INTERNATIONAL JOURNAL OF SOCIAL SCIENCES BULLETIN
ISSN: (E) 3007-1917 (P) 3007-1909
Volume 4, Issue 3, 2026

BINDING THEORY AND ITS APPLICABILITY TO URDU: A COMPARATIVE SYNTACTIC ANALYSIS

Shoaib Khan

MPhil Scholar, Department of English (GS), National University of Modern Languages, Islamabad

Corresponding Author: *
Shoaib Khan
DOI: https://doi.org/10.5281/zenodo.19016149

Received	Accepted	Published
05 January 2026	18 February 2026	14 March 2026

ABSTRACT

This study investigates the applicability of Binding Theory to Urdu within the framework of Government and Binding Theory. The research analyzes selected English sentences and their Urdu equivalents to examine the behavior of anaphors, pronouns, and R-expressions. Using a qualitative descriptive approach, the study applies the three binding principles along with the concepts of co-indexation and c-command to compare binding relations in both languages. The findings indicate that despite differences in surface word order—English following SVO and Urdu SOV—the fundamental binding principles operate similarly in both languages. The analysis suggests that the core constraints of Binding Theory are largely applicable to Urdu, supporting the idea that certain syntactic principles may reflect broader universal properties of language.

Keywords: *Binding Theory, Urdu Syntax, Anaphors, Pronouns, R-expressions, Comparative Syntax*

1.INTRODUCTION

Within the framework of generative linguistics developed by **Noam Chomsky**, Binding Theory occupies a central place in explaining how different noun phrases function and relate to one another within a sentence. The theory is primarily concerned with the distribution and interpretation of nominal expressions, particularly with regard to how certain noun phrases may or may not refer to the same entity. In its classical formulation, Binding Theory distinguishes three major types of noun phrases: **R-expressions** (referring expressions such as proper names and definite descriptions), **pronouns**, and **anaphors** (reflexive or reciprocal forms). Each of these elements follows specific syntactic constraints that determine where it can appear in a sentence and how it can be interpreted in relation to other elements in the same structure. Binding Theory proposes three well-known principles—Principle A, Principle B, and Principle C—which regulate the distribution of anaphors, pronouns, and R-expressions respectively. Anaphors must typically be bound within a local domain, pronouns must remain free within that domain, and R-expressions must remain free everywhere. These principles were initially formulated with reference to English and other European languages, where their application has been widely discussed and tested. However, the universality of these principles has also been a subject of considerable debate, particularly when linguists attempt to apply them to languages that differ structurally from English.

Urdu, an Indo-Aryan language spoken widely in Pakistan and parts of South Asia, provides an interesting testing ground for examining the applicability of Binding Theory. Unlike English, Urdu follows a **Subject–Object–Verb (SOV)** word order and allows a relatively flexible arrangement of constituents due to case marking and postpositional structures. Moreover, Urdu makes use of reflexive forms such as *khud* and possessive reflexives like *apna*, which interact with pronouns and referring expressions in ways that may not always align neatly with the assumptions derived from English-based analyses. These structural characteristics raise important questions about whether the classical principles of Binding Theory can be directly applied to Urdu or whether they

require modification to account for language-specific patterns.

The present study investigates the applicability of Binding Theory in Urdu by examining how anaphors, pronouns, and R-expressions behave within different syntactic environments. The study seeks to determine whether the constraints proposed in generative grammar hold consistently in Urdu sentences and to what extent the language conforms to or diverges from the patterns observed in English. By analyzing naturally occurring and constructed examples from Urdu, the research aims to highlight the ways in which binding relations operate within the language and to identify any structural features that influence these relations.

In addition to testing the theoretical principles, the study also aims to contribute to a broader understanding of how universal grammatical frameworks interact with language-specific structures. Comparative investigations of this nature are important because they help reveal the extent to which linguistic theories developed on the basis of one language can account for the diversity found in others. Through an examination of Urdu data, this research therefore not only explores the functioning of binding relations in a South Asian language but also offers insights into the flexibility and limitations of Binding Theory as a model of universal grammar.

Ultimately, the purpose of this article is to analyze the syntactic behavior of noun phrases in Urdu within the framework of Binding Theory and to explore the similarities and differences that emerge when the theory is applied across languages with distinct grammatical systems. By doing so, the study hopes to shed light on the interaction between universal theoretical principles and the unique structural properties of Urdu.

1.1 Research Objectives

The primary objectives of this study are:

To examine the nominal relations in Urdu, focusing on anaphors, pronouns, and R-expressions.

To identify the similarities and differences between English and Urdu with respect to nominal relations and binding principles.

1.2 Research Questions

This study seeks to answer the following questions:

What types of nominal relations exist in Urdu?

What parallel similarities and differences can be observed between English and Urdu in terms of nominal reference and binding relations?

2. Literature Review

Binding Theory is a central component of generative syntax and deals primarily with the distribution and interpretation of **noun phrases (NPs)** in a sentence. In general linguistic description, a noun refers to a word that denotes a person, place, thing, or abstract concept, and it can occupy different grammatical positions within a clause, most commonly the subject or object position. Within the framework of generative grammar, however, the focus is not merely on the semantic role of nouns but on the structural constraints that govern where and how noun phrases can occur in relation to other elements in a sentence. Binding Theory attempts to explain these constraints by outlining the relationships that may exist between different types of noun phrases and by specifying the environments in which these relationships are permitted (Carnie, 2012).

A key aspect of Binding Theory is the classification of noun phrases into three major categories: **R-expressions, anaphors, and pronouns**. Each category behaves differently with respect to reference and syntactic positioning.

R-expressions (referring expressions) are noun phrases that receive their interpretation directly from the context of the discourse rather than from another element within the same sentence. These include proper names, definite noun phrases, and other lexical nouns that refer to identifiable entities in the real world. Examples include names such as *Ali*, *Sara*, or noun phrases like *the teacher* and *the boy*. Since R-expressions are inherently referential, their interpretation does not depend on another noun phrase within the sentence structure (Carnie, 2012).

Anaphors, on the other hand, are noun phrases whose interpretation depends on another noun phrase within the same sentence or discourse. They cannot normally stand independently because their meaning is derived from a previously mentioned antecedent. Typical examples of anaphors in English include reflexive and reciprocal expressions such as *myself, yourself, himself, herself, itself, ourselves, yourselves, themselves,* and *each other*. These elements must refer back to another noun phrase that appears earlier in the

structure, and their interpretation is therefore constrained by syntactic rules that determine where such relationships are permitted (Carnie, 2012).

The third category consists of **pronouns**, which display more flexibility in their interpretation. Pronouns may refer to an antecedent within the sentence, but they are not always required to do so. In many contexts, their reference may be determined by the broader discourse rather than by an element within the same clause. Common examples include *I, me, you, him, her, it, we, us, they,* and *them*, as well as possessive forms such as *his* and *her*. Because pronouns may or may not rely on a syntactic antecedent, their distribution is governed by constraints that differ from those applied to anaphors (Carnie, 2012).

The structural restrictions that regulate the distribution of these noun phrase types were formally proposed in **Chomsky's Government and Binding framework**. According to Chomsky (1981), Binding Theory operates through three fundamental principles that define how these expressions interact within a syntactic domain.

Principle A states that an anaphor must be **bound within its binding domain**, meaning that it must have an antecedent within a local syntactic environment. This antecedent must also stand in a specific structural relation to the anaphor.

Principle B states that a pronoun must be **free within its binding domain**. In other words, a pronoun cannot have an antecedent within the same local domain, although it may refer to an element outside that domain.

Principle C requires that **R-expressions remain free everywhere**, meaning that they cannot be bound by another element in the structure. Because R-expressions are inherently referential, they must not depend on another noun phrase within the sentence for their interpretation (Chomsky, 1981).

An important concept used in analyzing binding relations is **co-indexing**. Co-indexing is a notational device that marks the relationship between an antecedent and the expression that refers to it. In syntactic analysis, identical subscripts—such as *i, j,* and *k*—are assigned to noun phrases that share the same reference. For instance, if a pronoun refers to a previously mentioned noun phrase, both elements are given the same index to indicate that they refer to the same entity. This process helps linguists visually represent the referential connections that exist within a sentence structure.

Another crucial concept in the analysis of binding relations is **c-command**, which determines whether one syntactic element has the structural authority to bind another. The notion of c-command describes a hierarchical relationship within the syntactic tree, indicating that one node structurally dominates another within a given phrase structure. Binding relationships are only possible when the antecedent c-commands the element it binds. This structural requirement ensures that binding relations are determined not simply by word order but by the hierarchical organization of the sentence (Lapointe, 1980).

Together, these principles and structural mechanisms provide the theoretical basis for analyzing the distribution and interpretation of noun phrases in natural language. While Binding Theory was originally formulated through the analysis of English and other European languages, researchers have increasingly applied it to languages with different grammatical structures. Such cross-linguistic investigations are important because they reveal both the universal aspects of the theory and the ways in which individual languages may adapt or challenge its predictions. In the context of Urdu, examining the behavior of pronouns, anaphors, and referring expressions can provide valuable insights into how binding relations operate in a language with a distinct syntactic organization.

3. Research Methodology

3.1 Research Design

This study adopts a **qualitative descriptive approach** to examine the applicability of Binding Theory in English and Urdu sentences. Qualitative descriptive research focuses on presenting and interpreting data systematically while remaining close to the actual linguistic forms found in the data. According to Suryana (2010), qualitative descriptive research aims to provide a clear and accurate description of phenomena based on observable facts. In this study, the approach is used to analyze how different noun phrases behave in English and Urdu sentences within the framework of Binding Theory.

3.2 Population and Sampling

The data for this study consists of selected English sentences containing relevant noun phrases such as

R-expressions, pronouns, and anaphors. These sentences were chosen randomly to ensure variety in structure. Their Urdu translations were then used for comparative analysis. The purpose of this comparison is to examine similarities and differences in the way binding relations operate in the two languages.

3.3 Data Analysis Technique

The analysis was carried out in several steps. First, the researcher collected English sentences that contained the noun phrases relevant to Binding Theory. Second, these sentences were translated into Urdu by the researcher. After translation, the Urdu sentences were also presented in **Roman script** to facilitate clearer comparison. Once the data was compiled, each sentence was analyzed by applying the **binding principles** to identify the relationships between noun phrases. Finally, the patterns observed in English and Urdu were compared in order to draw conclusions about the similarities and differences between the two languages.

3.4 Theoretical Framework

This research is grounded in the **Government and Binding Theory** proposed by **Noam Chomsky in the 1980s**, particularly the principles of Binding Theory that explain the distribution and interpretation of anaphors, pronouns, and R-expressions within sentence structure.

4. DATA ANALYSIS

The following English and Urdu sentences were analyzed to examine how the principles of Binding Theory operate in both languages. Each sentence was examined by applying the three binding principles in order to identify the relationships between antecedents and their corresponding noun phrases. The analysis also considers **co-indexation** and **c-command**, which determine whether a binding relation is syntactically valid.

4.1 Binding Principle A

An anaphor must be bound within its binding domain.

English Sentence

$[He]_i$ injured $[himself]_i$.

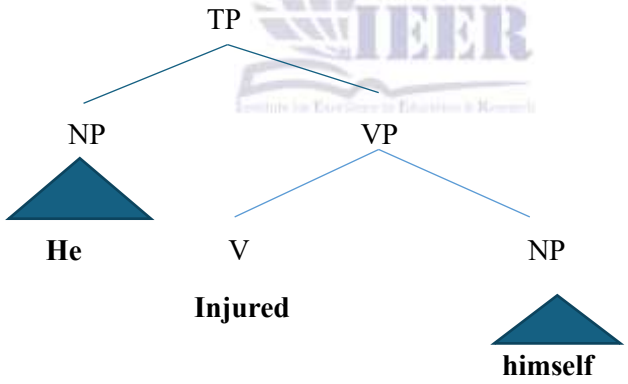


Figure 1

In this sentence in Figure 1, the pronoun **"he"** functions as the antecedent, while **"himself"** serves as the anaphor. Both elements share the same index (i), which indicates that they refer to the same entity. The antecedent structurally **c-commands** the anaphor and both appear within the same clause. Since the anaphor receives its reference from the antecedent within the same local domain, the conditions of Binding Principle A are satisfied. Therefore, the anaphor *himself* is properly bound within its binding domain.

Urdu Sentence
[Us ne]i [khud ko]i zakhmi kiya.
(He injured himself.)

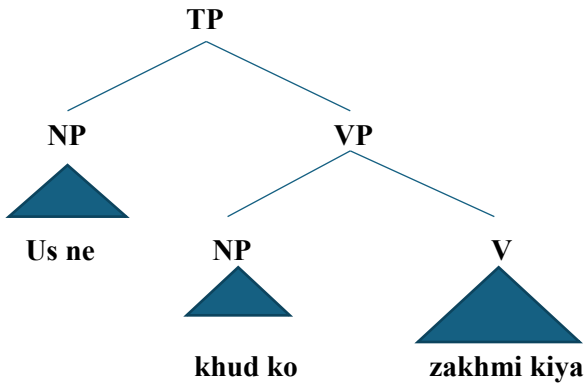


Figure 2

In the Urdu example in Figure 2, **"Us ne"** acts as the antecedent, while **"khud ko"** functions as the anaphor. Both noun phrases are co-indexed, indicating that they refer to the same individual. The antecedent also c-commands the anaphor within the sentence structure. Moreover, both elements occur in the same clause. As a result, the anaphor is correctly bound by its antecedent within the local domain. This shows that the conditions of **Binding Principle A** are satisfied in Urdu in a manner similar to English.

4.2 Binding Principle B
A pronoun must be free in its binding domain.
English Sentence
Ali said that he hit himself.

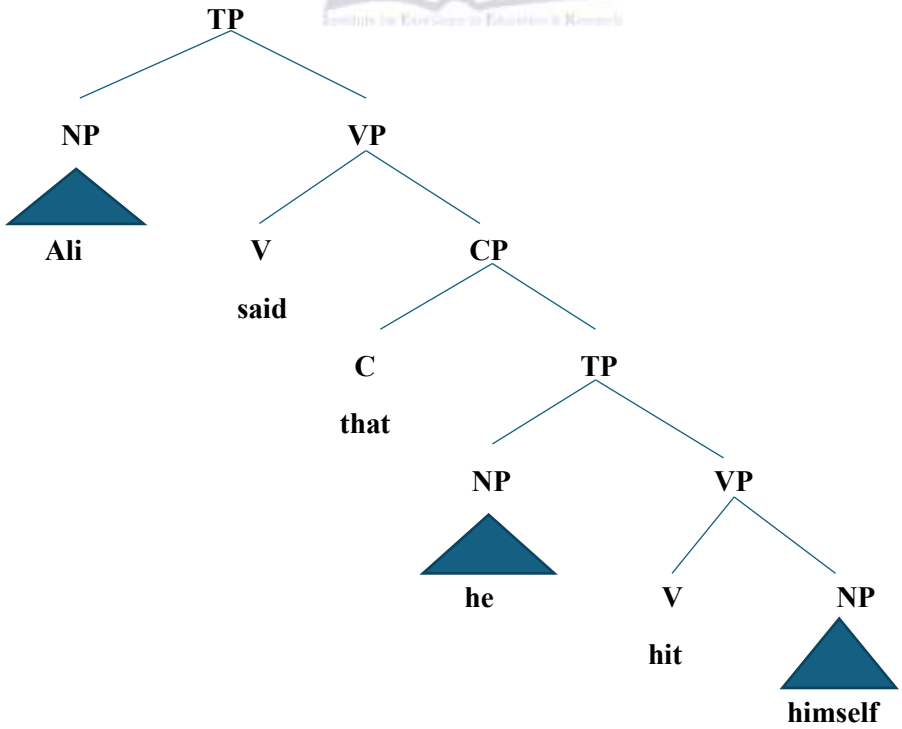


Figure 3

This sentence in Figure 3 allows two possible interpretations:
[Ali]$_i$ said that [he]$_j$ hit [himself]$_j$.
[Ali]$_i$ said that [he]$_i$ hit [himself]$_i$.
In the **first interpretation**, the pronoun **"he"** refers to a different person from *Ali*. Since the pronoun and the R-expression are not co-indexed, no binding relation exists between them. In this case, the pronoun remains completely free.

In the **second interpretation**, the pronoun **"he"** refers to *Ali*, meaning that both are co-indexed. Although the pronoun is c-commanded by the antecedent, they occur in **different clauses**. Binding Principle B requires that a pronoun be free within its **local binding domain**, usually the clause in which it appears. Since the pronoun is not bound within its own clause, the condition of the principle is still satisfied.

Urdu Sentence
1. [Ali ne]$_i$ kaha ke [us ne]$_j$ [khud ko]$_j$ maara.
2. [Ali ne]$_i$ kaha ke [us ne]$_i$ [khud ko]$_i$ maara.
(Ali said that he hit himself.)

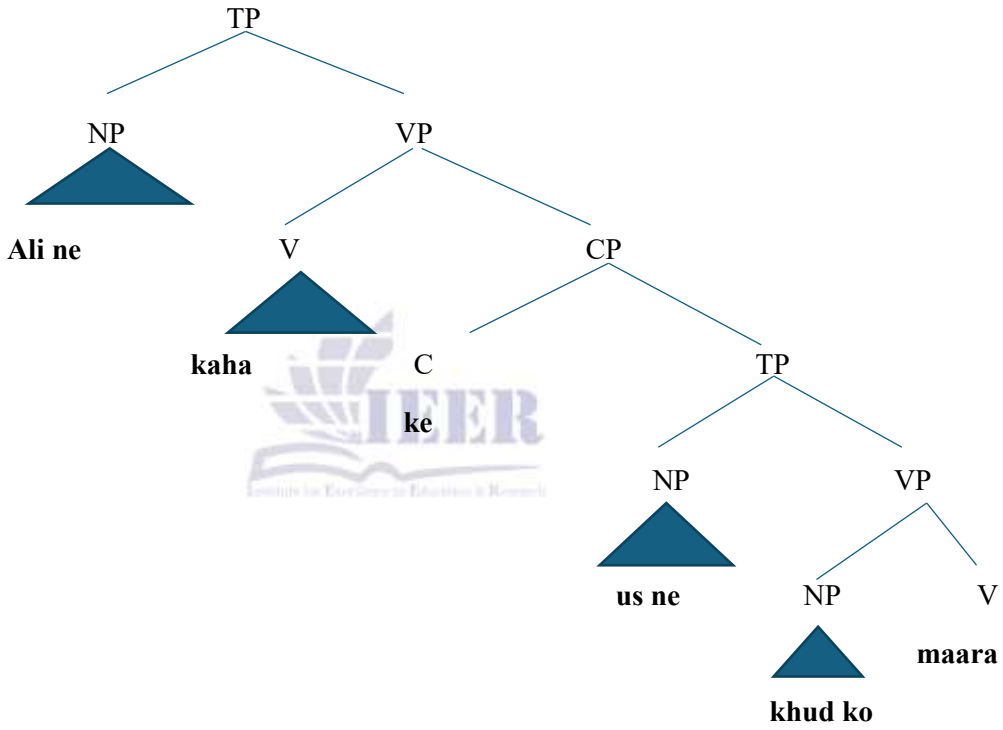


Figure 4

In the **first interpretation**, the pronoun **"us ne"** refers to someone other than *Ali*. Therefore, there is no co-indexation between the two noun phrases and no binding relation exists.
In the **second interpretation**, the pronoun **"us ne"** refers to *Ali* and both are co-indexed. Although the pronoun is c-commanded by the R-expression *Ali*, they occur in **separate clauses**. Consequently, the pronoun is not bound within its own binding domain and remains free locally. This confirms that **Binding Principle B** operates in Urdu in a way comparable to English.

4.3 Binding Principle C

An R-expression must always be free.
Consider the earlier examples:
Ali said that he hit himself.
Ali ne kaha ke us ne khud ko maara.
In both sentences, **"Ali"** in English and **"Ali ne"** in Urdu function as **R-expressions**. These noun phrases can serve as antecedents that bind other elements, such as pronouns or anaphors, through co-indexation and c-command. However, the R-expression itself does not depend on any other noun phrase for its interpretation and is not bound by another element in the sentence.

This observation supports **Binding Principle C**, which states that R-expressions must remain free. In both English and Urdu, the R-expression acts as an independent referring element and does not participate as the bound element in a binding relation.

5. Conclusion

English and Urdu differ noticeably in their **syntactic organization**. English generally follows a **Subject–Verb–Object (SVO)** word order, whereas Urdu typically follows a **Subject–Object–Verb (SOV)** structure. Because of this difference, the arrangement of sentence elements in the two languages appears quite distinct at the surface level. However, the present analysis shows that these structural variations do not prevent the underlying grammatical principles from functioning in a similar way.

The examination of selected English and Urdu sentences demonstrates that the three core principles of Binding Theory—**Principle A, Principle B, and Principle C**—operate effectively in both languages. In the case of **Principle A**, anaphors such as *himself* in English and *khud ko* in Urdu require a local antecedent within the same clause, indicating that they must be bound within their binding domain. Similarly, the analysis of **pronouns** supports **Principle B**, as pronouns remain free within their local domain even when they may refer to an antecedent located in a higher clause. Finally, **R-expressions** in both languages behave independently and do not depend on another noun phrase for their interpretation, which confirms the validity of **Principle C**.

Conclusively, the findings suggest that although English and Urdu differ in surface word order and certain grammatical features, the **underlying binding relations function in comparable ways**. This indicates that the principles proposed within the Government and Binding framework can be applied to Urdu without major modification. The results therefore support the broader claim of generative linguistics that many aspects of grammatical structure may reflect **universal principles** shared across languages, even when their outward forms appear different.

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