



RESEARCH PAPER**Analysis of Languages Variation in Structural Patterns through Government and Binding Theory**

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ABSTRACT

This research aims to elaborate the applicability of Government and Binding Theory universally, a method of evaluating language syntax based on the relationship between nominal heads and sub-thread phrases e.g. PP's, and VP's. Noam Chomsky's Government and Binding Theory of the English Language was first presented in 1980. SVO structure of English and similar structural languages justify GBT because the theoretical paradigms are based on the English language. Due to the SOV structure and significant differences from English, the Urdu language benevolences several challenges for researchers. Consequently, the use of Urdu language samples and the construction of a tree diagram shows a distinctive presentation, created with the reference to English language configuration. Moreover, the "R" expression, anaphoric illustration, and prepositional phrase demonstration that, how a tense phrase of the Urdu language has experimented with co-indexing and co-relating the patterns of the English language under Government and Binding Theory.

KEYWORDS Government and Binding Theory, Language Variations, Nominal Phrase, Syntax

Introduction

Noam Chomsky (1980) develop the tradition of transformational grammar by justifying the phrase structure grammar contributing to the domain of syntax by Government and Binding Theory. Several revisions in the basic theoretical approaches lead to this narrow-down theoretical perspective explained in the Minimalist Program (1993) and several research papers with the application of several texts on the structure of the bar developed by Chomsky. A huge literature analysis of the English language exists in the thread of binding theory but the applicability of the same theoretical approach to other languages e.g. Urdu, Punjabi, German, and Spanish is rare. Looking deep down at the binding theory, there are two domains constrained under a singular approach based on government and binding (Chomsky, 1980).

Government is a grammatical concept based on the grammatical features of the proposition and verbs, controlling the grammatical feature selection of the other words in a sentence or a phrase. At a more surface level, governing the proposition or verb applies to a specified grammatical order in a sentence to tag it as correct or incorrect in a structural frame. For example, intransitive verbs are required in the dative case for

indirect objects, similarly, this process appears vice versa for the direct object in the accusative case.

To identify a person, place, or thing, a noun is necessary for every language. A noun is a flexible word that can be used as, either the subject or the object of a phrase. The lexical category of nouns is related to a significant number of connectors. Most frequently, it serves as the head for a clause, implication phrase, or tense phrase. When a noun is indicated under the genitive case, gender is occasionally provided. For a better comprehension of a language, tense phrases are further separated into noun phrases and verb phrases, where inflectional and prepositional phrases serve as tense and aspect markers, respectively.

Binding Theory is the most specific general phrase that relates the noun and its variant likelihood concerning nouns and their relationship in the sentence. The binding theory has additional requirements for approving the grammatical focus of a sentence. Another important element that raises the value of a binding theory is C-Command since it justifies returning to the headword. C-Command also can make sentences less ambiguous, which improves the intelligibility of the language. Illuminating the second part of Chomsky's perspective on binding declares a relationship between antecedents and anaphoric elements e.g. pronouns associated with each other grammatically. For example in the sentence "Ahmad saw himself" the antecedent "Ahmad" bounds the anaphor "himself". Different languages have several binding restrictions based on structural patterns, morphemes, and paradigmatic limitations in syntax. The binding domains of the English language are reflexive pronouns, reciprocal pronouns, personal pronouns, and nouns.

Defining government and binding theory as a whole are related to the assignment of the case. A case includes the corresponding grammatical functions of the nominal group based on b and modifiers in any language. If "B" is governed by "A" then here the governor is "A" that commands "B". Particularly, the head of lexical categories are governors, making the case assignment justified. The three fundamental rules that are considered in structuring the patterns of any language are;

1. A reflexive or equivalent anaphor must be confined in the area around it.
2. It is forbidden to bind a pronominal (non-reflexive pronoun) in the vicinity of it
3. It is forbidden to bind a non-pronoun.

Noam Chomsky published a book "The Pisa Lectures" in 1980 based on the collection of lectures Chomsky delivered during the GLOW meeting and workshop, held at the Scuola Normale Superiore in Pisa, Italy (1980). Chomsky proposed his framework on the language structure's limiting hypothesis, significantly influencing syntactic research in the middle of the 1980s, especially among etymologists working with the transformational language structure system. These assumptions can be compared to constraining requirements in many ways.

This study contributes to the field of Urdu syntactic studies and linguistics theoretical generalization applicability. In addition to this, language variation with the reference to tokenization elaborates a way for the linguists that are working on the Urdu language. As far as the framework of the research is developed, helps in the several threads of linguistic studies e.g semantics, morphology and natural language processing while learning L2 with a different structural placement of linguistic typology

than L1. Simultaneously, this qualitative study gives symmetry to linguistics researchers while working on any linguistic thread associated with the applicability and observational projection illuminating lingual case marker's authenticity.

Limitations of this study count the variety of sample collection that may give different results when the variety of samples differs e.e. switching from direct to indirect sentences. Complex sentences are the second factor that is difficult to analyze but spending more time on the analysis of the complex sentences illuminates the structural patterns of difficult sentences as well. Human error is a side factor to be kept in mind which is due to the limited corpus efficiency of software while processing the Indo-Arian languages.

To elaborate on the variations in structural patterns of different languages, the following questions are answered by applying Government and Binding theory on the Urdu language concerning the variations from the English Language that includes;

1. How do Urdu vernacular structural patterns are distinctive from English language?
2. Why is it integral to examine the applicability of the theoretical rationale based on the universality of language patterns?

Literature Review

In any language, the universality of linguistic typology is the major paradigm under which grammatical constraints with the reference to any language are defined. Subject, Verb, and object stay constant in all languages but the placement or the order of the linguistic typology varies. As far as the linguistic typology of the English language is concerned, the order is S+V+O, whereas this order is a bit different in the case of the Urdu language as the structure of Urdu is S+O+V.

Importance of Linguistic Variations among Languages

Linguistic analysis of the Urdu language is a bit limited and developing with time. The major concern of linguists is to dissect the language. Bashir (2011) gives a summary of the linguistic and Urdu languages with the evolutionary relationship that is fraught. She suggests corpus development in the Urdu language for which additional skills are required. Likewise, the second language acquisition majorly English in Pakistan plethora and pedagogic relativity with the Urdu language is the major concern of her contribution particularly (Bashir, 2011). Summarizing the essence of the Bashir vision from the linguistic canon, the theoretical implications of linguistics theories for the developed languages e.g. English on developing e.g. Urdu is the most attractive area for the comparative study of the "applicability of the generalized approaches and their limitations".

Linguistics Experimentation and Observations

Insua & Guerra (2011) explained the differences between the English and Urdu language at a parametric level in the extent of the null subject. Considering the Universal Grammar theory, the language variations are illuminated by contributing to the field of principles and parameters of the Urdu language directing the pro-drop feature of the English Language. This observational study was conducted to prove whether the Urdu language is a pro-drop language or not similar to the English language. In this way, the researcher suggested that "A person with L1 Urdu language must avoid the translation

techniques for mastering in the English language as L2 because it may lead to a wrong syntactic and grammatical sentence structure". (Insua & Guerra, 2011)

Syntax Complexities

Kiani (2011) conducted a study on the examination of predicate complexity and syntax of the Urdu Language. Primarily, the major concern focuses on the main and light verb functionality in a clause that is studied under the "Minimalist" key concept of (Chomsky, *A Minimalist Program for Linguistic Theory*, 1993) from personal observations and a collection of books. In Urdu, the complementizer is merged in the tense phrase, and this way object is separated from the verb phrase.

In simple words, the placement of the navigation marker is before the verb and after the object. For the elaboration of examples in the study, tree diagrams and utilized to illustrate the language structure (Kiani, 2011). Hence the double-verb construction in the Urdu language is a bit different from the English language paradigms.

Tokenization

Before the syntax analysis of the Urdu language, tokenization is a stage of consideration that leads to successful binding construction. Bhat (2012) toils on the tree bank of the Urdu language and evaluates its dependency by analyzing the reliability of the tree bank that is manually annotated. Word problems are a crucial consideration of segmentation measured with Kappa statistics by scaling the dependency level of words in a clause. It is very significant to tokenize the language sentences (Bhat, 2012). Moving deep down in the Binding will give an easy and smooth path to the projection of structural phrases.

Significance of Noun Phrase

Insua and Guerra (2011) investigated the noun phrase structural approach defining the features and categories of the relevant word identities in a sentence. The morphosyntactic and semantic characterization of the determiner is significant because it is directly concerned with the functional approach in a language. English is utilized as a target language in light of which the Urdu language is deciphered.

After the division of complement phrases into determiner and Noun phrases, the grammatical configuration of a sentence structure is justified. As far as the rules of Government and Binding theory are concerned, they are already set out as a paradigm for sentences that a researcher going to analyze with the reference of a noun phrase and the determiner. (Insua & Guerra, 2011)

Generalization of Linguistic Theories

The major framework of this research is linked with the X-Bar theory. Ball (2003) studied the purity of the X-Bar theory and its semantic relationship in a clause. As per his perception, meanings are encoded in the form of grammatical patterns and the placement of words may give a different meaning while decoding by the listener. Similar to this concept, the generalization of the X-Bar theory is suggested by Ball with slight modifications in the concept of the head and specifier relationship (Ball, 2003).

Simplifying the key concept of the overall modified theoretical generalization, the expression of a clause is driven by the specifier and if the complement is there then relational heads only take that complement for referring to the determiner. Relating to

the case of the Urdu language, this study is also utilizing the generalizability feature of the linguistic theoretical framework applied to the cross-examination of a culture where two languages are experienced by several people e.g. English as L2 and Urdu as L1.

Government and Binding Theoretical Paradigm

Zeb (2019), concentrates on the phraseology oddities with the reference to the case markers. The observations are solidly based on the difficulties that a learner faces while learning any language as in the Pakistani context, the English language is compulsory to learn for studies. Government and Binding theory is used as a theoretical framework for the analysis of acquisitive and nominative cases in the Urdu language. The sample is included in the form of phrases collected from the "New Headway Workbook" written by Liz & Soars (Zeb, 2019). Likewise, the properties of both languages are compared and vice versa as the relationship among parts of speech.

Material and Methods

In the milieu of heading the objectives of the research, a qualitative approach is utilized that narrows down the comparative analysis of language structure, pattern, and syntax according to the Government Binding theory between English and Urdu languages. Specifically, 10 simple sentences are included from daily life examples having nouns as a headword, and in the comparison of that tree diagram, a nearly possible Urdu word-for-word translation is added, which is further justified under the discussion.

Collectively, the methodology in this research is trapped under the phenomenological grounded examination. The phrases listed in the table are examined using a syntactic analysis of the phrases. A foundation for comprehending binding theory and the placement of subject, verb, and object in the Urdu language is provided by the step-by-step variation in the sentences. Tree diagrams are also referred for a visual representation of relations among the words in sentences.

Results and Discussion

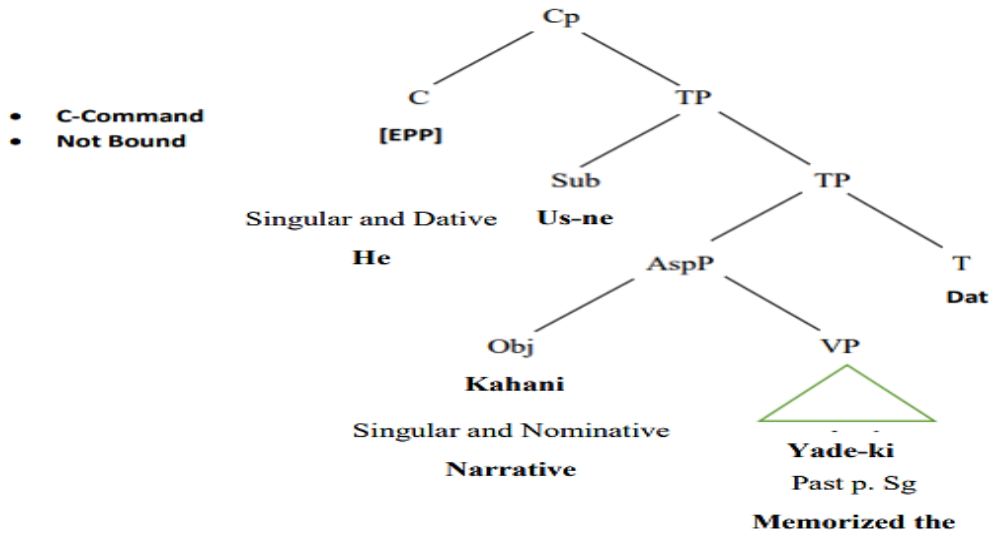
Circular thinking is used in the process of deciphering semantics charts. When it comes to data scrutinization, the data is justified with certain predetermined grammatical rules in both English and Urdu Language. The distinct merging of the inflectional structure of the Urdu language is also recognized as a benefit in the syntactic examination.

Sr. No	English Language	Urdu Language
01	He memorized the narrative.	اس نے کہانی یاد کی
02	Ashghar drove the car himself.	اصغر نے گاڑی خود چلائی
03	Ali has to go to school.	علی کو اسکول جانا ہے
04	Naseem was frightened.	نسیم کو ڈر لگا
05	Nadeem had to go to the post office himself.	ندیم کو خود ڈاکخانے جانا پڑا
06	I chased the bus.	میں نے بس کا پیچھا کیا
07	Asad is talking to Umair.	اسد عمیر سے بات کر رہا ہے
08	Ironsmith build his mask out of iron.	لوہار نے لوہے سے اپنا مکھوٹا بنایا
09	Mubashar called himself from Karachi.	مبشر نے کراچی سے خود فون کیا
10	Hamza opened the lock with a key.	حمزہ نے تالے کو جابی سے کھولا

1- Us-ne Kahanii yade ki

اس نے کہانی یاد کی

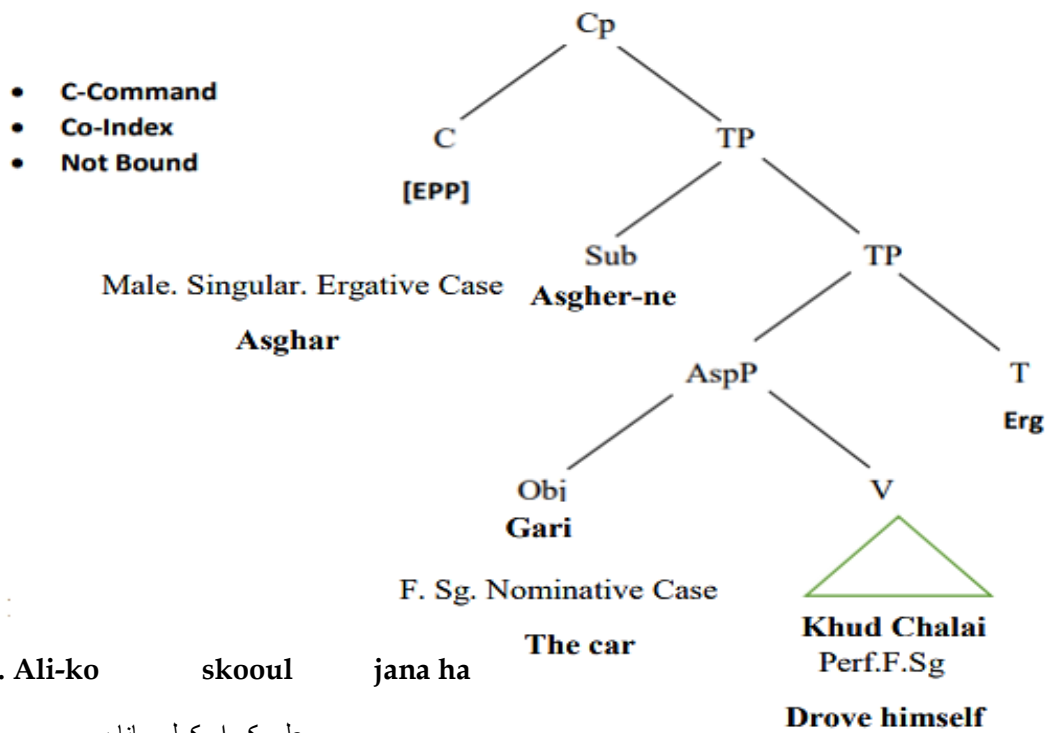
He memorized the narrative.



2- Asgher-ne Gari Khud Chalai

اصغر نے گاڑی خود چلائی

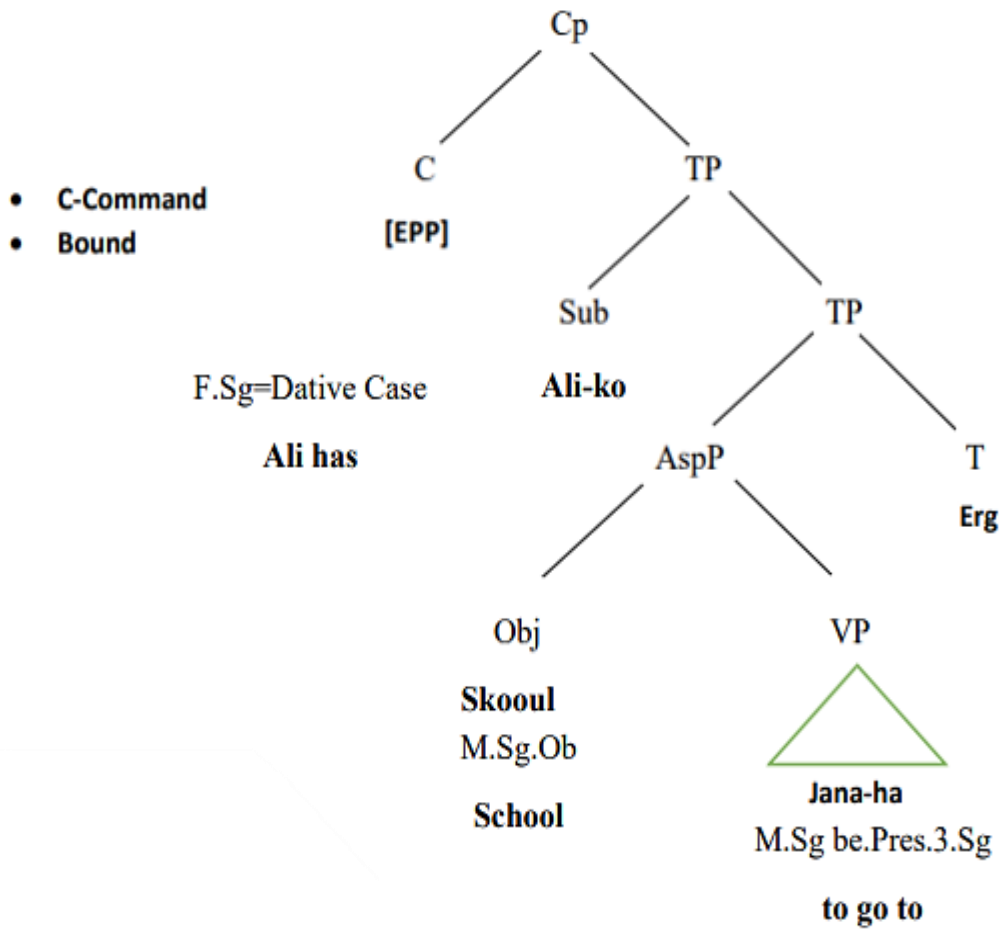
Asghar drove the car himself.



3. Ali-ko skool jana ha

علی کو اسکول جانا ہے

Ali has to go to School

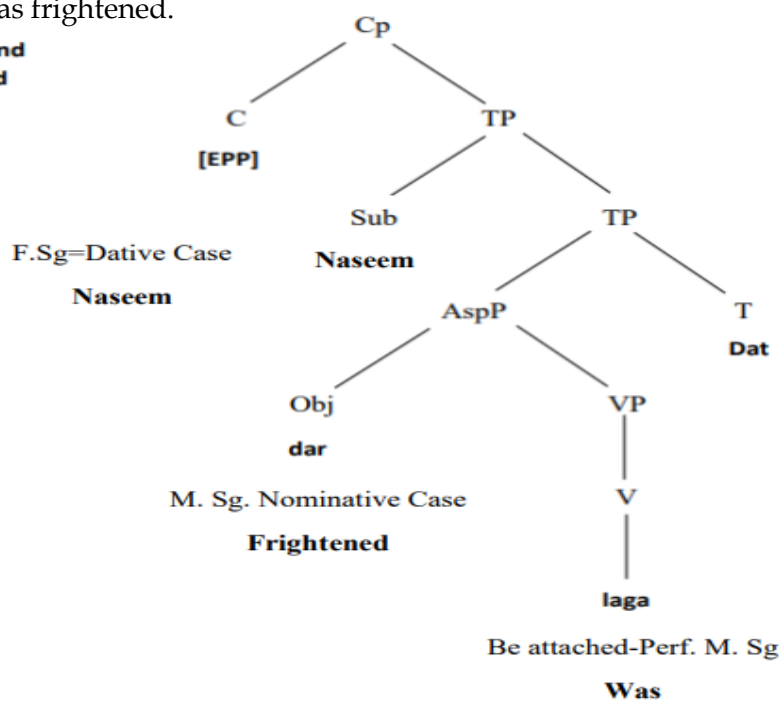


2. Naseem-ko dar laga

نسیم کو ڈر لگا

Naseem was frightened.

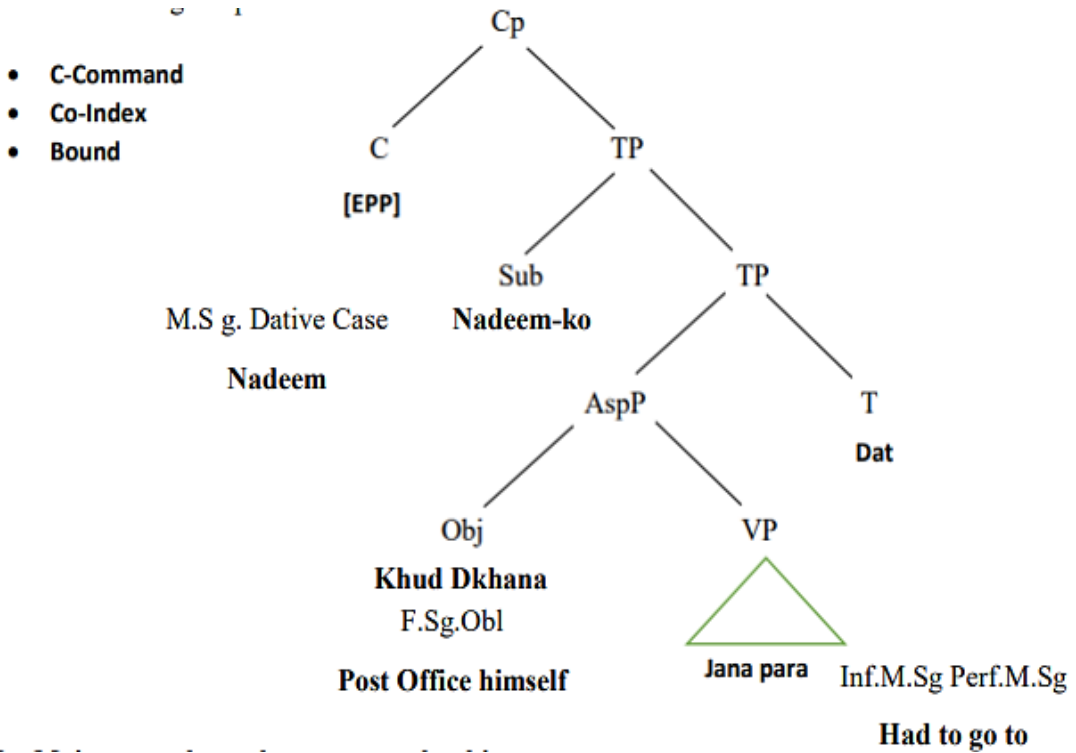
- C-Command
- Not Bound



3. Nadeem-ko khud dakhana jana paraa

ندیم کو خود ڈاکخانے جانا پڑا

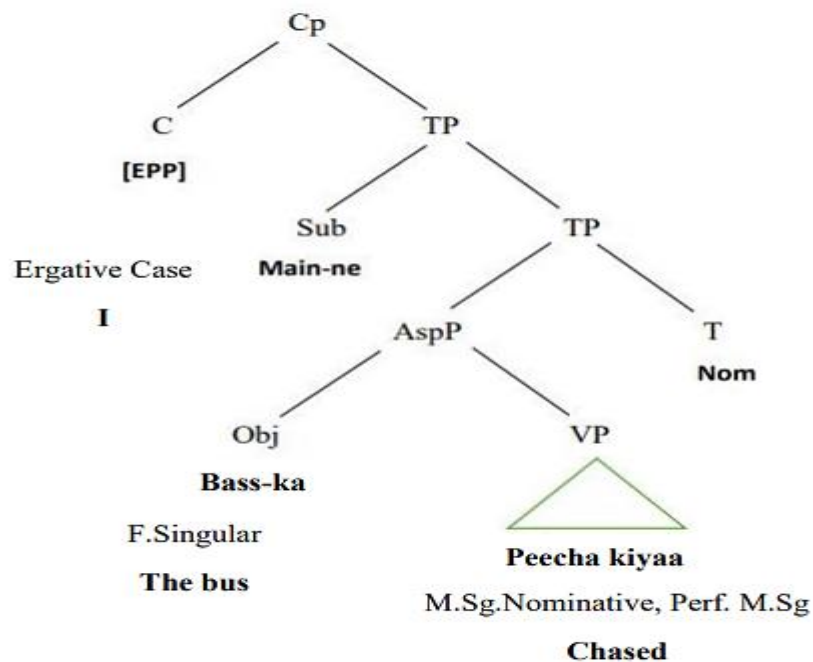
Nadeem had to go to post office himself.



4. Main-ne basss-ka peeacha kiyaa

میں نے بس کا پیچھا کیا

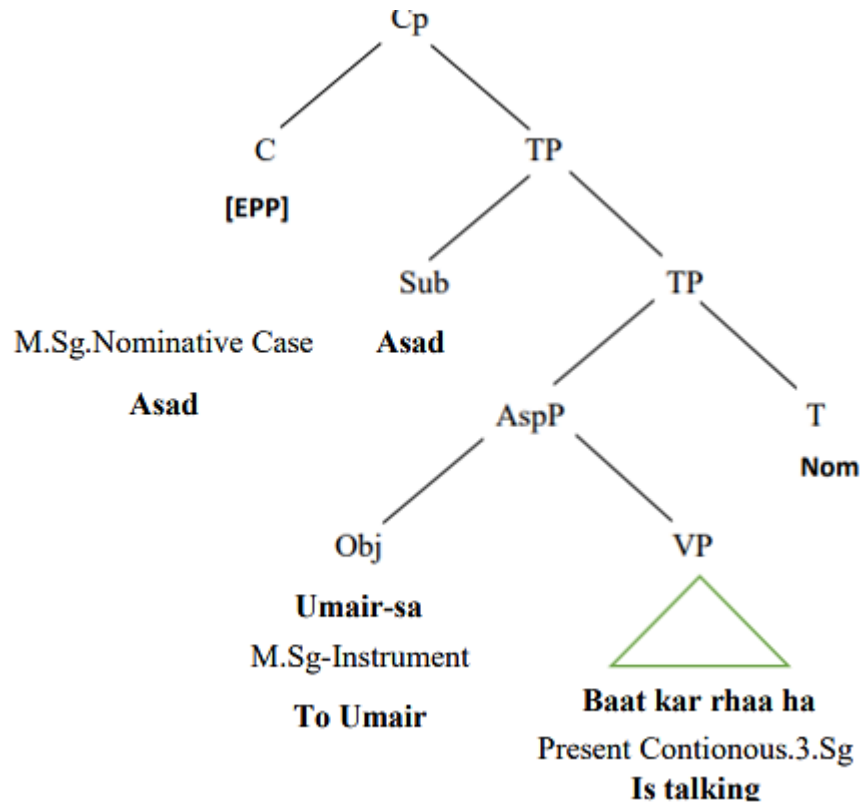
I chased the bus



5. Asad Umair-sa batt kar rhaa ha.

اسد عمیر سے بات کر رہا ہے

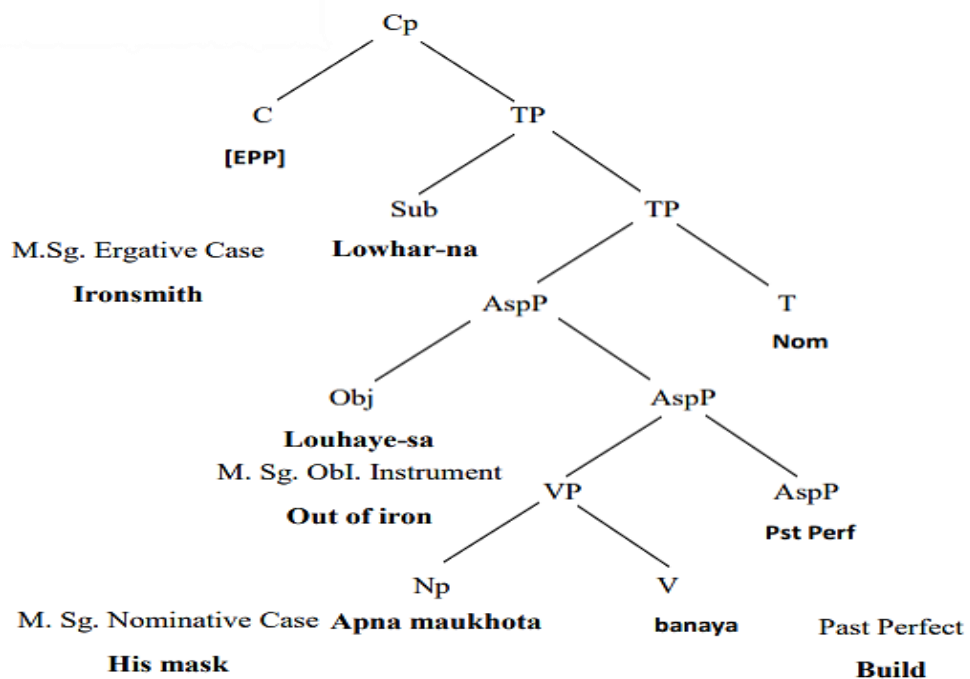
Asad is talking to Umair.



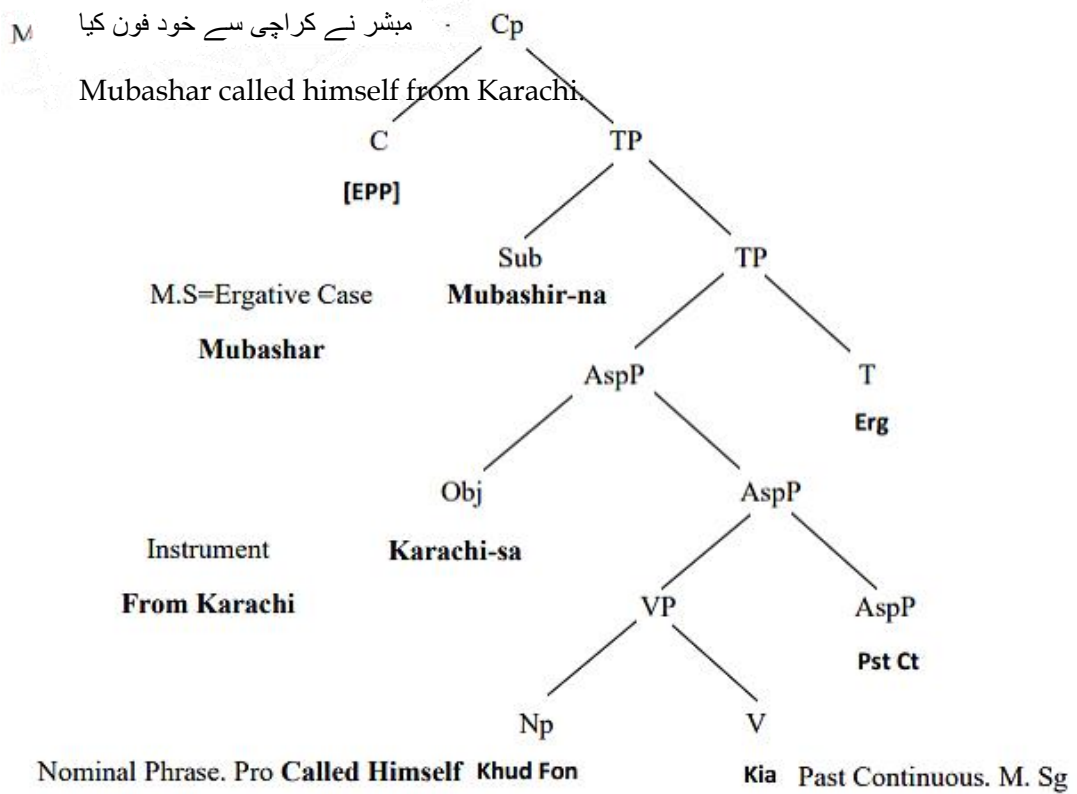
6. Lowhar-na louhaye-sa apna maukhota banyaa

لوہار نے لوہے سے اپنا مکھوٹا بنایا

Ironsmith build his mask out of iron.



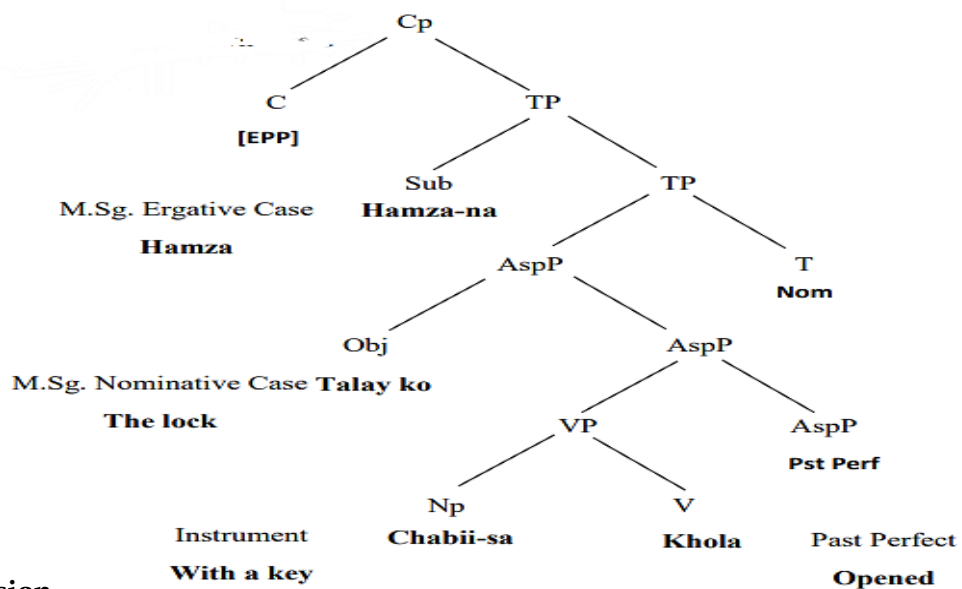
7. Mubashir-na Karachi-sa khud phone kiya



8. Hamza-na talay ko chabiii- sa kholaa

حمزہ نے تالے کو چابی سے کھول

Hamza opened the lock with a key.



Discussion

The first illustration is having the pronoun as a headword and the word Kahani is referring back to the headword. In this way, the condition of the C-command is fulfilled. Reviewing the structural variation, the pronoun is a dative case structured with the past perfect tense. Similarly, the placement of Objects justifies the syntactic variation between Urdu and the English language. As far as the analysis of the second statement

is elaborated, Asghar is a proper noun and an Ergative case. On the other hand, the difference from the first statement is concerned with the non-bounded reference of the word Khud. Without using the word Khud sentence is perfectly complete but the intensifier eliminates the bounding feature at the surface level.

In the third statement, Ali is again a proper noun but the case marker is different from the second statement. This change clarifies that the case markers are based on the overall construction of the statement and its chain relation with the referential words that specifically fall under the verb and object. The fourth statement is having a unique tense marking portrayal of the Urdu language which is also a prominent feature of the Urdu language. In the English language tense markers are stays solid e.g. was, were but in the Urdu language, modifications of 'gaa', 'gi', 'ga' are added to the verb phrase and the switching of these tense markers also do not affect the grammatical order of the sentences.

Elaborating the Fifth statement, the placement of the lexis is showing the language patterns where Khud Dakhana is translated as Post Office himself with the correct grammatical order. This statement is also different from the previous statements because of the bounding features among the subject, object, and verb. Identification of the fifth statement is considered a dative case marker. This is the perfect example of the Urdu language because it is C-commanded, co-indexed, and bounded as well. Hence all the theoretical paradigms and hypothetical realizations are implemented and observed. The sixth statement utilized the first-person singular ergative case marker followed by the nominative case of Peecha Kiya. It is the simplest statement from all the complex sentences of the data. Comparatively, the seventh statement carries the words 'bat kar raha ha' as a verb phrase but the possible equivalent expression for this phrase 'is talking' which is probably difficult to comprehend for L2 learners of the English language when they don't find out the similar expressions to translate with the reference of L1 e.g. Urdu language.

Out of the complexities, in the eighth statement, the instrument is iron because of the functionality of the loha as a material utilized for making the mask. The tense is past perfect and the headword is Ironsmith. Ironsmith is the profession and here it is male singular. In the English language, there is no feminine expression of the ironsmith whereas in the Urdu language loharan is particularly a part of the dictionary found in the grammar books of Urdu which may cause the prediction of gender markers for an English foreign language learner.

Predicting another difficult situation in the language variation is the missing expressions in any language. In the ninth statement, 'Kia' stays alone without any clue or merging expression in the English language. The closest possible difference under noun phrase is even created in the tree diagram according to the rules of GB theory but in the end, the mental state is empty for the representation of the verb in insolation.

Ending up with the last statement, all possible case conditions and elaborative justification are provided for a better understanding of the applicability of GB theory as a whole. Hamza is an Ergative case doing an action on the lock (nominative case) with the help of an instrument (key) in the result of which the lock opened concluded with the past tense. The difficulty here is now about the incomplete justification of tense in verb as khola is also viewed as a continuous marker but the sentence as a whole is showing the past perfect tense. But in the English language infliction of 'ed' after open determines the root word category and in the Urdu language, this separation is not available.

Conclusion

Wrapping up the gist of the phenomenal observatory application of GB theory in the Urdu language it is justified that, language variations are not only based on the lexical level but the placement of words and the equivalence of the words from one language to another language is also not solid. Likewise, the flexibility in the structure of every language and inflectional grammatical order also fluctuates. Relating to the discussion, the structural patterns ensure the grammatical correction and authenticity of a phrase or sentence rigid in any language. Pedagogy is excluded as the delivery of message is thoroughly based on the rules of a language.

Concluding the vision of generalizability of GB theory on other languages with different structures, a possible condition of making tree construction is elaborate. The languages of similar structure to the Urdu Language are successfully dissected using this research approach and analysis. Referential sources of the English language may be affected by the word-for-word translation but in that way, the linguistic variations will be visible as explained in the discussion above. A comprehensive analysis contributes to future research on the complex sentences in the Urdu language that demonstrates more interesting features as compared to the English Language.

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