

NOMINAL CIRCUMFIXATION OF COMPLEX DERIVATIVES IN URDU

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Abstract

This paper delves into the nominal complex circumfixation in Urdu. The present endeavor decomposes the circumfixation and studies its constituents with structural, hierarchical, and functional perspectives. The objectives of the study comprise tracing the underlying patterns of the nominal complex circumfixation of Urdu, demonstrating the complex circumfixation through binary branching, and highlighting functions of each morpheme of circumfixation with the proposed morphological attribute value matrix (MAVM). The present work is descriptive accomplished in the paradigm of qualitative research. It uses purposive sampling technique to trace and elaborate the nominal complex circumfixation. From the print and online resources, the nominal circumfixes are ransacked and enlisted with transcription and etymology. It is brought on the surface that the X part of the nominal circumfix is free-standing in some cases. The study explores that the constituents of circumfixation do not violate the binary branching and are presentable on the hierarchical trees. It is found that the proposed mechanism MAVM traces the features left over by the phrase structure morphology. The study concludes that the Urdu complex circumfixation is idiosyncratic in relation to the X free-standing part of the nominal circumfix, its realization on the binary branching, and the application of the feature-checking analyzer MAVM.

Key Words: affixation, circumfixation, morphology-syntax nexus, Urdu language

1. Introduction

Circumfixation pertains to a word-formation process. The purpose of the word-formation is to produce the words recursively and facilitate the process of communication. Yule (2006), Barnhart et al. (2006), and Doblhofer (1990) familiarize the readership with the word-formation processes, including acronymy, blending, borrowing, antonomasia, conversion, backformation, compounding, derivation, clipping, folk etymology, and coinage. In addition to these word-formation processes, reduplication and modification of base are conspicuous in the word production mechanism. Out of various word-formation processes, circumfixes demonstrate some idiosyncratic features for the derivational perspective. They comprise a discontinuous affix splitting into two dissimilar parts surrounding a free morpheme (Boeckx & Fumikazu, 2004; Finegen, 2004; Fromkin, 2003; Spencer, 1991). Out of two collective parts of circumfixes, one is added to the root at the fronting position, and other is simultaneously attached to the root at the final position. The interconnected parts of circumfixes demonstrate $X + Base + Y$ structure. The present work delves into the circumfixation of the Urdu nominal complex derivatives. Rehman (2017) and Grimes (2000) regard Urdu-Hindi as the second most spoken language of the world. Thus, the present work is expected to contribute to the legacy of universal morphology.

Words are sub-categorized in relation to their morphological structures. They pertain to either simple or complex constructions. Simple words lack segmentation of internal structure i.e., they are not divided into morphemes. On the other hand, complex words are further divided into multimorphemic complex and compound derivatives. Compounding is not the focus of the study. This study is delimited to the complex derivatives. Yule (1996) states that derivation is the process of new word-formation. The internal structure of the complex derivatives exhibits the composition of more than one morpheme. The complex derivatives need the projection of affixation.

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The complex words are derived with the addition of prefixes, suffixes, or both e.g., *immorality*. It is analyzed that both prefix *im-* and suffix *-ity* are added to the root separately, and removal of one affix either prefix e.g., *morality* or suffix e.g., *immoral* does not render the derivative ungrammatical. Nevertheless, the use of circumfix with respect to the discontinuous morpheme is unique and distinct. Bauer (2003) observes if neither of two affixes is used on its own, and they collectively seem to realize a single morpheme, they are sometimes classed together as a circumfix. He, however, takes the position that if the structures $X + \text{Base}$ and $\text{Base} + Y$ produce grammatical forms, they are not the realizations of a typical circumfix. Contra Bauer's (2003) observation, Klegr (2018) exemplifies the Czech morphological theory, which recognizes $X + \text{Base} + Y$ forms as circumfixes even when Y is a free-standing reflexive particle. It leads to demonetize the argument of Bauer (2003) mentioned above. This paper endeavours to adjust some parameters of the Urdu circumfixation keeping in mind the perspectives presented by Bauer (2003) and Klegr (2018).

2. Need and Significance of the Study

The need of the study crops up to observe the free-standing particle of the circumfixes in Urdu. Contra Czech circumfixal constructions, the Urdu circumfixes demonstrate X particle of nominal circumfixes free-standing. Moreover, the Urdu circumfixation has never been studied with the lens of morphology-syntax nexus and its study is expected to fill in the research gap. The presentation of the nominal complex circumfixation with complex morphological trees capture various properties associated with each morphological node. The study incorporates the proposed mechanism of morphological attribute value matrix (MAVM) derived from Lexical-Functional Grammar in the analysis to harmonize syntactic description with multiple functions. Thus, the interlinked generative steps are intertwined to use template to function model. It is perceived that there is lack of application of template to function analyzer on the Urdu nominal circumfixation. Siddiqi (2009) and Embick and Noyer (2005) point out that the application of morphosyntactic theories are seen abundantly on English. However, the Urdu nominal circumfixation has never been researched on the proposed derivational perspectives. The present scrutiny is supposed to explore new avenues in the study of the Urdu nominal complex circumfixation and its sister Indo-Aryan languages. The systematic constructions of the configurational template and demonstration of circumfixal features through MAVM are distinguishing elements and prime significance of the study.

3. Research Objectives

This paper sets some objectives to probe various perspectives of the nominal circumfixation of Urdu. The following research objectives are perused to accomplish the study:

- i. To trace the underlying patterns of the nominal complex circumfixation of Urdu.
- ii. To demonstrate the complex circumfixation through binary branching.
- iii. To highlight functions of each morpheme of the nominal circumfixation with MAVM.

The set objectives consist of some generative steps. The first step is to trace the representative template of the nominal circumfixation. The second step is to display the constituents of the circumfixation on the binary branching to highlight morphosyntactic features. The third step

is to capture the multiple grammatical functions of each morpheme. The proposed interconnected analytical steps originate template to function analyzer and establish morphology-syntax nexus.

4. Research Questions

The research questions are presented to meet the objectives of the study. The following questions are expected to unpack the theoretical significance of the study:

- i. What are the representative patterns of the nominal circumfixation of Urdu?
- ii. How is the nominal circumfixation demonstrated through binary branching?
- iii. How does MAVM highlight multiple functions of each morpheme of the nominal circumfixation?

5. Literature Review

The analysis of most natural languages is centred on the prefixation and suffixation. On the other hand, some languages demonstrate the morphological characteristics of infix and circumfixes. However, the delimitation of the present study is unpacking the internal segmentation and functions of each morpheme concatenated as circumfixation. Some other terms are also used to refer to circumfixes. Scalise (1984) and Kari (2015) use the term parasynthesis for circumfixes. Murušič (2018) labels circumfixes with collective morphemes. Ndimele (1999) tags circumfixes alternatively with discontinuous affix. Mbah (2012) characterizes circumfixation with ambix or confix.

Circumfixes are distinct and unique in a number of ways. Alan (2004) states that a circumfix is an affix or a morpheme that is placed around another morpheme. Circumfixes contrast with prefixes, suffixes, and infixes in relation to its attachment to the root or stem. Scalise (1984) explains circumfixation as a process in which a word is derived by means of the simultaneous attachment of prefix-like and suffix-like formatives to a single base.

Murušič (2018) and Mbah (2012) hold that circumfixes have different grammatical functions. They are concatenated to achieve inflectional and derivational functions in many languages of the world. The derivational circumfixes are traced in Japanese, Degema, Malay-Indonesia, and Tagalog languages. Boeckx (2004) points out the honorific circumfix *o-...-ni naru* and *o-...-suru* in Japanese. The adjectival constructions *oyomini naru* (respectful) and *oyomisuru* (humble) are derived from the root *yomi*. Kari (2015) points out the agentive circumfixes *o-...-(a)m*, *o-...-m*, *o-...-ə*, and *ɔ-...-ám* in Degema, spoken in Southeastern Nigeria, to derive agentive nominals from verbal roots. The agentive nominal *ɔkelám* 'beginner' is derived from the verb *kel* 'begin'. In Malay-Indonesia, the circumfixes *se-...-nya* and *ke-...-an* are used to derive adverbs and adjectives respectively. The adverb *sebenarnya* 'actually' is derived from the adjective *benar* 'true' and *kebaikan* 'kindness' is derived from the adjective *baik* 'good, kind'. Lieber (2018) brings to the surface the circumfix *ka-...-an* to create collective nouns in Tagalog e.g., *kaintsikan* 'the Chinese' is formed from *intsik* 'Chinese person'.

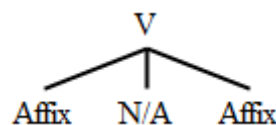
Apart from derivational circumfixation, the inflectional circumfixation are also traced in Berber, Guaraní, Arabic, German, Chickasaw, Dutch, and Igbo languages. Zerrouki and Balla (2009) explain circumfix in Berber languages with the feminine marker *t-...-t* in the construction of *tafust* derived from the root *afus* (hand). They, furthermore, exemplify the

negation in Guaraní with the help of circumfixes *nd-...-i* and *nd-...-mo'ãi* for future negations. In Arabic, the inflectional circumfix *y-...-on* is used in the tense conjugation like *yktubon* (They write). The Guaraní language uses *nd-...-i* for negation and *nd-...-mo'ãi* is used for future negations. Alan (2004) highlights circumfixation with *ge-...-ne* for the German past participle. The derivation of the past participle *gedrunken* 'drunk' is triggered from the verb *drunk* 'drink' with the help of simultaneous attachment of two parts of circumfix *ge-...-ne*. Fromkin et al. (2007) explain the circumfix *ik-...-o* in Chickasaw, a language spoken in Oklahoma, to generate negatives. Its attachment brings phonological change to drop the final vowel of the base e.g., *ikpallo* 'it isn't hot' is derived from *palli* 'it is hot' by dropping its ultimate vowel. The inflectional circumfix *ge-...-te* is used as a plural marker in Dutch. The plural *gebergte* 'mountains' is formed with the nominal root *berg* 'mountain' and the plural circumfix *ge-...-b*. In Igbo, Anagbogu et al. (2010) highlights the circumfixation with the help of the circumfix *à-...-m*. This frame is used to derive gerundives from the verbs e.g., *àzàm* 'sweeping' is derived from *zà* 'sweep'.

In the analysis of the morphemic segmentation of some structures of the circumfixation, an important question arises whether the circumfixal structure is analyzable on hierarchical trees with binary branching. Binary branching forms the fundamental operation of merge in the Minimalist Program (Chomsky, 1995). Kayne (1994) takes binary branching as transitive, anti-symmetrical and total. The argument of Schultink (1987) is taken a point of departure, who states that circumfixation violates the constraint on binary branching because its circumfixal elements occur at the beginning and the end of the word, which hosts it.

Culicover and Jackendoff (2005) present a comprehensive theory *The Simpler Syntax Hypothesis*, which proposes an alternative mechanism to mainstream generative grammar e.g., Minimalism. They oppose binary branching and assert that reducing the number of nodes requires more branching possibilities. To meet the structural need of circumfixation, Serrano-Dolader (1999) puts forward a ternary-branching proposal for the circumfixal derivation, which is as follows:

5.1



Guevara (2007) states that the ternary-branching structure has a little explanatory power. It contains concomitant affixation, and it is not clear whether the affixes form a constituent or not. Contra Serrano-Dolader (1999), some morphologists Strauss and Corbin (1990) and Scalise (1984) view parasynthetic derivations as binary structures. Guevara (2007) holds that many morphologists use the terms parasynthesis and circumfixation as synonyms because of the simultaneous attachment of two morphological elements, one to the left and other one to the right of the base. In the light of the above arguments, the circumfixal derivatives can be displayed with binary branching trees despite having two parts of the circumfixes.

In the brief literature review, it is noticed that the above mentioned derivational and inflectional circumfixal perspectives do not bring in focus the issue of free-standing part of circumfixes. This research gap is expected to fill in by highlighting the circumfixation in

Urdu and other Indo-Aryan languages because sister languages are the continuation of the same ancestors.

6. Theoretical Framework

Theoretical underpinning investigates three generative perspectives of the nominal complex circumfixation. The first perspective examines the structures of the nominal circumfixation. This generative step proposes the representative template to generalize to the other nominal circumfixal constructions. This step is meant to capture the underlying representative rule of the nominal circumfixation. The proposed structure of the circumfixation is supported with the complex derivatives. The second step is to demonstrate hierarchical features of the nominal circumfixation through binary branching. This step leads to the point that the derivational process of the complex derivatives is syntactic. The third aspect is to elaborate functionality of each morpheme of the circumfixation. The proposed formalism of MAVM derived from LFG is used to highlight the embedded features of the circumfixation. MAVM traces multiple functions of each morpheme and highlights them in f-structure and its inner sub-matrixes in attribute-value pairs.

The proposed analytical steps are expected to support one another in relation to morphology-syntax nexus. The structural analysis elaborates the internal segmentation, positional, and configurational features. The binary branching morphological trees magnify the embedded features of each node and hierarchical characteristics. The functional analysis through MAVM brings to the surface the multiple features overlooked by the structural perspectives. The proposed steps are complement to one another. The analytical steps, as proposed earlier, lay the foundation of template to function model. This model is assumed workable to meet the objectives of the study. With the help of the proposed theoretical procedures, this paper examines the nominal circumfixation in the lens of morphology-syntax nexus.

7. Methodology

The present work is descriptive accomplished in the paradigm of qualitative research. It uses purposive sampling technique to trace and elaborate the nominal complex circumfixation. The inflectional circumfixation is not the part of discussion. The configuration and category features of the roots and discontinuous circumfixes are analyzed. It is analyzed whether X or Y free-standing part of circumfix is evident in Urdu. From the print dictionaries *Feroz-ul-Lughat Jame New Edition*, and *Ilmi Urdu Lughat Jame*, the nominal circumfixes are ransacked and enlisted. The features and etymology of each marker is planned to elaborate in the data analysis. Online dictionaries and a thesaurus including *Urdu Lughat*, (<http://www.udb.gov.pk/>), *Urdu Lughat* (<http://urdulughat.info/>), *Kitab-o-Qafia* (<https://www.docdroid.net/rdHlIwO/kitab-e-qafia-january-2016-pdf>), and *Urdu Thesaurus* (<https://urduthesaurus.com/>) are consulted for circumfixes, meanings, transcriptions, and etymology. Tree Editor, version 0.9.0.3, is used to present the constituents of circumfixation with binary branching complex morphological trees.

8. Data Analysis

This section investigates and exemplifies the nominal complex circumfixation in Urdu. The core purpose of this section is to probe the structural, hierarchical, and functional perspective of the circumfixation through the lens of generative approach. These perspectives are set to

meet the objectives of the study. The first step comprises the representative template of the nominal circumfixation with the projection of root and circumfixal attachment. The proposed template is supported with the tabular data to generalize the structure. The second step presents the constituents of the circumfixation with tree diagrams to distinguish them in various ecologies. The pictorial presentation of the bottom-up analysis makes the morphemic segmentation and the hierarchy of constituents of the circumfixation easy to understand. The third step is to capture the functionality of each morpheme with the proposed formalism of MAVM through f-structures. The template to function model works in line with the proposed steps to scrutinize the nominal circumfixation in morphology-syntax nexus.

In Urdu, the derivation with circumfixes contributes to generate the nominal or the adjectival complex derivatives. Thus, the use of circumfixes comes out to be either category- changing or category-maintaining derivational morphemes. The nominal derivational examples and configurational template of the Urdu circumfixation are given below:

$$8.1. N \rightarrow [N^{circ.1}] N^r [N^{circ.2}]$$

The proposed Template represents the morphological strand of the Urdu nominal circumfixation. It starts its derivation from noun. Two parts of circumfix are simultaneously added to the root to derive a nominal complex derivative of circumfixation. Some nominal circumfixal derivatives are given in the following Table to generalize the proposed Template on Urdu:

Table 1: Some Nominal Circumfixation Conforming to the Proposed Template

$N^{circ.1}$	Roots (N)	$N^{circ.2}$	Nominal Circumfixal Derivatives
ḡo:- ‘two’	ʃa:l ‘shawl’	-a	ḡo:ʃa:la ‘double folded shawl’
ḡo:- ‘two’	a:b ‘water’	-a	ḡo:a:ba ‘land between two rivers’
ḡo:- ‘two’	ra:h ‘way’	-a	ḡo:ra:ha ‘two-sided way’
ḡo:- ‘two’	bəld ‘ox’	-a	ḡo:bəlda ‘a cart of two oxen’
ḡo:- ‘two’	rəŋ ‘colour’	-i	ḡo:rəŋi ‘hypocrisy’
seh- ‘three’	yəzəl ‘ode’	-a	sehyəzəla ‘three odes’
seh- ‘three’	bərg ‘petal’	-a	sehbərga ‘a flower of three petals’
seh- ‘three’	həḍ ‘boundary’	-a	sehhəḍa ‘a place of three boundaries’
seh- ‘three’	bənd ‘close’	-i	sehbəndi ‘payment of three months’
tʃo:- ‘four’	ra:h ‘way’	-a	tʃo:ra:ha ‘crossroad’
tʃo:- ‘four’	mi:x ‘nail’	-a	tʃo:mi:xa ‘punishment by nailing’
pəndʒ- ‘five’	ʃa:x ‘branch’	-a	pəndʒʃa:xa ‘chandelier with five branches’

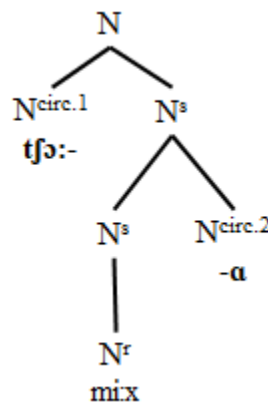
In the nominal complex derivatives given in Table 1, there are nominal roots in-between positions surrounded by the nominal circumfixes of the circumfixation. In the nominal complex structures of **ḡo:a:ba** ‘land between two rivers’, **ḡo:ra:ha** ‘two-sided way’, **ḡo:ʃa:la** ‘double folded shawl’, **ḡo:bəlda** ‘a cart of two oxen’, **ḡo:rəŋi** ‘hypocrisy’, and **pəndʒʃa:xa** ‘chandelier with five branches’, the first parts of circumfixes **ḡo:** ‘two’ and **pəndʒ** ‘five’ are free-standing morphemes. They are also cardinal numbers. These examples support the study of Klegr (2018) who exemplifies the Czech morphological theory with one free standing *Y* part of circumfixation. Contrary to the Czech example, the Urdu circumfixation exhibits *X*

circumfixal part as a free-standing morpheme. It is noted that no second affix is found to be free-standing in the above derivatives.

In the analysis of circumfixation, an important question crops up whether the circumfixal structure is analyzable on hierarchical trees with binary branching. Although for claims, as put forward by Guevara (2007), Strauss & Corbin (1990), Scalise (1984), and counter claims, as presented by Schultink (1987), Culicover and Jackendoff (2005), and Serrano-Dolader (1999) are examined, yet the notion of *Binary Branching Hypothesis*, a fundamental operation of merge in the Minimalist Program (Chomsky, 1995), is still considered the reference against the other emerging theories.

The nominal complex derivative *tfo:mi:xa* ‘punishment by nailing’ is taken to analyze the embedded features and formation of the circumfixation. The present section strives to highlight the hierarchical protocol. The two parts of circumfix *tfo:-* ‘denoting four’ ($N^{circ.1}$) and *-a* ($N^{circ.2}$) are added simultaneously to the nominal root *mi:x* ‘nail’. The constituents of the proposed Template are demonstrated with the following tree diagram of *tfo:mi:xa* ‘punishment by nailing’ (N) to unpack the morphosyntactic features:

8.2



Tree Diagram 8.2 presents the pictorial presentation and hierarchical perspectives of *tfo:mi:xa* ‘punishment by nailing’ (N). Since morphological structures are syntactic, the above construction demonstrates the projection of endocentricity. Carstairs-McCarthy (2002) maintains that an affix determines the category of the whole word, so counts as its head. In phrase structure grammar, the syntactic projections are named after the category of the head i.e. N is the head of NP, A is the head of AP etc. Similarly, the morphological structures are endocentric and the head projects the ultimate category to the complex structure. Thus, the circumfix *tfo:-...-a* (N^{af}) counts as head of the complex construction *tfo:mi:xa* ‘punishment by nailing’ (N). Moreover, the given construction follows the locality condition and allows the local morphemes to attach first. The nominal root *mi:x* ‘nail’ and the nominal circumfix *tfo:-...-a* (N^{af}) are tied in the government and binding relation.

It is noted that each morpheme or complex morpheme hosts multiple features in case of segmental analysis. The minimal solution of the structural complexity of circumfixes is that the constituents of circumfixes are interwoven and are attached to the root simultaneously without probing their segmental features. Thus, both parts of the circumfix and the root constitute nominal category of the complex derivative *tfo:mi:xa* ‘punishment by nailing’, and the Urdu dictionaries certify it. The same derivational mechanism is embedded in the

adjectival circumfixation. The constituents of *kālmōha* ‘black-faced’ (A) are in the same strand except the presence of the adjectival circumfix. Its strand is as follows:

$$kāl- \text{ ‘black’ } (A^{circ.1}) + mōh \text{ ‘face’ } (N) + -a (A^{circ.2}) = kālmōha \text{ ‘black-faced, cruel’ } (A)$$

The above morphological segmentation is compared to the nominal circumfixation of *tfo:mi:xa* ‘punishment by nailing’ (N), which is as follows:

$$tfo:- \text{ ‘four’ } (N^{circ.1}) + mi:x \text{ ‘nail’ } (N) + -a (N^{circ.2}) = tfo:mi:xa \text{ ‘punishment by nailing’ } (N)$$

The structural perspective leaves room for the functional perspective. It highlights the functional exposition overlooked by the structural analytical step. The functionality attached to each morpheme is examined in the following MAVM of *tfo:mi:xa* ‘punishment by nailing’ (N):

8.3

DERIV	<i>tfo:mi:xa</i> ‘punishment by nailing’	
CATEG	N	<div> <div>STR</div> <div>complex</div> </div> <div> <div>COMP</div> <div>bimorphemic</div> </div> <div> <div>NUM</div> <div>singular</div> </div> <div> <div>TYPE</div> <div>common</div> </div> <div> <div>CASE^M</div> <div>masculine</div> </div> <div> <div>ORGN</div> <div>Persian</div> </div>
ROOT	<i>mi:x</i> ‘nail’ (N)	
N ^{circ.1}	<i>tfo:-</i>	<div> <div>CATEG</div> <div>nominal</div> </div> <div> <div>MORPHEME</div> <div>bound</div> </div> <div> <div>C-CHANGING</div> <div>-</div> </div> <div> <div>ORGN</div> <div>native Urdu</div> </div>
N ^{circ.2}	<i>-a</i>	<div> <div>CATEG</div> <div>nominal</div> </div> <div> <div>MORPHEME</div> <div>bound</div> </div> <div> <div>C-CHANGING</div> <div>-</div> </div> <div> <div>ORGN</div> <div>native Urdu</div> </div>

The proposed formalism MAVM also captures the embedded features of circumfixation. In the nominal MAVM, the first function DERIV indicates the value of the nominal complex derivative *tfo:mi:xa* ‘punishment by nailing’. The second function CATEG has a nominal value. It has a further sub-matrix to explore morphological and syntactic aspects. The complex derivative under analysis *tfo:mi:xa* ‘punishment by nailing’ has a complex structure. Its construction is bimorphemic: *mi:x* ‘nail’ is the root, *tfo:-* ‘four’ (N^{circ.1}) and *-a* (N^{circ.2}) are two parts of the nominal circumfix. The function NUM shows that it is singular. The function TYPE shows that the derivative under analysis is a common noun. The third main function is ROOT. The root of the given derivative is *mi:x* ‘nail’, which belongs to the Persian origin. The fourth main function is N^{circ.1} *tfo:-* ‘denoting four’. Its values are given in attribute-value pairs in the sub-matrix to indicate that it is a nominal, bound, and category-maintaining part of circumfix. It belongs to the native Urdu origin. The fifth main attribute is N^{circ.2} *-a* which

is, here, the second part of the circumfix. Its values are given in attribute-value pairs in the sub-matrix. It indicates that it is a nominal, bound, and category-maintaining morpheme. It belongs to the native Urdu origin. Thus, the proposed formalism of MAVM provides a lens to magnify the morphosyntactic characteristics of the complex derivatives.

9. Conclusion

In this paper, the features of the Urdu nominal circumfixation are tried to explore. The first objective of the study pertains to the underlying pattern of the nominal circumfixation of Urdu. It is brought on the surface that the nominal circumfixes are attached to the nominal root simultaneously, as the twin parts of the same affix are interwoven in both structure and semantics. The second objective probes the projection of circumfixation through binary branching tree diagram. It is observed that the Urdu nominal circumfixation does not violate the binary branching and it can be displayed on the hierarchical trees. Furthermore, the distinct feature of the free-standing part of circumfixation is addressed and traced that the X part of Urdu nominal circumfixation is found free-standing in the complex derivational ecology. The third objective delves into stripping off the constituents of circumfixation and unpacking the functional description of each through MAVM. The proposed syntactic, morphological, semantic analyzer highlights the features left over by the structural analytical perspective. Thus, various features of the complex circumfixation make it a distinguishing category of the Urdu derivational process. It is proposed that the Urdu circumfixal features may help understand the circumfixal features of other Indo-Aryan languages because of their shared features and common ancestors.

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