

Split Tense Projection in Urdu: An Illusion

Asad Ali¹, Nazir Ahmed Malik², Zain³

^{1,2,3}Department of Languages, The University of Chenab, Gujrat, Pakistan.

Abstract

This study explores the cartography of Tense Projection (TP) in the Urdu/Hindi language within the framework of feature sharing proposed by Pesetsky and Torrego (2007). To examine feature sharing, the study employs Head Movement Constraints (HMC) as proposed by Travis (1984) to analyze the role of intervening elements in Urdu/Hindi T-Projection. Additionally, it demonstrates how HMC restricts T to V or V to T movement in Urdu, contrasting with English where such movement is permitted in the absence of an intervening head (H₀). This study explores the inflection of V in Urdu concerning aspect and tense marking through the lens of feature sharing. Drawing on evidence from Urdu/Hindi, it strongly asserts that V in Urdu does not inflect to mark tense but solely for aspectual distinctions: habitual (ta), imperfective (iya), perfective (chuka), and progressive (raha), while tense marking (present (hai) and past (tha)) is achieved through other means. Furthermore, these findings endorse the Feature Sharing Theory by affirming the significance of valuing unvalued features for the interpretability of uninterpretable features during derivation, emphasizing the necessity for all features to be valued and interpreted before spell-out to avoid derivation crashes.

Keywords: Projection, Inflection, Aspect, Tense, Derivation, unvalued

1. Introduction

The primary objective of this study is to explore the intricate syntactic mechanisms governed by Head Movement Constraints (HMC) within the linguistic contexts of Urdu and English. HMC, as outlined by Travis (1984) and discussed further by scholars such as Matushansky (2006), Roberts (2010), Donati (2006), Harizanov and Gribanova (2019), Arregi and Pietraszko (2021), among others, imposes restrictions on the movement of T to V or V to T in Urdu, while permitting such movement in English when there is no intervening head between T and V. According to HMC (Travis, 1984), head movement cannot bypass intermediate heads, meaning only the head of the sister of a head (H₀) can move to H₀. In the context of movement operations such as upward or downward movement (Arregi & Pietraszko, 2021), features are shared in a mutually constrained manner, aligning with the principles of the Feature Sharing Theory (Pesetsky & Torrego, 2007).

1. Ali	pizza	khaa-ta	hai.
Ali.3SG	pizza.3SG	eat- asp	is.3SG

- ‘Ali eats pizza.’
2. Me-ne pizza khaa-ia hai
 I.1SG-Erg pizza-3SG eat-**asp** is.3SG
 ‘I ate pizza.’
3. Vo pizza khaa-iye ga.
 He.3SG pizza.3SG eat-**asp** will.3SG
 ‘He will eat pizza.’
4. Vo novel paar rah-ii hai.
 He.3SG novel.3SG read-ing-FM is.3SG
 ‘He is reading a novel.’
5. Tum sabaq yaad kar chuk-ey ho.
 You.2SG lesson.3SG learn do-verb **asp-MM** be.2P
 ‘You have learnt the lesson.’
6. Ali pizza khaa-ta tha.
 Ali.3SG pizza.3SG eat-**asp** was.3SG
 ‘Ali ate pizza.’

Based on examples (1-6), the current study seeks to demonstrate that Urdu is an aspect-based language, where the presence of AspP (ta, iya, raha, rahi, and chuka) is obligatory and overt in every sentence, while English is predominantly tense-based. It argues that V in Urdu never inflects to mark tense but does so for aspectual distinctions. Conversely, V in English inflects for both tense and aspect marking. This distinction indicates that Urdu, Hindi, and Punjabi are aspect-based languages, as the overt presence of the AspP head creates interventions within narrow syntax, blocking upward and downward movements (Arregi & Pietraszko, 2021).

Furthermore, the investigation into the inflection of V in Urdu and English is a compelling area of inquiry that has been explored by various scholars (Mahajan, 1990; Butt & Ramchand, 2001; Butt & Sadler, 2003; Butt & Geuder, 2003; Bhatt, 2011; Rai, 2017; Ansari & Mangrio, 2019; Sharif, 2020; Khurshid et al., 2021; Ali et al., 2021) in Hindi and Urdu. However, these studies have not distinctly delineated between Urdu/Hindi and English based on aspect and tense. Therefore, this study innovatively typologizes Urdu/Hindi as aspect-based languages, contrasting them with English, which is predominantly tense-based.

For evidence of English as a tense-based language, see examples (7-12), where tense is marked through inflections (-s, -ed). The aspects (continuous and perfective) in these examples (9-12) are expressed through ‘have’, ‘be’, and their respective inflections.

7. He works in a factory.
 8. Najma washed the dishes.

9. I am playing cricket.
10. They **have** completed homework.
11. Aqsa will be buying new clothes.
12. You **had** written a letter.

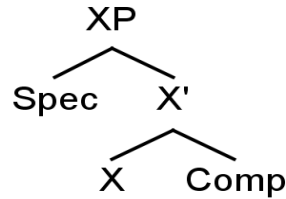
1.2 Linguistics Preliminary

Chomsky's Minimalist Program (1995; 1999; 2005; 2013; 2014; 2021; 2023) posits that the faculty of language relies on universal computational machinery, incorporating a Lexicon of lexical items (LIS). This framework reflects Chomsky's extensive contributions over the years, introducing numerous concepts pivotal to our understanding of language. The ideas central to the study of syntax, collectively known as the Minimalist Program, have been the focus of Chomsky's linguistic endeavors since 1993. Initially developed in Chomsky (1957, 1965), the theory of generative grammar laid the foundation for these concepts.

The Minimalist Program (MP) proposes the existence of two levels of representation: Logical Form (an abstract representation of meaning) and Phonetic Form (an abstract representation of sound), which are interconnected through linguistic structure. In contrast to the Government and Binding (GB) Theory, which distinguished between levels such as S-structure and D-structure, MP consolidates these into two interface levels: LF and PF. This necessitates an internal grammatical structure to effectively connect these representations. In essence, abstract structures are generated within the linguistic system and later realized overtly.

The process begins with Numeration (Lexical Array), the initial stage of every syntactic derivation, wherein a set of morpho-syntactic and lexical items is selected from the lexicon. This precedes merge, during which the chosen elements are combined to form partial trees and projections. Merge serves as the mechanism through which information is transferred from the lexicon to the interface levels, facilitating the construction of linguistic expressions. For instance, consider a pair of syntactic objects (α, β) . These objects are selected from the Numeration. During the operation 'Merge', a new syntactic object is constructed out of the pair (α, β) . This single syntactic object is labelled as (K). On the other hand, it may combine a new lexical item and a syntactic structure which is already formed i.e. 'Merge' can also combine two phrases. As for as the identity of K is concerned, Chomsky (1995; 2013 and 2014) expresses that K is either one or the other of (α, β) . He adds that if α projects, K will be $\{ \alpha \{ \alpha, \beta \} \}$ and if β projects, K will be $\{ \beta \{ \alpha, \beta \} \}$. The operation Merge (α, β) then is asymmetric which projects either, α, β . The element which projects becomes the title of the complex newly formed. In general, the syntactic object K must be of the form $\{ \gamma \{ \alpha, \beta \} \}$, where γ

shows the type to which K belongs. γ is termed as the label of K. In MP, the lexical items from the lexicon are transformed into specifier-head and head-complement relationships as seen in the following figure:



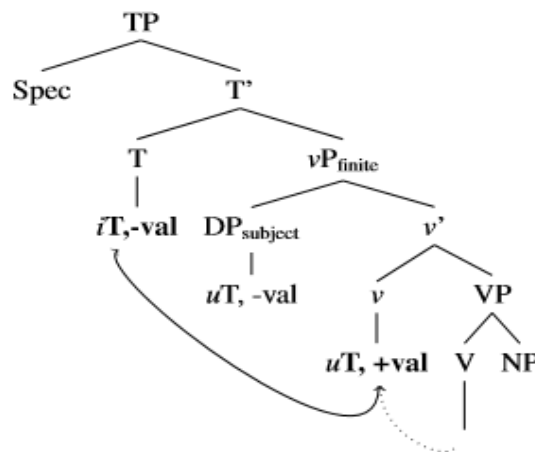
The specifier-head or head-complement relationship has been a focal point in linguistic inquiry. Mahajan (1990) made significant contributions to this area, particularly in the context of Hindi-Urdu language, where he made a clear distinction between A and A-bar movement. His work extended to encompass inflections, case-marking, scrambling, and agreement, laying the foundational assumptions for understanding Urdu-Hindi syntax. This distinction has since been embraced by Chomsky (1995; 2014), among others. Building upon Mahajan's (1990) insights, Butt and Ramchand (2001) delved into the structure of Urdu complex aspects, predicting the selectional requirements between various aspects and tense. Butt and Sadler (2003) focused on agreement and verbal morphology, shedding light on the nature of agreement in Urdu-Hindi. Additionally, Butt and Geuder (2003) explored grammaticalization and evolutions in Urdu-Hindi, identifying a list of light verbs. Bhatt (2011) conducted research on Urdu models, endeavoring to formulate their syntactic structure. Rai (2017) undertook a comparative study of English and Mugali Rai within the domain of aspect, revealing that Mugali Rai, like English, exhibits two aspects: perfect and progressive. Rai (2017) concluded that all aspects in Mugali Rai are morphologically marked, unlike English.

In contrast, Ansari and Mangrio (2019) extensively examined the paradigm of Urdu morphology within the generative framework, focusing on word and paradigm approaches and observing the morphology of fusional languages. They concluded that the morphological approach effectively provides a paradigmatic set of patterns in Urdu verbs, covering both inflectional and derivational morphology. Sharif (2020) investigated the internal inflectional layer of Urdu, predicting a causative layer based on Urdu-Hindi data. Khurshid et al. (2021) utilized the complex aspectual model of Butt and Ramchand (2001) to analyze Urdu case marking, arguing for the existence of oblique case and various features in Urdu. Ali et al. (2021) examined intra-clausal scrambling, focusing specifically on NP-Scrambling in Urdu within the theoretical framework of the minimalist program (1995; 2001). They evaluated the works of Mahajan (1990) and

Kidwai (2000), claiming that scrambling in Urdu-Hindi is controlled, restricted, and blocked only by phase heads (C_o and v_o) within the clausal-level. However, despite these extensive investigations, the structure of aspect as an independent head in Urdu-Hindi languages remains largely unexplored. Therefore, this study fills a significant gap in Urdu-Hindi syntax, proposing unified distinctions between Urdu-Hindi and English in marking both tense and aspect.

In this article, it is particularly assumed with Pesetsky and Torrego (2007) that syntactic features possess two parameters: (a) interpretability and (b) valuation. *Four* types of syntactic features are generated by the combination of these two parameters: interpretable and valued features [$iF, +val$], interpretable and unvalued features [$iF, -val$], un-interpretable and valued features [$uF, +val$], and, un-interpretable and unvalued features [$uF, -val$]. Features that match with one another, i.e., having the same syntactic functions, develop a relation called feature sharing. After feature sharing, un-interpretable features get deleted and unvalued features share the value of a valued feature, if there is one. In a grammatical derivation, all un-interpretable features must get deleted, and all unvalued features must be valued before LF. For instance, Pesetsky and Torrego (2007) proposes that in English, T has an interpretable but unvalued tense feature [$iF, -val$] and inflected finite verbs in v have an un-interpretable but valued tense feature [$uF, +val$]. To achieve a successful derivation, T gets its tense feature by showing Agreement with the inflected verb in v. On the other hand, the inflected verb gets its un-interpretable tense feature deleted. Thus, in the derivation, there is no un-interpretable feature left. This is depicted in the diagram (1) below:

(1) T in English: Agree with v



Thus, Pesetsky and Torrego (2007) assert that the features of lexical items interact with one another through *agreement* and influence the shape of syntactic structure and

the process related to the semantic interpretation. Hence, an *unvalued feature* F acts as a probe on a particular head H at a syntactic position (α). It scans for another instance of feature F that acts as a goal at a location (β) within its c-command domain and agrees with it. Therefore, $F \alpha$ is replaced by $F \beta$ i.e. same feature is present in both the locations. Therefore, in the above diagram, the unvalued feature of T acts as a probe and scans in its C-command domain the instance of valued feature of T located at v . Thus, after feature sharing, both the syntactic locations T and v have same feature that is valued.

2. Split T Projection in Urdu

In this section, this study conducts an analysis of the inflection of verbs in Urdu concerning grammatical tense (Past and Present) and aspect (Perfective, Imperfective, and Progressive). In Urdu, present and past tenses are indicated using independent auxiliaries such as ‘hai’ (is), ‘hein’ (are), ‘tha’ (was), and ‘thy’ (were) respectively. Conversely, aspectual clitics are employed to denote grammatical aspects in Urdu, including ‘-a/ (-masculine), -e/ (-feminine), -ae (plural for both masculine and feminine), -ta (habitual aspect, masculine), -ti (habitual aspect, feminine), -tay (ergative aspect, masculine and feminine), -tain (habitual aspect plural),’ and ‘raha (masculine singular)/rahi (feminine singular)/rahay (plural).’ Based on the data analysis, the order and placement of aspectual morphemes within Urdu sentences relative to the main verb (V) suggest that the aspectual morpheme typically occupies a position between the verb phrase (VP) and tense phrase (TP), i.e., (VERB.ASP.TENSE). To illustrate this point, consider the following example.

- | | | | | | |
|----------------------------|----------|------|-------|---------|----------|
| 13. Ali | khana | khaa | raha | hai. | |
| Ali.3SG | meal.3SG | eat | Prog | is.3SG | |
| ‘Ali is eating food.’ | | | | | |
| 14. Ali | khana | khaa | raha | tha. | |
| Ali.3SG | meal.3SG | eat | Prog | was.3SG | |
| ‘Ali was eating meal.’ | | | | | |
| 15. Ali | khana | khaa | raha | ho- | ga. |
| Ali.3SG | meal.3SG | eat | Prog. | do-verb | will.3SG |
| ‘Ali will be eating meal.’ | | | | | |

In the examples above (13-15), the progressive aspectual morpheme ‘raha’ is observed after the present tense marker ‘hai’ and before the main verb ‘khaa’. This sequence—main verb, aspectual morpheme, tense marker—is the sole acceptable order in Urdu. Any alteration in the arrangement of these syntactic elements results in ungrammatical sentences in Urdu-Hindi. This can be illustrated by the following examples (16-18).

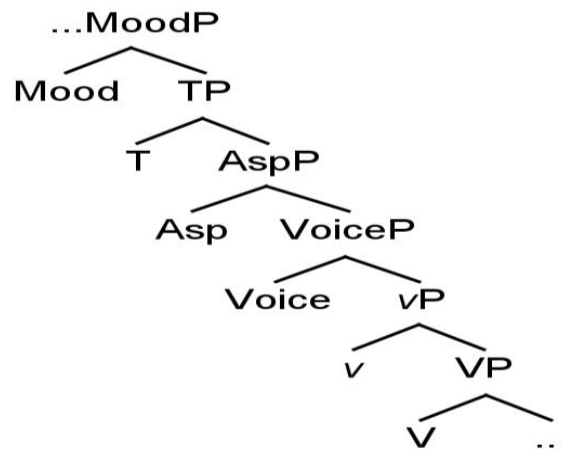
16. Ali	khana	khaa	raha	hai. (V. AsP. Tense)
Ali.3SG	meal.3SG	eat	Prog	is.3SG
'Ali is eating meal.'				
17. *Ali	khana	raha	khaa	hai. (Asp. V. Tense)
Ali.3SG	meal.3SG	Prog	eat	is.3SG
'Ali is eating meal.'				
18. *Ali	khana	hai	raha	khaa. (Tense. Asp. V)
Ali.3SG	meal.3SG	is.3SG	Prog	eat.
'Ali is eating meal.'				

By carefully examining the positioning of the aspectual clitic between the main verb "khaa" (eat) and the tense marker "hai" (is), a thorough analysis of verb inflection in Urdu is conducted, supported by evidence from linguistic theory. This analysis aims to substantiate the hypothesis that the main verb (V) in Urdu does not undergo inflection for tense. Specifically, there is no head movement from V to T and vice versa. According to Chomsky (1995; 2001; 2005; 2014), a terminal node is labeled as a head (H_0). However, the term "terminal" itself raises ambiguity—is it syntactically atomic (indivisible) or merged from the numeration/lexicon as a single lexical item or feature bundle? If heads are considered nodes merged from the numeration, they must possess internal morphological structure. Thus, heads are defined as syntactically indivisible bundles of formal features (Matushanky, 2006; Donati, 2006; Roberts, 2010; Harizanov & Gribanova, 2019). Returning to the discussion of head movement, Chomsky (1994; 2013; 2014) posits that head movement occurs as part of narrow syntax, taking place after Spell-out, on the phonological branch of derivation, thereby affecting only the phonological form (PF). As such, head movement does not induce any semantic changes, as LF remains unaffected by PF alterations. Chomsky (1995; 2001; 2014) contends that since movement is not prompted by syntactic features and occurs at PF, this explains why it is a head of a phrase that moves, rather than an XP. This simplifies the syntactic component of computation, as syntactic features only trigger phrasal movement. When considering the phenomenon of head movement, Chomsky (2001) argues that it exhibits distinct properties compared to phrasal movement. These unique properties are outlined below:

- i. Head movement does not have any semantic effect.
- ii. It is counter cyclic.
- iii. The moved head does not c-command its trace.
- iv. Head movement follows *locality condition* differently than phrasal movement.
- v. It is carried out through an adjunction rule, by which the moving head is adjoined to the target head.
- vi. It is not successive-cyclic. (no ex-corporation)

According to Matushansky (2006) and Roberts (2021), there has not been a dedicatedly serious proposal concerning the properties of the PF branch. Therefore, it's insufficient to solely attribute the properties of head movement to PF. Furthermore, it remains ambiguous why Agree and (Re)Merge would be incapable of targeting heads, given that these narrow syntactic operations typically focus on features residing on heads. Additionally, it must be acknowledged that (Re)Merge must target heads at some stage, as otherwise, it would not be possible for a head to enter the derivation initially. Hence, it's not entirely clear if head movement is indeed sensitive to PF.

Travis (1984) introduces a locality condition on head movement, suggesting that head movement strictly occurs within the local domain of the head. Considering head movement as part of narrow syntax, it should adhere to certain syntactic constraints. One such constraint proposed by Travis (1984) is the Head Movement Constraint, which stipulates that head movement may not bypass intermediate heads. In other words, head movement between two heads A and B occurs only if A and B have a local relation, meaning there is no projection of head C that intervenes on the path of branches connecting A and B. Simply put, only the head of the sister of a head H_0 can move to H_0 . Taking into account the locality condition on head movement, let's commence the syntactic analysis of head movement of the main verb (V) in Urdu. The present study adheres to the standard assumptions presented by Cinque (2001, pp. 137-155) and Rizzi and Cinque (2016) to highlight the argument phrases.



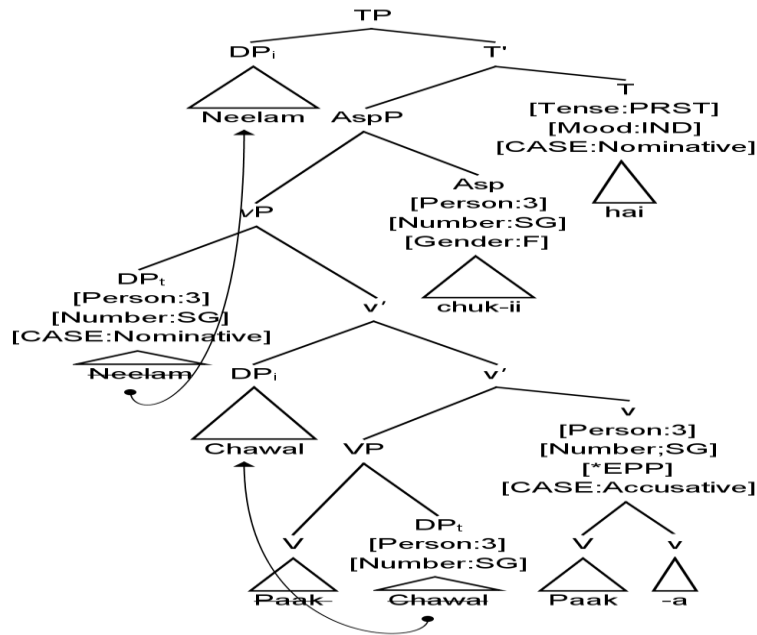
3. Data Analysis and Discussions

3.1 Perfective Aspects in Urdu

This section examines the mechanics of perfective aspects in Urdu-Hindi. In Urdu, there are two perfective aspects: "chuka" (for masculine) and "chukii" (for feminine), and "liya" for both feminine and masculine. Examples (19-20) illustrate both perfective aspects, "chuka" and "chukii." The overt aspects "chuk-a" and "chuk-i" do not require the overt ergative marker "-ne" with the subject DP (Neelam, Nuria, and Aqsa). However, "liya" obligatorily takes the ergative marker "-ne," as demonstrated in examples (21-22). In these examples, the ergative marker "-ne" blocks the subjective case marker but assigns Ergative case to the nominal DP (Aqsa) (Harris, 1997). According to Bjorkman (2018), perfectives in Hindi-Urdu typically serve as sources of ergative case, with ergative case marked via the overt clitic "-ne" in Hindi-Urdu. However, our data show that only "liya" takes the overt ergative marker "-ne," as seen in examples (21-22).

This study suggests that there are variations in perfectives in Hindi-Urdu. Furthermore, it investigates these variations within the perfective aspects in Hindi-Urdu with regard to case marking, both locally and in long-distance positions. In examples (19-20), the DP (Neelam) agrees with the perfective marker "chuk-ii," where "ii" represents the feminine case marker in Urdu-Hindi. Conversely, in examples (21-22), the ergative marker "-ne" prevents subjective agreement with the aspect and tense, causing the tense and aspect (perfective) to agree with the closest DP (pizza), which bears masculine gender.

19. Neelam	chawal	paaka	chuk-ii	hai.
Neelam.3SG	rice. 3SG	cook	has-F	PRST.F
'Neelam has cooked rice.'				
20. Nuria	chwal	pakaa	chuk-ii	thii.
Nuria. 3SG.F	rice.3SG	cook	had-F	was.PST.F
'Nuria had cooked rice.'				
21. Aqsa-ne	pizza	khaa	liy-a	hai.
Neelam. ERG	pizza. 3SG	eat	has-M	PRST.M
'Aqsa has eaten pizza.'				
22. Aqsa-ne	chaee	pei	lei-i	thi.
Neelam. ERG	tea. 3SG	take	has-F	PST.F
'Aqsa had eaten pizza.'				



3.2 Perfective Aspect and Light Verb

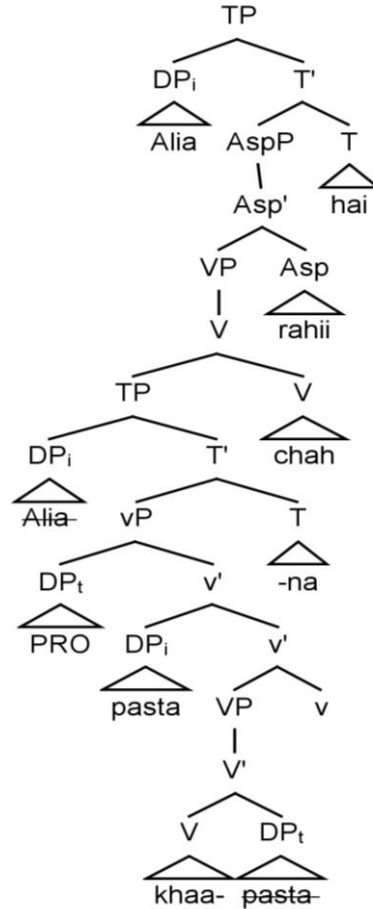
23.	Ali	saer	kar	chuk-a	hai.
	Ali. 3SG.M	walk.3SG	do-verb	has-M	be.M
	'Ali has walked.'				
24.	Neelam	saer	kar	chuk-ii	thii
	Neelam. 3SG.F	walk.3SG	do-verb	had-F	was.PST.F
	'Neelam had walked.'				
25.	Ali-ne	nashta	kar	liy-a	hai.
	Ali-ERG	breakfast.3SG	do-verb	has-M	be.M
	'Ali has walked.'				
26.	Log	saer	kar	chuk-ee	thee
	People. 3PL	walk.3SG	do-verb	had-PL. M	were. PST.PL.M
	'People had walked.'				

3.3 Progressive Aspect

In this section, progressive aspects have been demonstrated in the examples (24).

27. Nadeem	gaana	gaa	rah-a	hai.
Nadeem. 3SG.M	song.3SG	sing	Ing-M	be.PRST.M
'Nadeem is singing song.'				
28. Alia	pasta	khaana	chah-aa.	rah-ii hai.
Zeli.3SG	pizza.3SG	eat	wish-M	ing-F be.3SG

- ‘Alia is wishing to eat pizza.’
29. Alia pasta khaa-na chah-aa. rah-ii thi.
 Alia.3SG pizza.3SG eat wish-M ing-F was.3SG
- ‘Alia was wishing to eat pizza.’



3.4 Aspectual Structure in Ditransitive Verbs

30. Rubab khaat pakiza-ko daey-tii hai.
 Rubab. 3SG letter.3SG pakiza-DAT give-Asp be.PRST.M

‘Rubab gives a letter to pakiza.’

31. Rubab-ne khaat pakiza-ko dei-ya hai.
 Rubab. ERG letter.3SG pakiza-DAT give-Asp be.PRST.M

‘Rubab gives a letter to pakiza.’

32. Rubab-ne khaat pakiza-ko dei-ya tha.

Rubab. ERG letter.3SG pakiza-DAT give-Asp was.PST.F

‘Rubab gave a letter to pakiza.’

33. Rubab khaat pakiza-ko daey chuk-ii hai.
 Rubab.3SG letter.3SG pakiza-DAT give has-F be.
 PRST

‘Rubab has given a letter to pakiza.’

34. Moaz khaat Ali-ko daey chuk-aa tha.
 Moaz.3SG letter.3SG Ali-DAT give has-M was.
 PST.

‘Moaz had given a letter to Ali.’

3.5 Aspectual Structure of Non-finite Clauses

35. Aqsa-ne pizza khaana chah-aa.
 Aqsa-ERG pizza.3SG eat wish-3SG.M

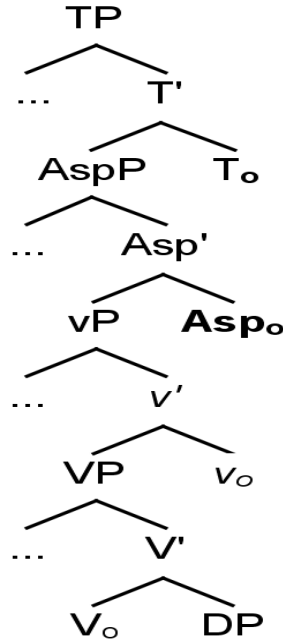
‘Aqsa wished to eat pizza.’

36. Aqsa pizza khaana chah-aa rah-ii hai.
 Aqsa.3SG pizza.3SG eat wish-M ing-F be.3SG

‘Aqsa is wishing to eat pizza.’

37. Mareez pizza khaana chah-aa rah-aa tha.
 Patient.3SG pizza.3SG eat wish-M ing-F was.3SG

‘Patient is wishing to eat pizza.’



We have presented the universal split mirror structure of Urdu TP, which comprises "To" taking AspP as a complement to establish the Head (H_o) and Complement Relation (XP). Additionally, the Head (Asp_o) selects vP as a complement within the vP, with "vo" selecting VP (lexical verb) as a complement (Embick, 2000). This system operates within the Urdu language, and we have supported our arguments with multiple types of data, including (a) mono-transitive verbs, (b) ditransitive verbs, (c) non-finite verbs, and (d) light verb patterns. However, such a comprehensive analysis has not been previously presented in the literature on South Asian languages, despite the works of scholars such as Mahajan (1990), Butt & Ramchand (2001), Kidwai (2000), Rai (2017), Ansari and Mangrio (2019), Sharif (2020), and Khurshid et al. (2021). While Mahajan (1990) provided details about X and X-bar movement with proper distinctions, our study reveals that the head (Asp_o) occurs as the complement of the T and exists independently in Urdu in both finite and non-finite clauses, as cited in (38-39) with various variations.

- | | | | | | |
|----------|-----------|---------|----------|--------|---------|
| 38. Alia | pasta | khaa-na | chah-aa. | rah-ii | thi. |
| Alia.3SG | pizza.3SG | eat | wish-M | ing-F | was.3SG |

‘Alia was wishing to eat pizza.’

- | | | | | | |
|----------|-----------|--------|---------|--------|--------|
| 39. Aqsa | pizza | khaana | chah-aa | rah-ii | hai. |
| Aqsa.3SG | pizza.3SG | eat | wish-M | ing-F | be.3SG |

‘Aqsa is wishing to eat pizza.’

Similarly, Khurshid et al. (2021) have explored the same context, investigating the oblique case in Urdu and providing an analysis of Urdu sentences with respect to case marking patterns. Their focus, however, was not to clearly delineate the distinctions between tense and aspect marking in languages. This study offers a multifaceted analysis of Urdu aspectual structure. In Urdu-Hindi, verbs predominantly inflect to mark certain aspects, while tense marking is sometimes optional and sometimes compulsory in different sentences. Similarly, control verbs operate in varying ways in Urdu. For instance, in Example (38), the verb "chah" (wish) serves as a control verb. It assigns case via T "tha/thi" rather than aspect "rah-ii/rah-aa." In the embedded CP, a non-finite clause headed by "-na" lacks the potential to mark case; hence, case is marked via finite T (Chomsky, 1995; Chomsky, 2001).

4. Conclusion

In conclusion, this study highlights parametric variations in languages (Chomsky, 2005) attributable to structure-building processes. While Urdu/Hindi exhibits an aspect-based structure, English is characterized as a tense-based language. Previous research has extensively discussed various aspects in Urdu/Hindi, Mugali Rai, among others. However, a systematic exploration of the aspect system in Hindi-Urdu remains largely uncharted territory. Building upon Urdu/Hindi data, this study posits that habitual (ta), perfective (chuka), imperfective (iya), and progressive (raha) aspects are directly associated with lexical verbs (e.g., "paar," "khaa," etc.) rather than tense markers. Furthermore, the absence of features such as [+CASE, NUMBER, GENDER] in the non-finite clause marker "-na" suggests that these features are valued, matched, and deleted in finite clauses, as the finite clause inherits features from the CP, serving as a phase head. It is evident that within T-Projection, aspect overtly exists in Urdu/Hindi, adhering to the mechanics of feature sharing and violating Head Movement Constraints (HMC). Additionally, it is noted that Urdu/Hindi does not adhere to any restrictive mechanics.

References

- Ali, A., Jabbar, Q., & Kiani, H. (2021). Clausal-Internal Scrambling in Urdu Language: A Derivation by Phases. *REiLA: Journal of Research and Innovation in Language*, 3(1), 52-60.
- Ansari, N. A., & Mangrio, R. (2019). Morphology of Urdu Verbs: A word and paradigm approach. *Pakistan Journal of Language Studies*, 3(1), 31-42.
- Arregi, K., & Pietraszko, A. (2021). The ups and downs of head displacement. *Linguistic Inquiry*, 52(2), 241-290.
- Baker, M. C. (1988). *Incorporation: A theory of grammatical function changing*.

- Bhatt, R. (2011). Urdu/hindi modals.
- Bjorkman, B. M. (2018). Ergative as perfective oblique. *Syntax*, 21(4), 321-361.
- Butt, M., & Geuder, W. (2003). Light verbs in Urdu and grammaticalization. *Words in time: Diachronic semantics from different points of view*, 295-350.
- Butt, M., & Ramchand, G. (2001). Complex aspectual structure in Hindi/Urdu. *M. Liakata, B. Jensen, & D. Maillat, Eds*, 1-30.
- Butt, M., & Sadler, L. (2003). Verbal morphology and agreement in Urdu. *Syntactic structures and morphological information. Mouton*, 57-100.
- Chomsky, N. (1957). *Syntactic Structures*, Mouton and Co., The Hague. (1965) *Aspects of the Theory of Syntax*.
- Chomsky, N. (1980). *Lectures on Government and Binding*, Foris, Dordrecht. *Chomsky Lectures on Government and Binding*.
- Chomsky, N. (1986). *Knowledge of language: its nature, origin and use*. New York: Praeger.
- Chomsky, N. (1995). *The minimalist program*. MIT press.
- Chomsky, N. (2001). *Derivation by phase*. MIT Press
- Chomsky, N. (2005). Three factors in language design. *Linguistic inquiry*, 36(1), 1-22.
- Chomsky, N. (2013). Problems of projection. *lingua*, 130, 33-49.
- Chomsky, N. (2014). *The minimalist program*. MIT press.
- Chomsky, N. (2021). Linguistics then and now: Some personal reflections. *Annual Review of Linguistics*, 7, 1-11.
- Chomsky, N. (2023). Genuine explanation and the strong minimalist thesis. *Cognitive Semantics*, 8(3), 347-365.
- Chomsky, N., & Kenstowicz, M. (1999). Derivation by phase. *An Annotated Syntax Reader*, 482.
- Cinque, G. (2001). "Restructuring" and the order of aspectual and root modal heads. In *Current studies in Italian syntax* (pp. 137-155). Brill.
- David, A., Maxwell, M., Browne, E., & Lynn, N. (2009). *Urdu Morphology*. Maryland: Centre for Advanced Study of Language, University of Maryland.
- Donati, C. (2006). On wh-head movement. *Current Studies in Linguistics Series*, 42, 21.
- Embick, D. (2000). Features, syntax, and categories in the Latin perfect. *Linguistic inquiry*, 31(2), 185-230.
- Harris, A. C. (1997). Ergativity.
- Haegeman, L., & Guéron, J. (1994). *English grammar: A generative perspective*. Blackwell Publishing.
- Harizanov, B., & Gribanova, V. (2019). Whither head movement?. *Natural Language & Linguistic Theory*, 37, 461-522.
- Hashmi, A. (2013). *Urdu*. Ilmi Kutb Khana.

- Khurshid, M. A., Azad, H., Ahmed, S. R., & Usman, T. (2021). Oblique Agreement Feature and Oblique Adjunct Phrase. *Jahan-e-Tahqeeq*, 4(3), 412-421.
- Kidwai, A. (2000). *XP-adjunction in Universal Grammar: Scrambling and binding in Hindi-Urdu*. Oxford University Press, USA.
- Koul, O. N. (2008). *Modern Hindi Grammar*. Springfield, USA: Dunwoody Press.
- Li, C., & Thompson, S. (1994). On 'middle voice's verbs in Mandarin. *Voice: Form and function*, 27, 231.
- Mahajan, A. K. (1990). *The A/A-bar distinction and movement theory*. Doctoral dissertation, Massachusetts Institute of Technology.
- Matushansky, O. (2006). Head movement in linguistic theory. *Linguistic inquiry*, 37(1), 69-109.
- Naseer, A. (2010). Tense and Aspect in the Context of Urdu. *International Journal of Electrical & Computer Sciences*, 10(5).
- Pesetsky, D., & Torrego, E. (2001). T-to-C movement: Causes and consequences. *Current Studies in Linguistics Series*, 36, 355-426.
- Pesetsky, D., & Torrego, E. (2007). The syntax of valuation and the interpretability of features. *Phrasal and clausal architecture: Syntactic derivation and interpretation*, 262-294.
- Rai, I. P. (2017). Aspect in English and Mugali Rai: A contrastive study. *Pakistan Journal of Language Studies*, 1(1), 1-11.
- Roberts, I. G. (2010). *Agreement and head movement: Clitics, incorporation, and defective goals*, 59. MIT Press.
- Sharif, A. N. (2020). *Causative alternation licensing in Urdu: An event structure account* (Doctoral dissertation, University of Otago).
- Travis, L. D. (1984). Parameters and Effects of Word Order Variation: Submitted in Partial Fulfillment of the Requirements of the Degree of Doctor of Philosophy at the Massachusetts Institute of Technology. MIT.
- Rizzi, L., & Cinque, G. (2016). Functional categories and syntactic theory. *Annual Review of Linguistics*, 2, 139-163.
- Zyman, E., & Kalivoda, N. (2020). XP-and X0-movement in the Latin verb: Evidence from mirroring and anti-mirroring. *Glossa: a journal of general linguistics*, 5(1).