

LANGUAGE IN INDIA
Strength for Today and Bright Hope for Tomorrow
Volume 12 : 2 February 2012
ISSN 1930-2940

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An Introduction to Hindko Syllable Typology

Haroon-ur-Rashid & Ayesha Sohail

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Abstract

Hindko is one of the main native languages spoken in the focused area of Muzaffarad. This paper aims to identify the syllable typology of Hindko spoken in this area. In addition to this, it also attempts to find out the frequently used syllable templates for monosyllabic, bisyllabic and polysyllabic words. The data has been collected by asking the native speakers of Hindko to prepare the list of words that they commonly use in their real life. In order to work out the syllabification patterns, the participants were asked to pronounce the words from the prepared list. It is generally accepted that nucleus is obligatory in all languages, thus, the same is true of Hindko. The analysis indicates that Hindko treats both onset and coda as optional. Besides, the clustering phenomenon is absent at onset position while a rarity at coda position under certain conditions. This implies that Hindko does not allow the syllable templates like CCV or CCCVC where as it allows the template CVCC with certain restrictions and a limited range of occurrence. This rudimentary work can be used as a foundation to explore in depth the phonological patterns of Hindko.

Key Words: Hindko, Syllable typology, Syllable template, onset, nucleus, coda, monosyllabic, bisyllabic, polysyllabic

Introduction

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Generally, linguists identify Hindko as related to Lahnda sub group of Indo- Aryan languages that branch off Indo-Iranian languages. Under this view, Hindko belongs to Indic sub group of Indo European languages. Grierson (1916) as quoted in Rensch (1992) treated Hindko as a dialect of 'Lahnda', a term he used to refer to a sub group of languages spoken in Western Punjab and adjoining territories. According to his classification Lahnda group of languages is further divided into three sub-groups which are Southern, North-Western and North-Eastern. Hindko belongs to North-Western Lahnda group along with Dhani and Sawain. Hindko officially attained the status of a language along with Siraiki in the 1981 census (Addleton, 1986). The native speakers of Hindko are found in various parts of Pakistan, Afghanistan and India. The majority of the speakers live in Khyber Pakhtunkhwa province (KPP) of Pakistan. As far as the Jammun and Kashmir region is concerned, the Hindko speakers are found in Muzaffarabad district which is adjacent to Hazara division, KPP.

Literature Review

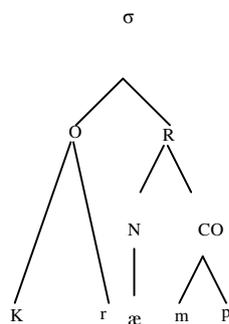
Duanmu (2008) considers the phonetic definition of the syllable as 'notoriously difficult'. Though linguists have wrestled a lot with the issue of defining a syllable yet the notion of syllable is regarded hard or difficult to define by them. But there is a consensus among them that the identification of syllables by the native speakers is an evident phenomenon. "Although everybody can identify syllables, almost nobody can define them" (Ladefoged, 2001).

The inability to define phonetically a syllable is also acknowledged by Davenport and Hannahs (2005) as 'there is no general consensus on a clear phonetic account of the syllable'. They treat syllable simply at its basic level as 'made of vowel segments' which may be preceded or followed by zero or more consonants.

Roach (2000) views the act of identification of syllables as an illustration of the importance of these in connection with speech rhythm. Though any exact phonetic definition has not been developed yet there are some definitions of the term syllable that are worth mentioning.

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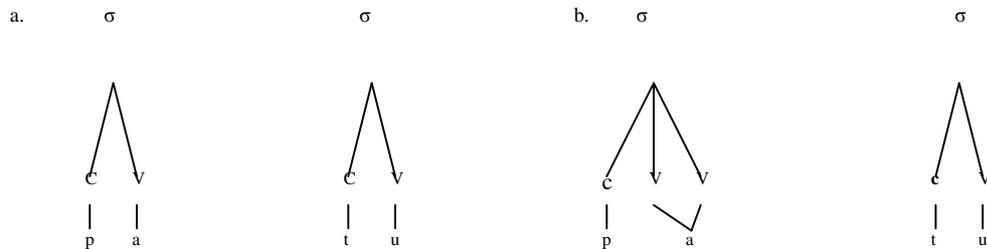
Jones (1950) considers a syllable to be a prominence peak in a word that is formed by the vowels. Stetson (1928) claims that every syllable is initiated by a chest pulse. In this sense, the muscular contraction in chest corresponds to the production of a syllable. Giegerich (2005) for the sake of description divides a syllable into two parts. These are ‘onset’ (O) and ‘rhyme’(R). The rhyme is further divided into nucleus (N) and coda (Co). Any consonant before rhyme forms the onset. The vowel in rhyme forms the nucleus and any consonant after nucleus forms coda. According to this, the word ‘cramp’ will have the following structure:



Syllables are also regarded as phonological units on the ground that these form the domain to which stress is assigned. Some syllables are stressed while others are unstressed. The importance of syllable is ‘illustrated’ by the attention paid to its writing. It happened only once in the history of mankind ‘anybody devised an alphabetic writing system in which syllables were systematically split into components’ (Ladefoged 2001). According to Ladefoged (2001), there was a modification by Greek 4000 years ago when ‘the Semitic syllabary’ was represented as ‘consonants and vowels by separate symbols’. Since then, the same convention has been prevailing.

As far as the phonological presentation is concerned, ‘segments are organized into syllables’ (Gussenhove and Jacobs, 1998) which identifies that syllables do not directly dominate segments. It means there is another level of presentation between the two. This is called ‘CV-tier’ (Gussenhove and Jacobs, 1998). It was proposed by Clements and Keyser (1983) aiming to show ‘segmental duration’ and ‘designation of syllabicity’. According to them consonants and vowels are associated with single slot where as geminate consonants and long vowels occupy

two slots at skeletal (CV) tier. For instance, the Tamil words ‘patu’ and ‘pa:tu’ (Gussenhove & Jacobs, 1998) will have the following representations respectively:



The first syllable in ‘b’ shows that it contains the long vowel /a:/, so, it is represented by linking it with two V-slots. Originally, the independent status of CV-tier was postulated by McCarthy (1980) while describing the morphology of Arabic. He found that Arabic morphemes are ‘specified in terms of strings of skeletal slots, referred to as templates’ (Gussenhove and Jacobs, 1998). Basically, McCarthy (1980) extended the model of ‘Autosegmental Phonology’, which was first proposed by Goldsmith in 1976, to describe the non-concatenative morphology of Arabic. The word ‘template’ in Phonology is used to refer to a ‘generalized phonological pattern’, like CCVC where the ‘C’ stands for ‘consonant’ and ‘V’ stands for ‘vowel’ (Carr, 2008). It is in this sense, i.e. phonological pattern; the word template is to be used in this study. This segment sequencing of syllables in Hindko will be treated as syllable templates

The examination of different languages reveals the phenomenon that different languages exhibit different syllable forms. It is generally accepted that nucleus is obligatory in all languages. As far as onset is concerned, it is optional in some languages while others require it obligatorily. However, the coda can optionally occur in many languages. The basic typology of syllable in different languages is given by Zec (2007). For details see ‘The Syllable’ by Zec (2007).

Onset	Coda	Onset cluster	Coda cluster	Inventory	Language
R	O	O	O	(C) CV(C)(C)	Totonak

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			X	(C) CV (C)	Dakota
		X	O	CV(C) (C)	Klamath
			X	CV(C)	Temiar
R	X	O	-	(C) CV	Arabela
		X	-	CV	Senufo
O	O	O	O	(C) (C) V(C)(C)	English
			X	(C) (C) V(C)	Spanish
		X	O	(C)V(C)(C)	Finnish
			X	(C) V(C)	Turkish
O	X	O	-	(C) (C) V	Pirahã
		X	-	(C) V	Fijian

R = required, O= optional, X = banned

This table shows that English exhibit onset, coda and clusters as optional. It shares this characteristic with Spanish, Finnish, and Turkish but differs in this respect from them in the choice of clusters. Turkish does not admit any type of clusters; Finnish allows only coda clusters and Spanish permits only onset cluster. In contrast, English allows both onset and coda clusters.

The basic syllable typology is the key to syllable templates as it determines the possible syllable templates. For example, English typology allows V, VC, CVC, CCVCC templates but Takota does not form VC template as onset is required, Fijian does not use CVC because coda is banned in it, Turkish syllable template cannot be CCVCC as its typology prohibits clusters both at onset and coda positions.

Methodology

In order to find out the syllable templates in Hindko, the data is collected by using the intuitive knowledge of various native speakers who were asked first to prepare lists of nouns, verbs and adjectives, which they commonly use in real life, and then to pronounce them. On the basis of

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their pronunciation, the syllables were labeled in terms of segments. Hindko native words were used as data for analysis.

Hindko Syllable Templates

Structurally, a syllable is a supra segmental unit of sounds in a language (Ladeford, 2001; Giegerich, 2005; etc). Conventionally, it is identified in templates by using the sequence of segments. The segments in a syllable are described as consonant (C) and vowel (V).

The analysis indicates that Hindko vocabulary largely consists of monosyllabic and bisyllabic words, while polysyllabic words are also found in Hindko. Usually, the polysyllabic root words are not frequently found in Hindko. The multisyllabic words are formed by affixation process on the base forms in order to derive new words or for performing grammatical functions.

Monosyllabic words

In Hindko a word may consist of a vowel only. However, the number of such words is very limited. The commonly found syllable templates are the templates with three illustrations, or those not ending with the expression 'etc.' mean they are not as productive as the templates with five examples as well as ending with the expression 'etc.' are as illustrated below:

- (1) a. V: *aa* (come), *e* (this), *o* (that).
- b. VC: *it* (brick), *od* (roof alignment), *ud* (fly), *ag* (fire), *uth* (stand), *is* (this), etc.
- c. CV: *pe* (father), *saa* (breath), *chaa* (pick up), *baa* (put) *le* (take), *cho* (oozing), etc.
- d. CVC: *Taap* (fever), *ran* (wife), *tur* (move), *took* (cut), *bad* (extra,) *gat* (less), etc.

The illustrations in (1) a-d exhibit that monosyllabic words can have four templates which are V, VC, CV and CVC respectively. As stated above, the first one is not very productive as not enough examples are found of this form. In contrast, the others are quite common and productive. However (1) b is not as productive as c and d because it is found only in those words that start either with the alphabet '*alif*' or '*ein*' such as *ag* 'fire' and *ii.waz* 'due to' respectively; because in Hindko, like Urdu, these are the potential letters to produce a vowel sound in the

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beginning of a word. On the other hand, the templates CV and CVC can be generated very productively as a bulk of alphabet are available to do so. The CVC template as shown in (1) d is the most productive one of all as it is found in nouns, verbs and adjectives such as, *bad*, *gat*, as well, while CV is usually found in nouns and verbs only.

Bisyllabic Words

The amount of bisyllabic words is quite large in Hindko and various types of templates are found in this category. For illustration see (2) below:

- (2)
- a. V.CVC: *uuper*, (up), *akhaan* (saying), *amaan* (safety), *oTaaq* (a place near roof).
 - b. VC.CVC: *atkal* (skill) *aRyal* (stubborn).
 - c. V. CV: *aaRii* (stubbornness), *oRii* (big piece of wood), *ekaa* (unity), *innun* (a ring made of the pieces of cloth), *otaa* (a place near stove).
 - d. VC.CV: *uukraa* (figure), *ithraa* (reactive), *opraa* (stranger).
 - e. CV.CV: *biiRaa* (button), *Tiiraa* (shoulder's length of a shirt) *nibaa* (meet with), *suukaa* (dry), *baataa* (strong), *lokaa* (light), etc.
 - f. CV.CVC: *maseeT* (mosque), *hoTer* (rice field), *paaTar* (big plate), *suuTar* (align), *Taaraq* (spoiled), etc.
 - g. CVC.CV: *chanTaa* (pocket), *bindaa* (small stole), *takraa* (fight), *baRkaa* (pump) , *manDaa* (bad), *ganDaa* (dirty), etc.
 - h. CVC.CVC: *makker* (pretension), *tabber* (family), *kukkaR* (peacock), *raggaR* (rub), *nukkar* (corner of a ridge), etc.

The illustrations given in (2) a-h exhibit the syllable templates found in bisyllabic words. The templates of the form mentioned in (2) a-d are not very common, on the ground as explained above i.e. the limited range of starting words with a vowel sound in Hindko; whereas the templates illustrated in (2) e-h are quite common. The analysis of Hindko vocabulary done for the identification of syllable templates lends support to this claim. All the above given illustrations in (2) a-d involve at least one syllable with the pattern either CV or CVC while (2) e-h both syllables which, in turn, indicates the frequent use of these as syllable patterns.

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Polysyllabic words

Though, usually, polysyllabic words in Hindko result due to derivational or inflectional operations, yet we find a number of polysyllabic stems consisting of base forms. The common templates in these words are shown in (3) below:

- (3) a. VC.CV.CV: *asTaawaa* (water-pot), *aaweRaa* (difficult), *angidhii* (fire cabinet), *isTarii* (iron).
b. CV.CV.CV: *paTiilaa* (big pot) *daraatii* (sickle), *saraanan* (pillow), *khanDolii* (small mattress), *paaranda* (a thread made hair binding and ornamental string), etc.
c. CVC.CV.CV: *batwaaraa* (distribution of land), *bakwaasii* (talkative), *chiRchiRaa* (angry).
d. CVC.CV.V: *baksuuuaa* (pin clip), *kaadhoaa* (an instrument).
e. CV.CVC.CV: *masallaa* (prayer sheet prepared of an animal skin), *naakhatto* (inactive).

The illustrations in (3) a-e exhibit the syllable templates found in polysyllabic words in Hindko. Among these, the most common template is the one as in (3) b. The general pattern that emerges is, to a great extent, CV and, to some extent, CVC as found in all the illustrations. A preliminary analysis of Hindko morphology reveals that there are no words consisting of four or five syllables. However, the suffixing of some inflectional morphemes to polysyllabic words as mentioned above can result in maximum four syllables like *paa.Tii.lii* ‘small pot’ a singular noun becomes *paa.Tii.lii.yan* ‘small pots’ plural as this forms the template CV.CV.CV.CV. Most interestingly, the multisyllable words of this kind consist of the template CV.CV.CV.CV. The data suggests that the high number of syllables with CV combination is found in polysyllabic words.

Consonant clusters

Consonant cluster also known as a ‘consonant blend’ is defined as a ‘combination of two or more consonants that contain no intervening vowel’ (Sadanand & Kala, 2006). Many languages of the world allow consonant clusters at both onset as well as coda positions.

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Consonant cluster is a rarity in Hindko. Hindko does not seem to allow consonant clustering at pre vowel position. However, it does so at the coda position as illustrated in (4) below:

- (4) a. *gamand* (pride), *mund* (beginning), *tund* (curve) *band* (distribution), *chand* (pain), etc.
b. *kanD*(wall), *banD* (close), *ganD* (garbage), *TanD* (relation), *manDDaa* (unattractive), etc.

The illustrations in (4) a-b show that coda clusters in Hindko are possible; which are /nd/ and /nd̥/ respectively. The former is a combination of alveolar + alveolar consonants and the latter is alveolar + dental. This shows that clustering in Hindko has to obey certain constraint. Thus, applying the classification of sounds according to active articulator, if both consonants are coronal the cluster is formed otherwise not. This means Hindko does not allow combinations like coronal + dorsal or coronal + labial or dorsal + labial. The clusters as mentioned above indicate that the syllable template CVCC is also found in Hindko. Though it is not very common but occurs under certain conditions as stated above for coda clusters.

Gemination

This phenomenon (germination) has several applications in Hindko and can be discussed in great detail but the discussion is limited in this work to its impact on syllable patterns. Gemination is a process by which ‘a single, non-geminate, consonant undergoes lengthening to become a geminate consonant’ (Carr, 2008). Thus, a geminate is ‘a long, or double, sound, normally a consonant’. For representation geminates are linked to ‘two skeletal slots or two moraic positions in syllable structure’ (Carr, 2008). The occurrence of a geminate in a morpheme is called ‘true geminate’ and across a morpheme boundary is called ‘fake geminate’. The latter is widespread in Hindko language. There is a large number of bisyllabic words where the consonant in coda of the first syllable becomes the onset of the second syllable due to gemination. This pattern is shown in (5):

- (5) a. *bəttāa* (stone), *bʊt̪t̪ii* (target), *mʊkkaa* (fist), etc.
b. *ʊt̪t̪faa* (height), *ənnan* (blind), *gillii* (wet) etc.
c. *əttā* (Should I build wall?), *d əssī* (will tell), *k əddo* (take out) etc.

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The illustrations contain in (5) nouns, b adjectives and c verbs. In all these examples germination is taking place as the consonant in the coda of the first syllable is given length or doubled and becomes the onset of the next syllable. This condition can be stated as below:

If the first syllable is CVC or VC, with a short vowel and the next syllable contains only a vowel then gemination takes place.

This condition applies to base forms as illustrated in (5) a-b as well as to the concatenation process which is applied to bases for different inflectional purposes as illustrated in (5) c. For instance, /ət/ is the imperative base which becomes an interrogative form /əttā/ when the morpheme ‘ā’ attaches to it. In case there is a long vowel in the first syllable or the second syllable has a different consonant in the onset position then gemination will not take place as in /baataa/ ‘strong’ and /bakraa/ ‘male goat’ respectively. The gemination results in addition of a ‘C’ segment in the second syllable as the templates are either VC.CV or CVC.CV in the above given data in (5) a-c; the ‘C’ in the second syllable is the geminate as in the word /əttā/.

Conclusion

The discussion above shows that in Hindko a syllable maximally is (C) V (C) (C) and minimally V. It means a syllable may have a simple onset or no onset. In rhyme constituent, the nucleus is obligatory and the coda is optional and can have zero consonant or maximum two consonants. As far as the clusters are concerned, these are banned at onset position while optional at coda position. Hence, the syllable typology of Hindko is as tabulated below:

Onset	Coda	Onset cluster	Coda cluster	Inventory
O	O	X	O	(C) V(C)(C)

This table exhibits the total resemblance of Hindko syllable typology with Finnish as mentioned above in the table given by Zec (2007). However, it differs from other languages, like English, Turkish, etc. The difference between English and Hindko is that the former allows both onset and coda clusters optionally while the latter bans onset clusters while admits some coda clusters as optional.

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The overall identified syllable patterns of Hindko are as:

- I. V
- II. VC
- III. CV
- IV. CVC
- V. CVCC

The preliminary analysis of Hindko vocabulary, which is done for finding out syllable templates, reveals that the most common syllable templates are CV and CVC while the less common are V and VC. The CVCC pattern is the least common one. The syllable templates in Hindko for different types of words in terms of number of syllables are as given below:

Monosyllabic:	CV and CVC
Bisyllabic:	CV.CVC and CVC.CV
Polysyllabic:	CV.CV.CV.

Keeping in view the data given in 1 to 5 and the discussion, it can be concluded that the most frequently used syllable pattern in Hindko is CVC as in Urdu (Alam, 1997). The nucleus (V) is obligatory while onset (C) and coda (C) are optional. As a whole, the syllable typology of Hindko is (C) V (C) (C).

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