A Phonological Property of Syllable Structure and Economy in Urdu: An OT Account

Mohd Hamid Raza

Aligarh Muslim University, Aligarh (U.P.)
India

Dedy Suhery

Department of English Education
IAIN Langsa Aceh

Happy Sri Rezeki Purba

Department of English Education
Muhammadiyah University of South Tapanuli, North Sumatra

Khairunnisah

Department of English Education
Muhammadiyah University of South Tapanuli, North Sumatra

Corrosponding author's Email: *Suheyassilmy@gmail.com*

R e s e a r c h   H i g h l i g h t s

Urdu is one of the Indo-Aryan bases of languages that are consisted of each other with the reference of sharing linguistic features through contact situations. It is one of the official languages out of the 22 languages in the eight schedule constitution of India. There are many assumptions to evolve the Urdu language one of them is that Urdu is derived from Saurseni Apabhramsha through the dialect prevalent around Delhi in the 12th Century. According to S.K. Chatterji (1890-1977), if there had not been such a type of settlement to the recognition of languages for serious literary purposes then it will be difficult to the development of these languages. Mahmood Khan Shirani (1880-1946) stated a hypothesis that Urdu is derived from Punjabi. It is hypothesized that Urdu is most influenced by Khari Boli, Haryanvi and Braj Bhasha that are regional dialects of Western Hindi in Uttar Pradesh, India. The objectives of this paper are to know the exact economic conditions of syllable structures in the words after the addition or elision of segments in the Urdu language. All the process of conflicts between the segments will manipulate by the help of constraint rankings in Optimality Theory (Prince and Smolensky, 1993). This study reveals the phonological properties of syllable structures and their economical observation regarding the addition and deletion of segments from the root words in Urdu. There is an explicit way to formalize the various types of syllable structures and find out the numeral categories that how much a root word can bear the load of external segments. It is the groundwork of this study that after the addition or deletion of segments from the root words, we will apply the principles of Optimality Theory to find out the exact dominating form of candidate.two broad sets of constraints in OT. They are markedness constraints and faitfulness constraints. Markedness constraints account for an input's tendency to schange its form in order become less marked. Less marked, or unmarked structures are preferred cross-linguistically (Chomsky 1981). After the implications of constraint rankings will determine one of the best candidate out of the all output candidates as an optimal candidate. In the account of the economy, how much segments are possible to the addition or deletion and what will be happening with the physical mechanism of the syllable structure of words.

_____

G r a p h i c a l   A b s t r a c t

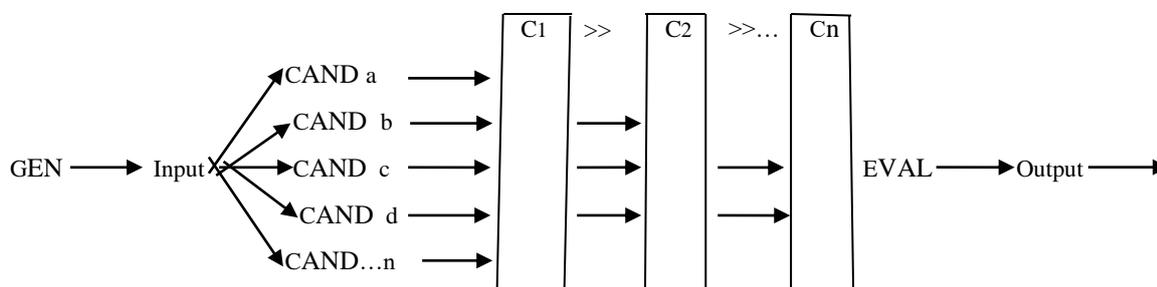Maping of input to output in OT (Kager,1999).

Fig. 1: The Interaction between Constraints and their Candidates

OT analysis of input candidate with the help of constraint rankings in the tableau

Table: 1 The Consideration of constraints and candidates with the reference of input

/input/	CONSTRAINT 1	CONSTRAINT 2	CONSTRAINT 3
a. Candidate 'a'	*!	*	*
b. Candidate 'b'		*!	
c. ☞Candidate 'c'			*

Research Objectives

The research objectives of this study are relevant to the whole phenomena of epenthesis and elision at the level of syllable structures and their economic behavior of segments in the words. There are various types of objectives, but this paper reveals some specific procedures of elements with the utilization of constraint rankings such as:

To know the typological structure of syllables after the phonological process in terms of addition and elision of elements. It is a general way to organize a well-formedness structure of words by the proper arrangement of segments in the specific environment. After all these activities the study will consider the tenets of Optimality Theory for the representation of the optimal candidate.

To investigate the grammatical and numerical properties of syllable structures just after the phonological processes. It will determine the total number of syllables within the sequence of consonant and vowel phonemes in the words whether it is monosyllabic, disyllabic or trisyllabic.

To examine the account of the segmental process in the physical mechanism of syllable structures with the concept of linguistic features. It will introduce the phonological behavior of each segment in the act of articulation and elaborated the number of tokens in a particular word.

To explore the vision of the best candidate between the input and output candidates by the help of the hierarchy of constraints. To solve the conflicts between the output candidates to the winner as an optimal candidate with the advantage of tenets of Optimality Theory. The first constraint in the hierarchy represents the dominating feature on the other constraints.

Methodology

Materials and Methods

Blaike (1981: 12-18) reveals that the sources of data used in cross-language research needs the natural settings. Further,this study takes the representation of data naturally. And then, the data collection used in this study with the different types of approaches, one of them is the 'interview'. The researchers used the interview for data collection from the native speakers of standard Urdu. This study conserves the significant features of primary data and relevant to the linguistic features of each segment that added to the root word. All native speakers were very extensive in the sense of additional properties of syllable structure and in the way of articulation of words. The material or data is absolutely the first time collected as the original form of words.

Procedures

The researchers used high quality of Tape Recorder for the collection of data and put it just approach to the mouth of the native speakers of Urdu. After data collection, the researchers transcribe it into phonemic transcription and find out the syllable structures and their economic conditions in the phonological properties of words. After that, the researcher proposed the principles of Optimality Theory to explore the optimal candidate out of the different types of the input and output candidates.

Participants

The researchers collected the data from the 20 participants and their age was between 25 to 40 as the native speakers of standard Urdu.

Asia Proceedings of Social Sciences
(APSS)
www.readersinsight.net/APSS

Results

In the data, we have analyzed that the root words consist of certain types of other segments as the form of morph that altered the whole physical mechanism and draw a new grammatical category of word.

Table 2: the phonological considerations of constraint rankings of input and output candidates

/khə.ri:d̪/	MAX-IO	DEP-IO	ALIGN-R	*VOI-CODA
a. [khə.ri:d̪.d̪a:r]		*!	*	**
b. ☐ [khə.ri:d̪]				*
a. [khə.ri:d̪.d̪a:.ri:]		*!*	**	*
b. [khə.ri:.d̪a:r]	*!	*	*	*

In table 2, the candidate 'a' is satisfied with the highest rank of constraint MAX-IO, while violated to the other higher, lower and lowest rank of constraints as DEP-IO, ALIGN-R and *VOI-CODA. So, in this context the candidate 'a' is not a winner candidate to mark the optimal candidate. The candidate 'b' is satisfied with MAX-IO, DEP-IO, and ALIGN-R, but violated to the merely one constraint *VOI-CODA, because the features of candidate 'b' are more similar to the input candidate. So, the candidate 'b' is the best candidate among the other output candidates and marked as an optimal candidate that is indicated by ☐. The candidate 'c' is satisfied only with the MAX-IO, while violated to all other constraints as DEP-IO, ALIGN-R and *VOI-CODA because the linguistic features are not similar to the input candidate to become an optimal candidate. The candidate'd' is not satisfied with a single constraint. It violated all constraints as MAX-IO, DEP-IO, ALIGN-R, and *VOI-CODA. There is not a single feature that preserves the process of input candidate to become the best candidate among the other output candidates.

OT analysis of input candidate /pər.vah/ within the hierarchy of constraint rankings

Table 3: the phonological interaction between input and output candidates

/pərvah/	MAX-IO	DEP-IO	ALIGN-R	ALIGN-L	*VOI-CODA
a. [pər.va]	*!				*
b. ☐ [pər.vah]					*
c. [be.pər.vah]		*!		*	*
d. be.pər.va.hi:		*!	*	*	*

In table 3, the candidate 'a' is satisfied with the markedness constraints as DEP-IO, ALIGN-R, and ALIGN-L, but violated to the highest and lowest rank of constraints as MAX-IO and *VOI-CODA. In this process, the candidate 'b' is not marked as an optimal candidate because of the lack of evidence related to the input candidate. The candidate 'b' is satisfied with the highest, higher and lower rank of constraints as MAX-IO, DEP-IO, ALIGN-R, and ALIGN-L, but violated to the only lowest rank of constraint *VOI-CODA. So, in this procedure, the candidate 'b' has the most analogous features related to the input candidate except voicing. It became the best candidate among the other output candidates and represented as an optimal candidate that is marked by ☐. The candidate 'c' is satisfied with the highest and higher rank of constraints as MAX-IO and ALIGN-R but violated to the other constraints as DEP-IO, ALIGN-L and *VOI-CODA. The candidate'd' is satisfied only with the highest rank of constraint MAX-IO, while violated to the all other types of constraints as DEP-IO, ALIGN-R, ALIGN-L and *VOI-CODA. So, in this phenomenon the candidate 'c' and the candidate'd' are involved within the highest rank of violations and fatal violations, to be unmarked as an optimal candidate.

Findings

In this study, we have evaluated that if any extraneous segment or syllable is added in the initial or non-initial position of a root word then it will be altered into another grammatical form in Urdu. We find out how a correspondence diagram represented the addition of segments in both right edges as well as in the left edges of the root words. We also examined how the constraints worked on the principles of OT and draw the best candidate as an optimal out of the other output candidates. We find out that a candidate is marked as an optimal candidate that has the least rank of constraints as compared to the other output candidates. Every candidate is represented within different types of constraints and one of the constraints is relevant to the highest rank of constraint that has dominant features. In table 2, the candidate 'd' and in table 3, the candidate 'a' are involved within the highest rank of constraints that cannot be never an optimal candidate because the features are far away from the input candidate.

References

Blaike, Norman. (2000). Designing Social Research:The Logic of anticipation. Polity Press.
Chatterji, S.K. (1970). *The Origin and Development of the Bengali Language.* Vol, I and II, London: George Allen & United Lid.
Chomsky, Noam (1981). Lectures on Government and Binding. Dordrecht : Foris.
Prince, A. & Smolensky, P. (1993). Optimality Theory: Constraint Interaction in Generative Grammar. Rutgers University Center for Cognitive Science Technical Report 2.
Shirani, M.K. (1870). Punjan men Urdu. Lucknow: Nasim Book Depot.