis of the NP at the surface level applying X-bar theory would provide substantive evidence to describe deviations, innovations and tendencies peculiar to NP in Pakistani English.

Analysis

Constituency-based Parse Tree at Sentential Level

Constituency-based parsing is often used to demonstrate sentences for analysing them in constituency-based grammars. However, parse trees are drawn to distinguish between terminal and non-terminal nodes. The *Leaf Nodes* are displayed via the terminal categories of the grammar, whereas interior nodes are displayed via non-terminal categories. This method divides sentences into significant parts, and these divisions reach irreducible constituents (most minor parts) through a continuous process, i.e., to a single yet meaningful constituent. Finally, final results are drawn through an immediate constituent structure in the form of visual tree diagrams (these are often called parse trees in image form). The researcher draws a constituency-based parse tree (in Figure 5 as an example) to show the general and straightforward syntactic sentence structure in British or Standard English. Moreover, continuing the method, more constituency-based parse trees are drawn to illustrate the complex syntactic structure of Standard English and the target language, Pakistani English. See the following simple standard/British English example for the general understanding of constituency-based parsing of a sentence:

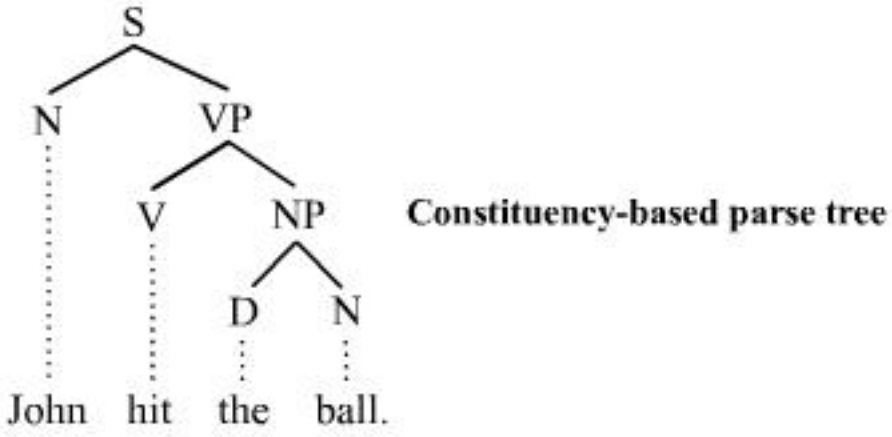

Figure 5. Parse tree (adapted from Wikimedia)

The ***constituency-based parse tree*** originates from S, denoted in place of Sentence. The procedure followed takes the division towards the leaf nodes (N=*John*, V=*hit*, D=*the*, N=*ball)* by dividing S into NP and VP. The terminal and non-terminal nodes indicate the procedure of any node, such as if it will be a parent node or a child node, which determines its fate as a branch or a root node, respectively. Following are the abbreviations to be used in the most straightforward constituency-based parse tree:

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- **S** indicates the word "*sentence*" and is the grandparent of all the further abbreviations used in the structure in the above example
- **NP** originates from S alongside VP since "John" is the only component of the NP, so it is denoted by simple N (noun).
- **VP** is the second component of dividend S, the predicate part of the sentence, and a branch node in the above example.
- **V**, the most essential component in the given, is the head at the sentential level. It serves as the primary/main predicate in VP.
- **D** stands for the determiner, at this moment referring to the article "the" in the NP
- **N** stands for the definite noun or the object of the sentence.

Elaborating more specifically, each node in the above structure is either a branch node, a leaf node or a root, depending on its position and the part it plays in constructing the structure or more complex structures. A root node is also recognised as a daughter node, and it does not precede branches or branch nodes with its commencing and is only once found amongst the minor division of constituents. A branch node performs the role of a parent node and creates a connection between the daughter nodes through its commencing. However, when division comes to the leaf nodes, it does not affect or take in domination of any other node or constituent in the structure. In the explanation, the above sentence has four essential components allocated their places as leaf nodes, with S, NP, and VP being the branch nodes of the structure, connecting the leaf nodes. Lexical tokens are used to determine the place of the roots in a structure, representing them as the leaves of the sentence. A parent node, also called a nonterminal node, can have two or more branches linked with it at different positions and levels of distribution. In contrast, a child node, represented as the terminal node, is always linked with a single another node, which is always a branch node.

In *Transformational Generative Grammar*, the ***phrase markers*** (Figure 6.) were introduced by some competitive names, including the great like Chomsky (1957, 2002:88). For the representation/illustration of the syntactic deep structure of any sentence in syntactic analysis, the phrase markers come in handy, as they operate by processing the *phrase structure rules* and mastering over them – as well as proceeding them for further transformations. There is no limitation in the specification of the appearance of phrase markers; they come in various shapes; mainly, they are used as 'brackets', thus occupying less space in the alphabetical or as tree branches in the form of constituency-based parse trees. For example, a bracketed expression corresponding to the constituency-based tree given above may be something like:

$$[_S\ [_{NP}\ John]\ [_{VP}\ [_V\ hit]\ [_{NP}\ the\ [_N\ ball]]]]$$

Figure 6. Illustration via Phrase Markers

Or

[S [NP [NN John]] [VP [VBD hit] [NP [DT the] [NN ball]]]]

Specifically, sticking to parse trees, there is an additional advantage of showing whatever one desires the most and hiding things that do not require any external focus during analysis, simplifying the nature of using phrase markers.

The priory described structure of constituency-based grammar and parse tree making was elaborated for a general understanding of familiar persona (with some basic knowledge of syntax) and is followed by a more specific, to the topic *X-bar theory*. X-bar theory is a way of a

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specific implementation of constituency-based grammar as it analyses a sentence by splitting it into constituents. Although it is a specific way of sentence analysis, it is followed by several simplified rules, which are as follows:

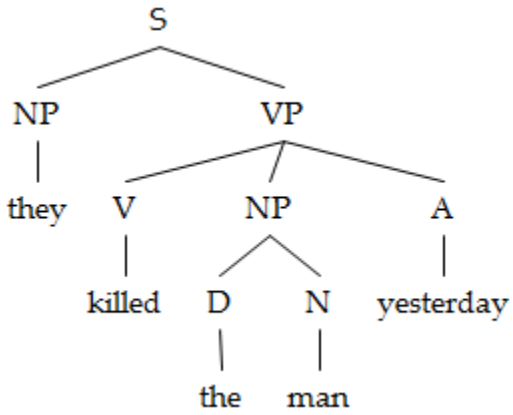

Figure 7. A rough parse tree

- The starter of the tree, which is referred to as S in the example (see Figure 7.), is more specifically called XP (X-phrase), and at this moment, it is the *maximal projection* of the structure through its head X (V "killed"). This indicates the significance of learning to read the structure from button to top instead of top down.

- In the "X-bar" theory, "X" actually plays the same role in algebra: a variable. It is eventually replaced by other constituents like Verb, Adjective, Noun, Adverb, Preposition, etc., all driven by the given example (Figure 7.). The XP, i.e., X-phrase, becomes VP/NP/JP/AP/PP, depending on the condition in which it is used. The head of VP is V, and the head of NP is N, going towards the *maximal projection* of the actual phrase in hand, thus summing up to "killed" being the head (V) in the sentence. The use of X in place of all these other variables comes from the point that all these variables share the same basic underlying structure.

- The projections are always in two or fewer branches. In the example (see Figure 7.), the tree is projected towards three other branches at a point of structure depending on the constituency-based grammar, but it is impossible in the X-bar format. The X-bar format only supports two branches (See Figure 4.4) at a time and goes down, splitting into equal divisions, making it even more straightforward and more accessible to generalise. The head may be linked with *intermediate projection* before maximal projection, invalid in the basic constituency structure. The branch where the intermediate projection lies is called the XB or the "X-bar". Going more specific and relating to the "X-bar" terminology, the constituents can be named NB or VB (see Figure 7), depending on their underlying structure.

- In the intermediate and maximal projection phases, the head projects directly towards the maximal projection, passing through the *intermediate projection*. So, in the example (Figure 6), if S is replaced with VP, it will not come in handy as a

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VP cannot be directly projected by a VP; it is not in the rules of X-bar theory. Therefore, a VB (see Figure 7) has to be introduced between the maximal projection and the head, as there is no limit on the number of *intermediate projections* to be used.

- The constituents of an X-bar structure can further be divided into four different types of arguments: the head, which is the essential projectile component of the structure and heads towards the *maximal projection*; the compliment, which is the complementary component for the head; the adjunct, which plays a role of a modifier for the head; the specifier, that determines what the head is, and its significance is that a head can have as many compliments and adjuncts as necessary but it can have only a single specifier.

- The *intermediate projections* consist of some bars. V-Bar or N-Bar can be anything; thus, it is an X-Bar. The components like compliments and adjuncts are purely optional and not always found in a phrase, and they also do not have any significant effect on the syntax of the remaining parts of the phrase. Whereas the maximal projections like NP, VP or JP are concerned, they make combinations with the specifiers, which are also not an ultimate part regarding their resistance. However, they are treated likewise if they are present.

- Despite the compliment, the specifier and adjunct themselves are regarded as *maximal projections*. As the example shows (Figure 4.3), the word "killed" has its compliments not as a single noun but as a whole Noun Phrase, that is ", the man", which is part of a noun phrase but is also the *maximal projection* of a single noun, "man", the part of the predicate is the adjunct of the verb "killed" which is adverb or AP.

The result would be shown in the tree below (Figure 7), which will take its place in place of the above example (Figure 6) parse tree:

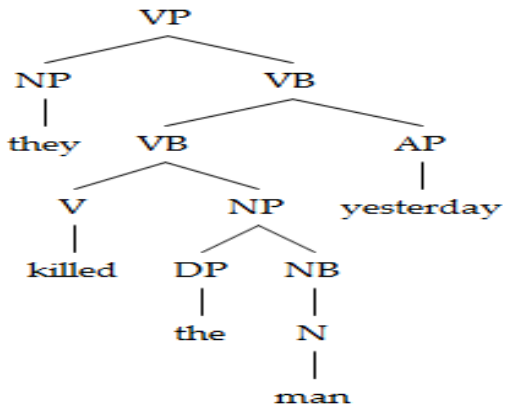

Figure 7. A node-based parse tree

The example (Figure 7) of a sentence elaborated above is a general example that researchers or linguists mostly take to analyse simple and made-up sentences like the one given above (see Figure 7). The researcher emphasises taking a real-life example (see Figure 8) for this research hypothesis and works on explaining in a variant and more specific way, i.e. The prior

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sentence (S 4.1) is taken from a target language-based newspaper which is composed and published locally in Pakistan, which is then processed under a whole chain of procedure including the stages of *maximal projection*, *intermediate projection* and constituents. Moreover, the specific emphasis has been directed on NP as it is the primary target of the researcher.

> (S-4.1) "Turkish President Tayyip Erdogan, who is pushing for executive powers, cites Hitler's Germany as an example of an effective presidential system, in comments broadcast by Turkish media on Friday."

The sentence (S 4.1) is a complex sentence which is randomly taken from the 'corpus'; first, to represent the deep structure (DP) of the sentence, it is divided into phrases and constituents for the representation of phrase structure rules through Phrase markers (P-marker). In constituency-based grammars, through P-markers, a sentence can often be represented in two forms: in the form of bracketed expressions (as in S 4.1a using the square brackets) or in the form of parse trees (as in Figure 4.5 using the nodes in the image from).

(S-4.1a) [S [NP [NP [JJ Turkish] [NNP President] [NNP Tayyip] [NNP Erdogan]] [,] [SBAR [WHNP [WP who]] [S [VP [VBZ is] [VP [VBG pushing] [PP [IN for] [NP [JJ executive] [NNS powers]]]]]]] [,]] [VP [VBZ cites] [NP [NP [NP [NNP Hitler] [POS 's]] [NNP Germany]] [PP [IN as] [NP [NP [DT an] [NN example]] [PP [IN of] [NP [DT an] [JJ effective] [JJ presidential] [NN system]]]]]] [,] [PP [IN in] [NP [NP [NNS comments]] [VP [VBN broadcast] [PP [IN by] [NP [NP [JJ Turkish] [NNS media]] [PP [IN on] [NP [NNP Friday]]]]]]]]]

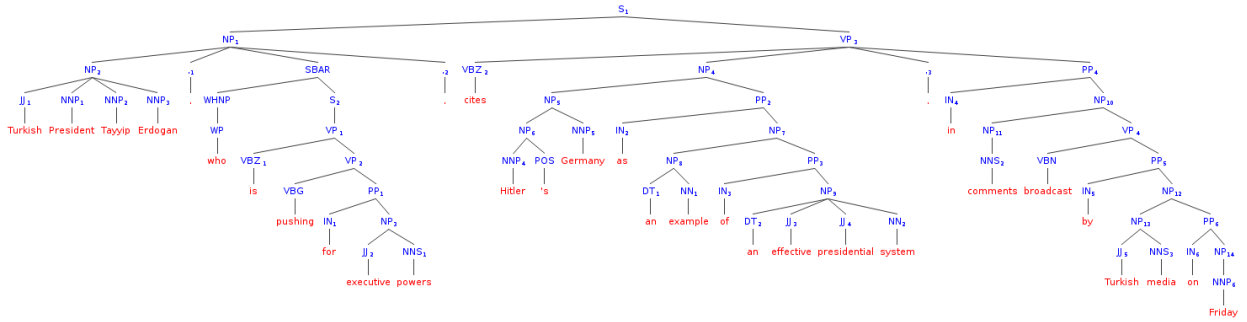

Figure 8. Example of Constituency-based parse tree at sentential level (from corpus)

Hence, the target is to espouse/defend the X-bar theory. Again, the example (Figure 8) of a real-life sentence is a general example of constituency-based grammar. However, it is taken from the target language to analyse the complex structure of constituency-based grammar following the rules specified in the example (see Figure 8).

The above example (Figure 8) can also be represented through X-Bar format as:

(S 4.1b) [XP [YP Turkish President... ...powers] [X' [X cites] [^ZP Hitler's Germany... ...on Friday.]]]

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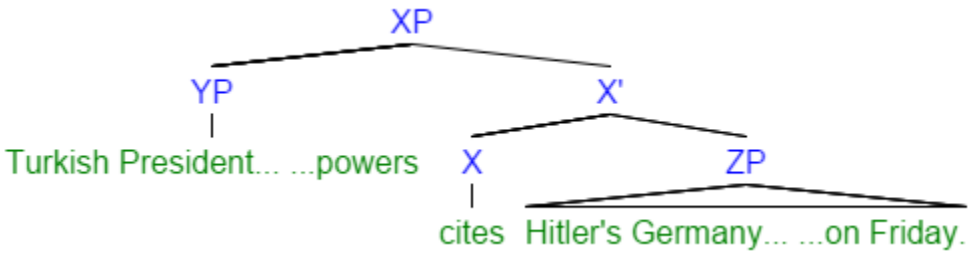

Figure 9. Example of X-Bar at Sentential Level (from corpus)

The starter of the tree in the above example (Figure 9), which is referred to as S, is more specifically XP (X-phrase), and as a result of this, it is the maximal projection of the structure of the sentence through its head X (V "cites"). X' represents the intermediate projection of the whole sentence, and ZP is a complement here.

The Analysis of the Syntactic Structure of NP in PE

The researchers now make an incisive description of the structure of Noun Phrase in constituency-based grammar. Concluding the previous discussions, describing them alongside the rules of traditional grammar given the prototypical structure of NP, the researcher moves on with the research. For a long time, whether the reliability and validity of the Immediate Constituents Analysis (IC analysis) is adequate or not has been questioned. Moreover, it has remained unchallenged in syntactic tradition for a long time. The first one to successfully criticise and analyse the IC analysis was Chomsky (1957), who formalised the whole structure of the syntactic framework and constituency-based grammar to turn it into a context-free structure – phrase structure grammar. He introduced a more simplified yet more complex structure of grammar to make it more able to be generalised, namely transformational grammar (TG), in which he considered every sentence of the English Language disregarding of any regional differences, giving it a universal structure. Consequently, the phrase structure of the sentences started obeying a Deep Structure and following specific transformational rules, which could be mediatory and optional in some circumstances, making it a Surface Structure representation. Postal (1967) considers the advantages of using the structure proposed by Chomsky (1957). It explains that the procedural structure is functional regarding its hierarchal pathway and can deal with certain discontinuous constituents. The constituent analysis depends on the order of words, but the X-bar theory is independent of all such factors. The discontinuity is found whenever two or more non-adjacent constituents come together to form a phrase. The X-bar theory identifies each constituent by appointing its position following a hierarchal pathway of splitting phrases into their intermediate projections. Although stereotypical traditional grammarians look into the effect of non-adjacent constituents and such discontinued structures, these recognitions could be hired to work for the phrase-for-phrase structure grammar. Postal (1967) believes:

> One of the virtues of TG is that it provides a straightforward formalisation of the notion of 'discontinuous constituent'. In TG, discontinuities are, for the most part, produced by the operation of permutation transformations. That is, if in some sentence there is a sequence DAE and D and E are discontinuous constituents of some higher order constituent B, then there is some P-marker for that sentence in which D and E are continuous constituents of B…(p. 67)

However, the traditional transformational grammar structure never successfully tackled the discontinuous constituents and their effects in general, although several attempts have been

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made. Harman (1963, 1966) elaborates that non-adjacent and discontinuous constituents in phrase structures can be dealt with formally, not in transformational rules and regulations, but in non-transformational terms and conditions. The many unsuccessful approaches to formalisation of discontinuous grammatical structures were put in vain by non-adjacent constituents and their havoc, as explained by Fries (1972), regarding NP:

> If the filler of a Loose Knit Modifier is complex, various portions of the filler may be permuted to different positions within the noun phrase. Thus, the phrase *a dangerous crime to indulge in* would be analysed as containing the adjective phrase *dangerous to indulge in* within the Loose Knit Modifier, with *to indulge in* permuted to a position following the filler of the Head tag meme of the Noun Phrase." (p. 222)

Therefore, linguists find no reason to reject the proposal of a structural approach in favour of either the deep structure or transformational approach. What has been concluded from the latest framework of Chomsky (1995) is that the *deep structure* (see Figure 10 below) is more in the view of significance to the basic structure. It is merged with the commencing of the minimalist program and not represented separately in constituency grammars.

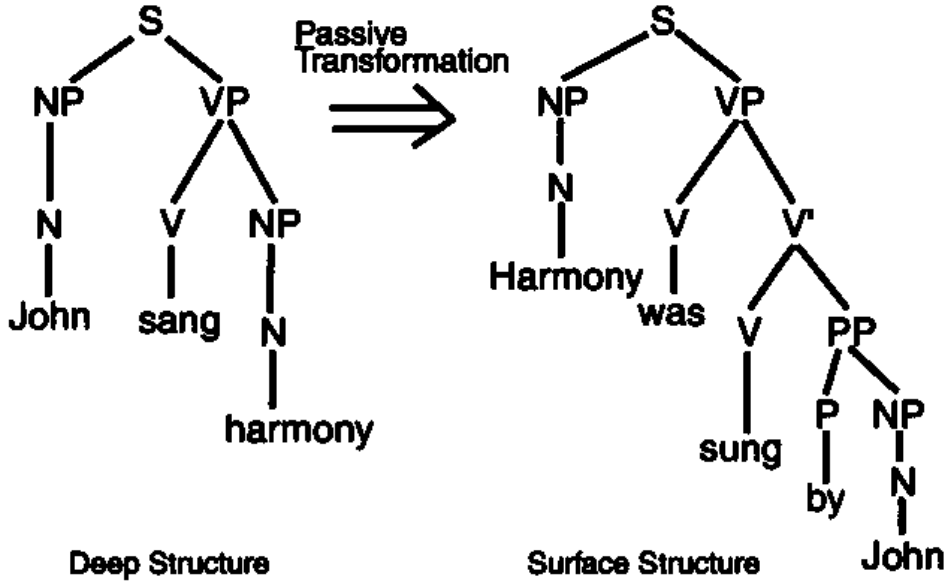

Figure 10. Example of Deep Structure and Surface Structure

The frame of *principles and parameters* works within the premises of generative linguists and describes how the framework of natural languages operates. The usage of general principles and specific parameters are present in each syntax, but it is to be decided which of them are turned on or off to create a structure of the flow of a language. This includes the movement of different constituents, also determined by the implementation *parameters*. The distribution of languages according to the *principles and parameters* framework is categorised as *head-initial* or *head-final*, depending upon the position of parameters and whether they are turned on or off. Depending on the second language's influence, culture, region, topography, and many other factors, including the destruction and restriction of specific languages and syntax, the languages vary from region to region under the distribution of *head-initial* and *head-final*. For example,

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considering the following NPs, the description of *head-final* and *head-initial* languages would be elaborated as follows:

'(a) A beautiful and charming girl…'

(NP-1) [FRAG [NP [DT A] [ADJP [JJ beautiful] [CC and] [JJ charming]] [NN girl]]]

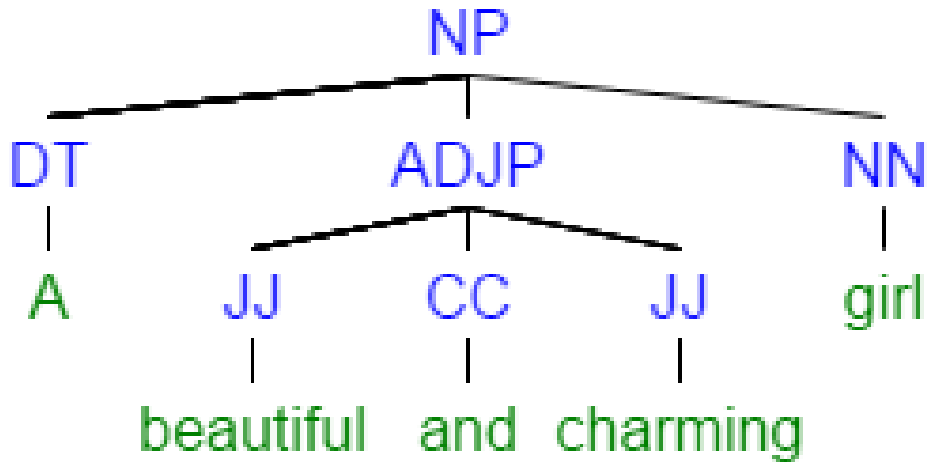

Figure 11. Example of Head-final Noun Phrase Tree

In the above NP (Figure 11), the head 'girl' is accompanied by a specifier consisting of 'a beautiful and charming', further divided into DT and ADJP, where DT stands for and consists of 'A'. The ADJP stands for adjectival phrase and consists of JJ, CC and JJ, thus 'beautiful and charming'. This can be displaced with '(b) a girl who is very beautiful and charming in NP-2. Likewise, the following example (s) is taken from the 'corpus' and represents the head-final variety, which is found in a vast quantity in the Pakistani English variety:

(NP-1a) [NP [DT The] [JJ new] [NN Chinese-made] [JJ nuclear] [NN reactor]]

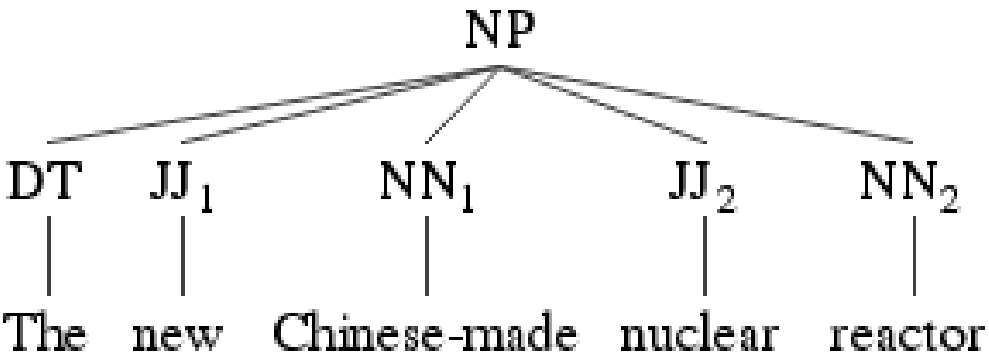

Figure 12. Example of Head-final Noun Phrase Tree (from corpus)

In the above NP (Figure 12), the head 'reactor' is accompanied by a specifier consisting of 'the new Chinese-made nuclear', further divided into DT, JJ1, NN1 and JJ2, where DT stands

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for and consists of 'A'. The adjectival phrase (ADJP) consists of JJ_1, NN_1 and JJ_2, thus 'new Chinese-made nuclear'

(NP-2) [NP [NP [DT a] [NN girl]] [SBAR [WHNP [WP who]] [S [VP [VBZ is] [ADJP [RB very] [JJ beautiful] [CC and] [JJ charming]]]]]]

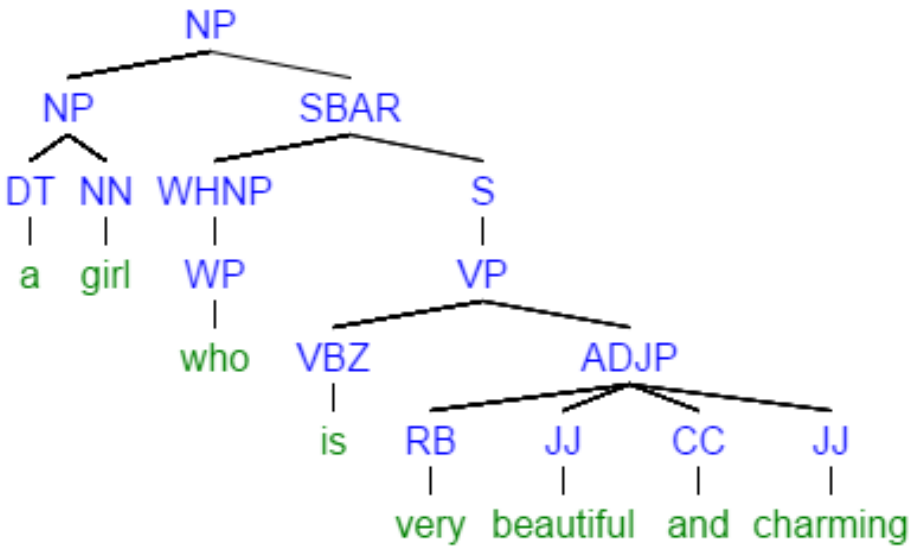

Figure 13: Example of Head-initial Noun Phrase Tree

In the above NP (Figure 13), the 'head' takes place in the initial stage of the NP, unlike in the previous NP (Figure 11), where the head was located in the final stage of the NP (Figure 11). The *maximal projection* NP (Figure 13) is divided into further NP and SBAR, NP consisting of the DT and NN (the head of *maximal projection*) and SBAR consisting of WP and VP. The ADJP (Figure 4.8) in the previous NP (Figure 1) was located before the head and is located before every component in the final stage in this NP (Figure 13). People do not generally understand it, but this slight difference creates a considerable disagreement on the level of syntaxes. The first NP is head-final (in the case of Pakistani English), the second NP is head-initial (in the case of Standard English), and is a differential pathway, i.e. the following example NP-2a is taken from the 'corpus' represents the head-initial variety yet found in meagre quantity in Pakistani English variety:

(NP-2a) [NP [NP [NP [DT the] [NN controversy]] [SBAR [WHNP [WDT that]] [S [VP [VBZ has] [VP [VBN erupted]]]]]] [PP [VBG following] [NP [NP [NNP Hersh] [POS 's]] [NNS revelations]]]]

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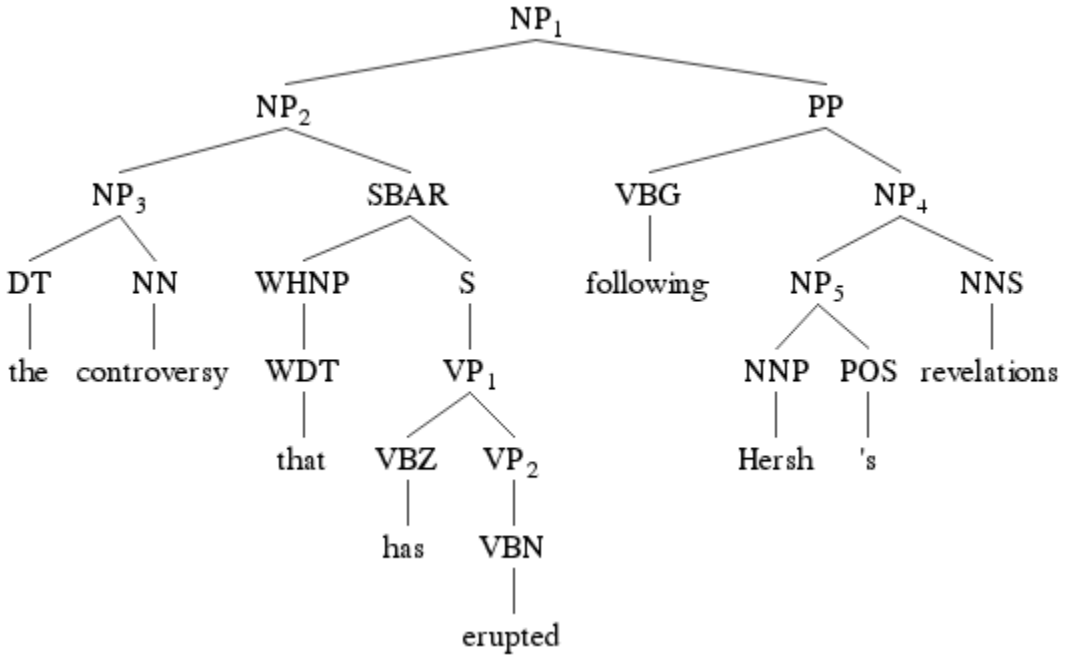

Figure 14. Example of Head-Initial Noun Phrase Tree (from corpus)

In the above NP (Figure 14), the head 'controversy' takes place in the initial stage of the NP, unlike the head-final NP (Figure 11), where the head was located in the final stage of the NP (Figure 11). The *maximal projection* NP (Figure 15) is divided into NP2 and PP, where NP2 consists of NP3 and SBAR (the head of maximal projection), and PP consists of VBG and NP_4. Likewise, in S-4.1, the same type of NP structure is found:

(NP-2b) [NP [NP [JJ Turkish] [NNP President] [NNP Tayyip] [NNP Erdogan]] [,] [SBAR [WHNP [WP who]] [S [VP [VBZ is] [VP [VBG pushing] [PP [IN for] [NP [JJ executive] [NNS powers]]]]]]]

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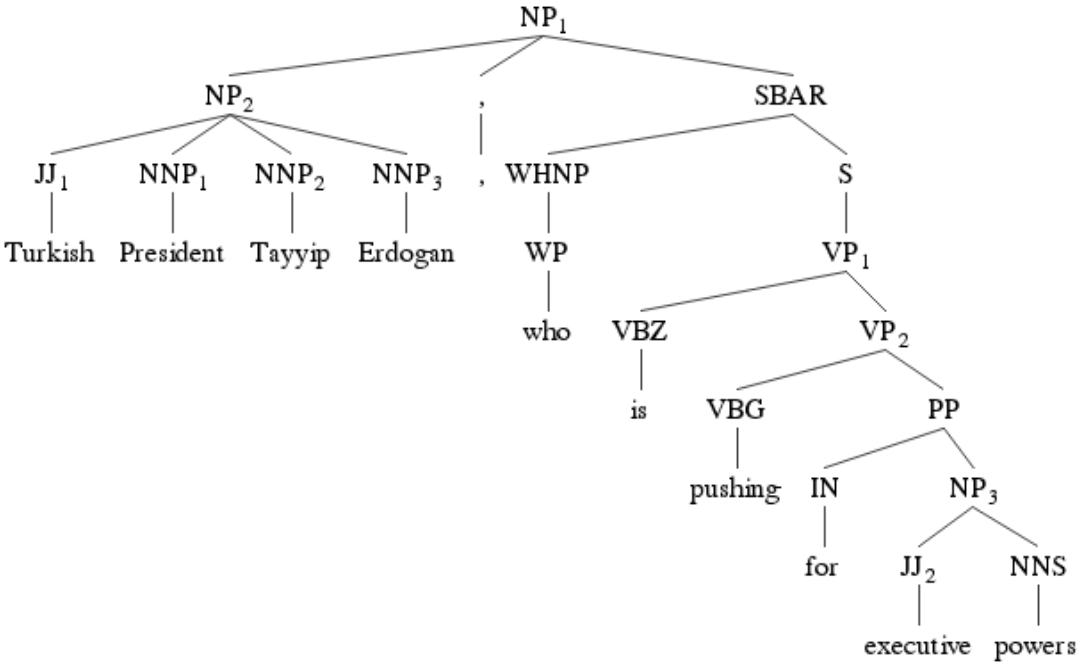

Figure 15. Example of Head-Initial Noun Phrase Tree (from corpus)

In the above NP (Figure 15), the head 'Erdogan' also takes place in the initial stage of the NP, unlike the head-final NP (Figure 11), where the head was located in the final stage of the NP (Figure 11). The *maximal projection* NP_1 (Figure 15) is divided into further NP_2 and SBAR (Complementizer Phrase), where NP_2 consists of the JJ1, NNP1, NNP2 and NNP3 (the head of maximal projection) and SBAR consists of WHNP and S.

As mentioned above examples for the Pakistani English study, the quantitative results from; 'Corpus' explicitly developed for the study have a total number of 1572 NPs; 711 are only head, 415 with pre-head modifications, 136 with post-head modifications, which means 550 of them are complex, i.e. displayed in below Table 1:

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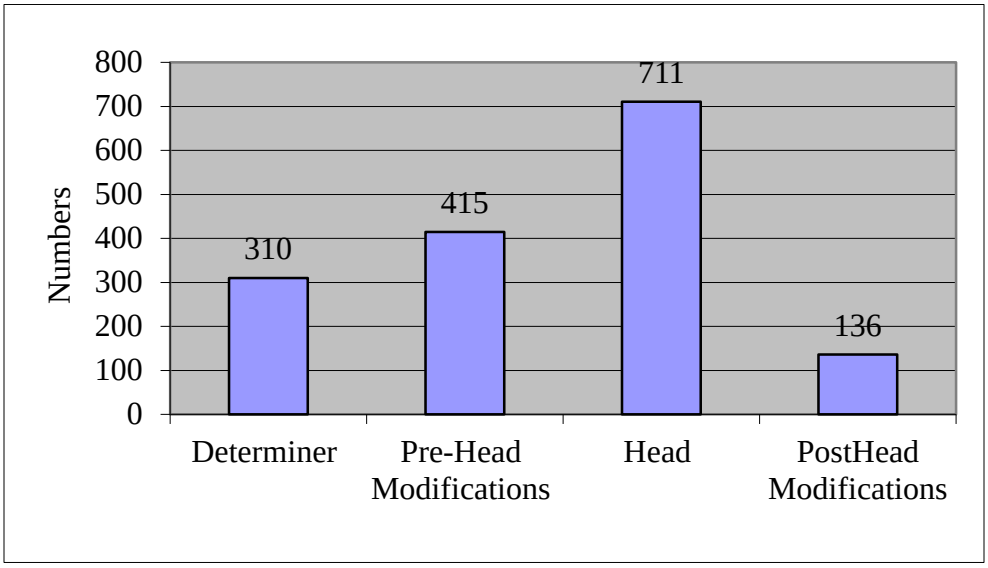
Table 1 Corpus Quantitative Results



.

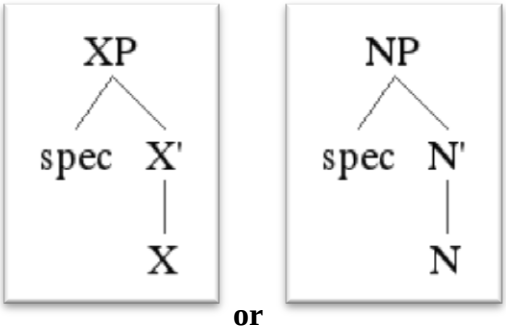
Results for X-bar framework

Table 2 Results for NPs (Only N)

Noun (N)
260 (19%)

Table 2 shows that 260 (19%) NPs from the total number of NPs consist of a Noun (N); the NPs may consist of just a Noun, Proper Noun, or Pronoun.

Table 3 Results for NPs with Determiners



or

Determiner (Det)	**Noun (N)**

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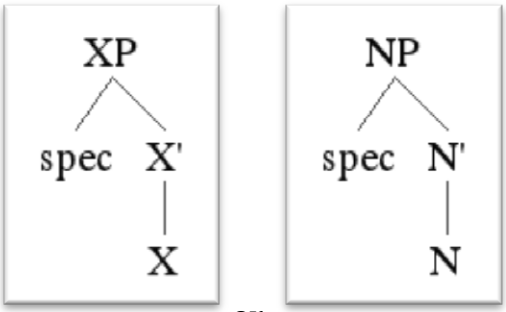
310 (19%)

Table 3 shows that 310 (19%) NPs from the total number of NPs consist of the Specifier (Spec) followed by a Noun (N); the NPs may consist of just a Determiner (Det) and a Noun (N).

Table 4 Results for NPs with Adjective (or AdjP)

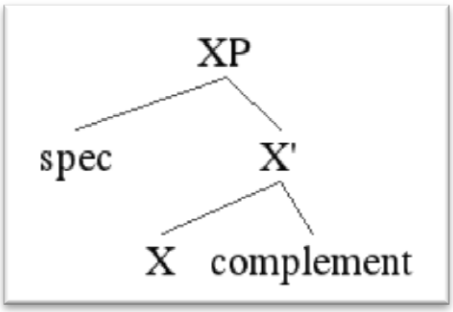


or

Adjective	**Noun (N)**
415 (26%)	

Table 4 shows that 415 (26%) NPs from the total number of NPs consist of the Specifier (Spec) followed by a Noun (N); the NPs may consist of an Adjective (JJ) or Adjectival Phrase (AdjP) and a Noun (N).

Table 5 Results for NPs with Compliments



Noun (N)	**Complement**
136 (9%)	

The above Table 5 shows that 136 (9%) NPs from the total number of NPs consist of a Noun (N) followed by a Complement; the NPs may consist of a Noun (N) and a Complement (Comp).

Table 6 Results for NPs with Specifier, Compliment and Adjunct

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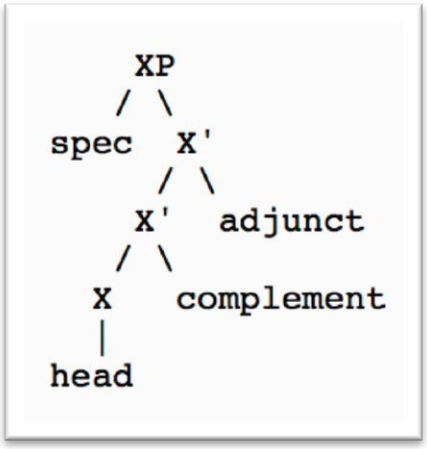

Specifier (spec)	Noun (N)	Complement (Comp)	Adjunct
	41 (3%)		

The above Table 6 shows that 41 (3%) NPs from the total number of NPs consist of a Specifier (spec) and a Noun (N) followed by a Complement (comp) and an Adjunct; the NPs may consist of a Noun (N) or a Complement (Comp), i.e. “the boys in uniform with shiny boots”.

Table 7 Combined Results for Noun Phrases

Noun phrase (NP) structure							
XP							
Specifier (Spec)				**X’**			
			AdjP	**X**	Compliment (Comp) Adjunct		
Predeterminer	Determiner	Postdeterminer	Premodifier	Head	Postmodifier		%age
				260			17%
	310			310			19%
55				55			3%
			415	415			26%
	317		317	317			20%
				136	136		9%
	38	38	38	38			2%
	41		41	41	41	41	3%

Table 7 shows that 260 (19%) of the total number of NPs consist of a Noun (N); the NPs may consist of just a Noun, Proper Noun, or Pronoun, etc. 310 (19%) NPs consist of the Specifier (Spec) followed by a Noun (N); the NPs may consist of just a Determiner (Det) and a Noun (N). 415 (26%) NPs consist of the Specifier (Spec) followed by a Noun (N); the NPs may consist of an Adjective (JJ) or Adjectival Phrase (AdjP) and a Noun (N). 136 (9%) NPs consist

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of a Noun (N) followed by a Complement; the NPs may consist of a Noun (N) and a Complement (Comp). 41 (3%) NPs consist of a Specifier (spec) and a Noun (N) followed by a Complement (comp) and an Adjunct; the NPs may consist of a Noun (N) or a Complement (Comp).

So, 415 (26%) NPs consist of the Specifier (Spec) followed by a Noun (N); the NPs may consist of an Adjective (JJ) or Adjectival Phrase (AdjP) and a Noun (N), it can be said that The Pakistani English variety is deviant and conforms to the notion of *'movement'* generally according to the X-bar structure (due to the influence of Urdu-Specifier on Pakistani English Variety) in the present case. So, this type of '*movement of constituents*' can be seen in the previous example (Figure 11) in constituency grammar.

As mentioned above, for the Pakistani English study, the results from the Corpus have a total number of 1572 NPs; 711 are only head, 415 with pre-head modifications, and 136 with post-head modifications, which means 550 of them are complex. That means that they have more than only a head. Of the complex NPs, 6.4% do not fit into the default NP structure. 82.8% of these deviant NPs exemplify the *movement* of constituents. Using the structure of the prototypical NP as a point of departure, the *movement* of constituents may result in variant NPs with the following features of Pakistani English into their broad categories:

a. a deferred modifier
b. a floating deferred modifier
c. a fronted modifier
d. a floating fronted modifier
e. a deferred determiner
f. a floating deferred determiner
g. a fronted determiner
h. a floating fronted determiner
i. a deferred limiter
j. a floating deferred limiter
k. a floating fronted limiter
l. a discontinuous modifier
m. a discontinuous determiner

Only eight of those thirteen types of deviant NPs were found in practice, and there have not been found any examples of a floating fronted modifier (d), a (floating) fronted determiner (g-h), a floating deferred limiter (j), and a floating fronted limiter (k). In addition, the emphasiser is a non-prototypical NP constituent that is mobile, which results in a floating deferred emphasiser but not a fronted emphasiser. The section 'Variant noun phrases' in Chapter 2 deals with the nine kinds of deviated NPs found in the corpus, and this section elaborates on how variant NPs are distributed. Variant NPs with a *mobile constituent* are much more recurrent in informal genres, and the opposite effect was seen for formal cases. However, the relationship is not strong regarding the contingency coefficient of these two variables. Generally, variant NPs are distributed in almost the same frequency as default NPs, with some slight differences. NPs with a *floating constituent* prefer the direct object position and are barely seen in the subject position. There were no examples of NPs with a fronted floating and *discontinuous constituent* working as a direct object, object complement or subject attribute.

Conclusion

Pursuing the principal objective, the researcher wanted to research the *movement of constituents* in the Pakistani English NP and gain insight into the characteristics and frequency of different NPs that may describe studies that involve corpus and intuitive information. The most important reason to study the movement of NP constituents was that the variation of word order in general and of phrasal constituents, in particular, had not been studied thoroughly in English descriptive grammar. If variations are mentioned, there is not much description, or it is merely tentative data on how frequently and under what conditions certain variations occur. Another reason for this study can be seen in the field of corpus linguistics. To analyse corpora, this sub-field of linguistics has to describe language exhaustively. Formal grammar is crucial in the corpora analysis, and it is supposed to describe all plausible regular structures and their variations. Insight into the constituents' '*movement*' may assist in formulating conditions on the variation of word order in the formal grammar, thus limiting the ambiguity of the analyses. In this chapter, I summarise and discuss the findings of the current study.

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