Vowel Deletion in Àbèsàbèsì
A Case Study of Èkìròmì

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Abstract

Àbèsàbèsì[4] is an endangered Nigerian language spoken in nine settlements within the Akoko North East and Akoko North West Local Government Areas (LGA) of Ondo State by an estimated total of less than 7,000 speakers. In this language, as in many other Benue-Congo languages, it is a common case that two vowels meet across a word boundary. Among different phonological processes that are triggered by the occurrence of two sounds at morphological boundary are: segment harmony, deletion/elision, assimilation dissimilation, coalescence, velarization and palatalization. This paper investigates the phenomenon of vowel deletion in Àbèsàbèsì for an insight into the $V_1 \# V_2$ vowel deletion in the language. Data collection adopts a participatory model. The paper attempts a descriptive and rule base account of the types of vowel deletion the language attests. For a better understanding of the segment behaviour, Data collection and presentation is limited to the Èkìròmì dialect as spoken in Ìkáràm. Èkìròmì attests two types of $V_1 \# V_2$ vowel deletion and certain environments where no vowel deletion takes place. This paper attempts to clarify the distributional properties of these two types of vowel deletion and to explain the cases where no deletion takes place. It shows that $V_1 \# V_2$ vowel deletion, in most cases, affects the first of two consecutive vowels (V_1) and proposes an explanation of the few cases, where the second vowel (V_2) is affected.

Keywords: Àbèsàbèsì, Èkiròmì, Benue-Congo, Phonology, Vowel, Deletion.

Introduction

Vowel deletion is a well-attested process within the Benue-Congo language family, being a means to reduce the amount of syllables and to maintain the rather rigid CV syllable structures predominant in the family. This study investigates the different types of vowel deletion in Èkìròmì, a dialect of the Àbe`sàbèsì language spoken in the Akoko mountains of Ondo state, Nigeria. The researchers limit the scope to this dialect in order to be able to carry out an in-depth analysis. Apart from the typical vowel deletion triggered by two vowels meeting across a word boundary (henceforth $V_1 \# V_2$), Èkìròmì also attests word final vowel deletion if a word is located at a syntactic boundary or uttered in isolation.

Data used for this research is drawn from authors' documentation corpus and a rich corpus gathered in about ten years by the lead researcher and various undergraduate students of the Department of Linguistics and Languages, of the home University. The data is evaluated using a descriptive method, while the distribution of the vowel deletion types is explained using a rule based approach.

After introducing the language and the dialect of interest, section 2 contains a description of the phonology in Èkìròmì and a summary of existing research on the dialect. While section 3 defines vowel deletion, section 4 presents data on the different domains of vowel deletion in Èkìròmì. Section 5which is the concluding section, discusses the different vowel deletion types discovered in the data and analyses their distribution using rule base approach.

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[4]Àbèsàbèsìis known as Akpes in literature and has the ISO-639-3 code ibe and the Glottolog code akpe1248.

1.1 Literature Review

This sections reviews available relevant literature. The section is divided to sub-sections for better understanding of the discussion.

1   Àbèsàbèsì

Àbèsàbèsì is spoken in eight communities in Àkókó North West and one community in Àkókó North East Local Government Areas of Ondo State, Nigeria, by an estimated amount of less than 7,000 speakers[5]. The inhabitants of these settlements are predominantly farmers. Intergenerational transmission fails to take place(Agoyi 2014:4)and language attitudes , especially among young speakers , reveal a preference of speaking the dominant language in the area , Yorùbá (Agoyi 2008:2–4).These factors cause high endangerment of the language. Yorùbá and English are used as languages of instruction in schools and for officialengagements. Adults useÀbèsàbèsì to communicate at home and in all informal occasions while Yorùbá or Nigerian Pidgin English is used to communicate with youths and children. The Àbèsàbèsì communities are in direct vicinity of communities speaking the Akokoid languages: Àhàn, Ayere, Ukaan and the Owé dialect of Yorùbá. Genetically, the language has long been classified as an independent branch of the Benue-Congo family (Williamson & Blench 2000) within the Niger-Congo phylum. However, Elugbe (2012) proposes Akedoid as a branch of the Benue-Congo family, suggesting that Àbèsàbèsì and Ukaan are earlier branches of what is now the Edoid languages. As for the internal classification, Agoyi (2008) distinguishes for dialects: Akpes spoken in Àkùnnù and Ìlúdùn, Èkiròmì spoken in Ìkáràm and Àsẹ̀, Ìluẹni spoken in Ìbaràmù, Ìyànì and Gèdègédé and Ọṣùgù spoken in Èṣùkù and Dája.

2   Èkìròmì

As mentioned in the preceding section, Èkìròmìis one of the Àbèsàbèsì dialects spoken in Àsẹ̀ and Ìkáràmin the northern part of Ondo State, Nigeria. While Ìkáràm is a town with around 5000 inhabitants, Àsẹ̀ is a small farm settlement with only less than   80 inhabitants situated about three kilometres east of I ˋkáràm (Chovwen et al. 2009:10). Inhabitants of Ìkáràm refer to their language as Èkìròm(ì), while those of Àsẹ̀ refer to theirs as Ekiròm . This research , however, is solely based on language data recorded in I   ˋkáràm. The following section gives an overview of the phonology in Èkìròmì, while summarizing existing research on the dialect.

Èkìròmì Phonology

Èkìròmì attests a total of36 phonemes, of which 22 are consonants and 7oral vowels.

Plosives	p b		t d			k g	kp gb	
Nasals	m		n		ɲ	ŋ		
Fricatives		f	s	ʃ				h
Affricates				tʃ dʒ				
Trill			r					
Lateral			l					
Approximants					J		w	

Table 1: Èkìròmì consonants

	front	centre	back
High	i		u
Mid	e		o
open-mid	ɛ		ɔ
Low		a	

Table 2: Èkìròmì vowels

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[5] Taking the inhabitant numbers of five communities given by a paper produced within the Millennium Villages Project (Chovwen et al. 2009:10), adding an estimated 800 inhabitants for Akunnu and a third of the population of Ajowa for the three Àbèsàbèsì-speaking communities of the nine communities within Ajowa, results in a total of 10664 people. Assuming a general percentage of 60% speakers across all communities, 6398 speakers are estimated.

Moreover, our data reveals a number of labialized consonants. Raji(1986), the first researcher working on Èkìròmì, mentions labialization and lists the following labialized consonants: /bʷ,tʷ, dʷ, kʷ, gʷ,fʷ, ʃʷ, hʷ,tʃʷ,jʷ/. Agoyi (1997) argues that labialization is caused by a deleted rounded vowel following the consonant. As this phenomenon cannot be discussed in this paper, we will not decide on the phonemic nature of these labialized consonants. Lau's (2019) corpus attests a few cases of palatalized consonants. No research has been undertaken so far and palatalization as a productive feature remains questionable.

Another phonological process, which all Àbèsàbèsì dialects attest, is vowel harmony. Agoyi (2008, 2012) has done extensive research on the topic and mentions different vowel harmony types in the dialects. Èkìròmì attests one vowel harmony type solely controlled by the ATR feature and one type controlled by the ATR and the roundedness feature. The tone system of all Àbèsàbèsì dialects consist of three tones register tones (high, mid, low). Agoyi and Emmanuel (in preparation) have been working on the tone system and add a falling tone to the three register tones.

There has been little research on vowel deletion in Àbèsàbèsì. Elugbe (2012)suggests word final vowel deletion of /i/ and /u/ in a rather short remark to explain the coda consonants and thereby strengthen his argument of a genetic relationship between Àbèsàbèsì and the Edoid languages. A similar claim he had posited before in Elugbe(1989). Agoyi (2015) proposes an optimality account of the syllable structure in Àbèsàbèsì and likewise explains the phonetic coda consonants by assuming an underlying vowel that has been deleted. This process will be referred to as word-final vowel deletion. V_1 # V_2 vowel deletion, on the other hand, has not yet been investigated.

Vowel Deletion

Vowel deletion is "another common process in the languages of the word that involves the loss of a segment under specifically imposed conditions"(Oyebade 2008:69). The process can affect any segment: consonants, vowels or suprasegmental phonemes (Oyebade 2001; Oyelaran 1972). The deletion of vowels specifically is called elision. In the following sections, we want to investigate V_1 # V_2 vowel deletion in Èkìròmì. We will start by presenting the different domains in which vowel deletion occurs. After that, we will distinguish the different types of vowel deletion. Finally, we will derive the rules determining the vowel deletion type.

Vowel Deletion Across the Grammatical Domains   3

Vowel deletion in Èkìròmì can generally occur, wherever two vowels meet across morpheme boundaries. As Èkìròmì attests a general distinction between verbs and nouns – with verbs starting with a consonant and nouns starting with a vowel, typical V # V occurrences can be found in the following grammatical domains:

Noun Phrase
- Noun + Nominal[6]
  Verb Phrase
- Verb + Nominal
- Pronoun + Nominal (in ditransitive constructions)
  Others
- Relativizer + Nominal
- Focus Particle + Nominal
- Interrogative Pronoun + Nominal

Additionally, Èkìròmì attests word-final vowel deletion. This phenomenon has already been described and analysed by Agoyi (2015).

Noun Phrases

Vowel deletion in noun phrases occurs when a noun is followed by another noun, a pronominal, numeral or adjective. Nouns can follow nouns to function as an attribute or to form a compound with the other noun. Data set 1) shows several noun + noun constructions, with all possible vowel qualities for V_1 except /u/.

It can be seen that it is always the first of two colliding vowels that is deleted. The last column shows the quality of the first vowel respectively.

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[6]Nominal is used here to encompass all kind of noun-like words that start with a vowel. These include categories that are traditionally referred to as nouns, pronouns, numerals, adjectives

								V₁

1

| | | | | | | | | V_1 |

a) afa   +   oɲó-no   →   afoɲóno   /a/
    book   wife-my   my wife's book

b) ɛ̀gɛ̀   +   iʃo   →   ɛ̀giʃo   /ɛ/
    door   house   door of the house

c) áje   +   ɛna   →   ájɛna   /e/
    mother   cow   mother of the cow

d) òli   +   ɔsɛ́-na   →   òlɔ̀sɛ́na   /i/
    cloth   father-my   my father's cloth

e) atɔ   +   iʃo   →   atíʃo   /ɔ/
    floor   house   flor of the house

f) ajo   +   áje-no   →   ajájéno   /o/
    eye   mother-my   my mother's eye

Other nominals modifying a noun behave exactly like nouns modifying nouns. The same kind of V₁ deletion can be observed. These nominals can be numerals (2a-b), demonstratives (2c-f) or adjectives (2g-h).

2

a) ɔnĩ   +   ekĩ   →   ɔnekĩ
    person   one/INDF   one/a person

b) iʃo   +   íʃon   →   iʃíʃon
    house   five   five houses

c) òwò   +   èéni   →   òwèéni
    hoe   this   this hoe

d) òli   +   ɛdɛ́n   →   òlɛ̀dɛ́n
    cloth   that   that cloth

e) anĩ   +   ìdín   →   anĩdín
    people   these   these people

f) anĩ   +   ìdɛ́n   →   anĩdɛ́n
    people   those   those people

g) ɔnĩ   +   ɛŋã̃   →   ɔnɛ̃ŋã̃
    person   new   stranger

h) ɔhunɛ̃   +   idug   →   ɔhunĩdug
    tree   PL\big   big trees

Noun + nominal constructions with /u/ as the first vowel, however, display a minor deviation from that pattern. Data set 3 shows constructions with /u/ as V₁ and changing V₂ values that are noted in the last column.[7] The mentioned deviation can be found in 3d) where the second of the two vowels is deleted instead of the first one. This occurs in a construction, where V₂ has the value /i/. Other constructions with /u/ as V₁ and /i/ as V₂ are given in data set 4. All attest the V₂ deletion. This V₂ deletion seems to only be triggered by /u/ as V₁.

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[7] Note that V₂ can never be /u/, as Èkìròm does not allow words to start with a /u/. Moreover, a deleted /u/ in V₁ position often results in the labialization of the preceding vowel, unless the second vowel is rounded.

Other vowels as V₁ in combination with /i/ as V₂ do not result in a V₂deletion (cf. 1b), 1e), 2b), 2e), 2f), 2h)). This weakens possible claims of /i/ generally being a 'weak' vowel that tends to be deleted – as it is attested in Yorùbá (Abiodun 2004).

V_2

3

a)	onũ	+	ájé-nõ	→	onʷájénõ		/a/
	mouth		mother-my		my mother's mouth		
b)	onũ	+	ɛnã	→	onʷɛnã		/ɛ/
	mouth		cow		the cow's mouth		
c)	onũ	+	ebo	→	Onẽbo		/e/
	mouth		dog		dog's mouth		
d)	onũ	+	iɲĩ	→	onũɲĩ		/i/
	mouth		water		water side		
g)	onũ	+	ɔ`sɛ́-nã	→	onɔ̃sɛnã		/ɔ/
	mouth		father-my		my father's mouth		
f)	onũ	+	oɲó-nõ	→	onõɲõnõ		/o/
	mouth		wife-my		my wife's mouth		

4

a)	òkú	+	inĩŋ	→	òkúnĩŋ		/i/
	all		thing		everything		
b)	òkú	+	igʷi	→	òkúgʷi		/i/
	all		material		all materials		
c)	ìtù	+	ilibɔ́	→	ìtùlibɔ́		/i/
	heap		cassava		cassava heap		

Out of the eight possessive pronouns in Èkìròm, five start with a vowel, which means they could theoretically also trigger vowel deletion. These are: 3SG.HUM 'u', 3SG.NHUM 'ɛ', 1PL 'ès', 2PL 'èn', and 3PL.NHUM 'i'. Examples for noun + pronoun constructions are displayed in dataset 5.

5

a)	òdè	+	u	→	òdèu		
	stool		her/his		her/his stool		
b)	òli	+	u	→	Òlúu		
	cloth		her/his		her/his cloth		
c)	iʃo	+	ɛ	→	iʃɛ / iʃɛ ɛ[8]		
	house		it		its house		
d)	iʃomo	+	ès	→	iʃomes	/o/	
	farm		our		our farm		
e)	atʃi	+	èn	→	atʃèn`	/i/	
	egg		your (PL)		your eggs		
f)	iʃo	+	i	→	iʃí / iʃii	/o/	
	house		their (NHUM)		their house		

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[8]In careful speech, speakers actually produce a version that attests no deletion but a full assimilation of the first vowel. The same holds for 5f)

Data set 5 reveals small differences to other noun + nominal constructions. The 3SG.HUM pronoun (5a-b) does not show any vowel deletion. Either, it is just concatenated to the noun, or an assimilation of V_1 takes place. The 3SG.NHUM and 3PL.NHUM pronouns (5c and 5f) trigger a deletion of V_1 or merely a full assimilation. The 1PL and 2PL pronouns (5d-e), on the other hand cause a regular V_1 deletion.

Regarding the V_2 deletion we discovered in data sets 3 and 4, the only pronoun to trigger a collision of /u/ and /i/ would be the 3PL.NHUM pronoun 'i'. Data set 6 shows, neither assimilation nor a vowel deletion occurs, when nouns ending in /u/ combine with the 3PL.NHUM pronoun. The expected V_2 deletion that has been shown to occur between /u/ and /i/ would result in the deletion of /i/. This would in fact delete the entire segmental material of the pronoun and in most cases leave no traces. The lack of deletion is thus necessary to protect the pronoun altogether.

6

a)	onu	+	i	→	Onũi	*del[9]	
	mouth		their (NHUM)		their mouths		
b)	okú	+	i	→	òkúi*del		
	all		their (NHUM)		all of them		

Verb Phrases 1.3

Vowel deletion in verb phrases can be observed when a noun follows a transitive verb. As most verbs end in a vowel and all nouns except for a few loan words start with a noun, this process occurs frequently. The verb + noun constructions in the following data set 7 show the same pattern of vowel deletion within noun phrases: We encounter solely V_1 deletion if V_1 is one of the vowels /a, ɛ, e, i, ɔ, o/.

7 V_1

a)	sà	+	okpo	→	sòkpo	/a/
	know		way		know the way	
b)	tʃɛ̀rɛ̀	+	ɔnĩ	→	tʃɛ̀rɔnĩ	/ɛ/
	repair		person		door of the house	
c)	de	+	ɛnãm	→	dɛnãm	/e/
	buy		meat		buy meat	
d)	tʃi	+	oɲõ	→	tʃoɲõ	/i/
	have		wife		have a wife	
e)	lɔ	+	ísaj	→	lísaj	/ɔ/
	throw		stone		throw stone	
f)	logìnõ	+	ɛmũ	→	lògìnɛ̃mũ	/o/
	destroy		money		waste money	

Verb + noun constructions also attest V_2 deletion at the collision of /u/ and /i/. Data set 8 displays verbs ending in /u/ followed by nouns starting with vowels of different qualities. V_2 can be seen in the last column. The V_2 deletion occurs in 8d). Other examples of /u/#/i/ collision in verb + noun constructions can be seen in data set 9.

V_2

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[9] *del implies that deletion is not allowed in the structure domain.

8

   a)   ju   +   ájé-no   →   Jájéno   /a/
        bury   mother-my   bury my mother

   b)   hu   +   ɛbʷɨj   →   hʷɛbij   /ɛ/
        hurt   goat   hurt the goat

   c)   nũ̀   +   èkìròm   →   nʷekirom   /e/
        go   Ìkáràm   go to Ìkáràm

   d)   du   +   ĩ̀ɲɨ̃   →   dũɲɨ̃   /i/
        fetch   water   fetch water

   e)   su   +   ɔ̀sɛ́na   →   sɔ̀sɛ́nã   /ɔ/
        annoy   father-my   annoy my father

   f)   ku   +   òlí-so   →   kolíso   /o/
        choose   fabric-your   choose your fabric

9

   a)   ku   +   iniŋ-so   →   kuniŋso   /i/
        choose   thing-your   choose your thing

   b)   jù   +   ìkpàr   →   jùkpàr   /i/
        bury   children   bury children

   c)   nũ̀   +   ìdʒɔ̀   →   nũ̀dʒɔ̀   /i/
        go   farm   go to the farm

10

   a)   ye   +   u   →   yéu   *del
see   him/her   sees him

   b)   sà   +   u   →   sàu   *del
        know   him/her   'knows him/her'

   c)   do   +   ɛ   →   dɛ   /o/
        want   it   'wants it'

   d)   loginõ   +   ɛ   →   loginɛ̃   /o/
        spoil   it   'spoils it'

   e)   kpono   +   i   →   kpòni   /o/
        tie   them   'ties them'

   f)   bɛ̀rɛ̀   +   i   →   bɛ̀ri   /ɛ/
        start   them   'starts them'

11

   a)   sà   +   ès   →   sès   /a/
         know   us   'knowsus'

   b)   sɛmɛ̀   +   èn   →   sɛmèn   /ɛ/
         greet   you (pl)   'greets you (pl)'

Other Constructions

The language attests other constructions that trigger vowel deletion. These affect all words with a grammatical function, such as the complementizer *mí*, the relativizer *mi*, the focus particle *gí* and different interrogative pronouns. All of these words can appear before the subject of a clause. This means that their final vowels get in contact with the initial vowel of a noun or subject pronoun and therefore face vowel deletion. None of these function verbs ends with a /u/, which means that the combination /u/ # /i/ is impossible in this domain. The following data therefore lacks V$_2$ deletion.

12

   a)   ìwé   mĩ ɔ̌   de étʃe   →   ìwé mɔ̃ dé tʃe
         book REL 2SG buy market\LOC   the book you bought at the market

   b)   ɔmiɲá u   gí ǎ gbà tʃá u   →   ɔmĩɲã̌ugâgbàtʃàú
         knife 3SG REL1PL give for 3Sg   we gave him his knife

   c)   màdí àn é   mĩ   →   màdánjé mĩ
         what 2Pl ASP do   what are you doing?

   d)   ìnɛ̃́   ɔ̂ dò mí   ɔ̌ gbà ná   →   inɔ̂ dòm̃̀ gbà ná
         how_much 2SG want COMP 2SG give me   how much do you want to give me?

In 12a-d, the vowels of all the grammatical items under investigation are deleted.

Discussion

The data presented reveals the existence of two vowel deletion types in a V$_1$ # V$_2$ environment and cases, where vowel deletion does not occur. The two vowel deletion types are V$_1$ deletion and V$_2$ deletion. In order to differentiate the three possible cases of vowel in contact in this paper, The vowel distribution rules will be formalized in the following subsections.

No Deletion

No deletion has been shown to occur only in the domains involving the three mono segmental object/possessive pronouns u, i and ɛ. The argument is that the lack of deletion is not affected by the domain but rather by the fact that these morphemes consist of only one morpheme. Datasets5 and 10 have shown that vowel deletion is not possible for those cases where the morpheme is at risk of being lost altogether. This is due to the combination of /u/ and /i/, which would otherwise affect V$_2$ deletion. A linguistic sign in the sense of Saussure has both a form (significant) and a meaning (signifié). If the form part consisting of only one vowel was lost entirely due to vowel deletion, it could not carry the meaning any more.

V1 Deletion

The language attests V$_1$ deletion in all grammatical domains. It is therefore, easier to formalize rules for V$_2$ deletion and no deletion, because they occur in more specific cases. Therefore, V$_1$ deletion is presume to be the default case in this analysis. Hence, V$_1$ deletion will occur, where the distribution rules for V$_2$ deletion and no deletion do not apply.

V2 Deletion

Data analyses in this paper reveals that Èkiròm attests V$_2$ deletion only in the grammatical domains of noun phrases and verb phrases. This is not a restriction on the grammatical domains per se but rather due to the fact that the other domains either do not permit the combination of /u/ and /i/ (section 4.3) or only provide mono segmental morphemes with grammatical meaning as the V$_2$ and therefore avoid V$_2$ (data set 6). Consequently, V$_2$ deletion only occurs, if a high back vowel (/u/) follows a high front vowel (/i/).

These two vowels generally play an important role in the phonology of Èkìròm. They are the two final vowels that can be deleted at the end of a syntactic boundary (Agoyi 2015). Moreover, only the [High+ Round} vole u triggers [ATR +ROUND] vowel harmony the Èkìròmì.

The implication is that the language attests [Round] vowel harmony that only affects the high back vowel /u/. This type causes vowels to harmonise based on the ATR feature, but has a specific [High] vowel value to harmonize with /u/[10].

In the study, all possible grammatical domains where $V_1 \# V_2$ vowel deletion is possible have been listed. Having looked at the different vowel deletion types across the different domains, we posit the hypothesis that the distribution of the vowel deletion types is not affected by the grammatical domains. Èkirom phonological process of deletion shows V_1 vowel deletion type occur in all grammatical domains, where they do not have to be avoided due to mono-segmental morphemes. The V_2 deletion occurs in all grammatical domains, where the combination of /u/ and /i/ is possible.

The factor affecting the distribution of the vowel deletion types is the vowel quality (V_2 deletion) and the avoidance of vowel deletion is caused by mono-segmental morphemes being the second vowel.

Conclusion

This paper has provided a description of vowel deletion in the Èkìròmì dialect of Àbèsàbèsì in a $V_1 \# V_2$ environment. It has shown that Èkìròmì attests two types of $V_1 \# V_2$ vowel deletion and cases, where no deletion occurs at all. While V_1 deletion has been shown to be the default case for most of the $V_1 \# V_2$ combinations, V_2 deletion only occurs in specific cases. V_2 deletion is triggered by a combination of the two [+high] vowels in the order /u/ # /i/. This rule is valid for all domains where this combination can occur except for mono segmental morphemes being V_2, where vowel deletion does not take place when the morpheme is at risk of being deleted all together. Moreover, grammatical domains have been shown to have no influence on vowel deletion. This research adds another view on the various types of $V_1 \# V_2$ deletion within the Benue-Congo language family and their distribution. This research could be expanded by investigating suprasegmental features that are affected or caused by vowel deletion. Nasalization, tones and labialization have been deliberately excluded from this work but could give further insides into the phonological system of Àbèsàbèsì.

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[10] Claimed by Agoyi(2008). New data, however, reveals that /u/ and /i/ can have an inherent [+ATR] or [-ATR] value that does not reflect in the pronunciation, but only in vowel harmony. This is indicative of a convergence of /u/ and /ʊ/ as well as /i/ and /ɪ/. The specific vowel value to harmonize with /u/ only holds true for /u/ with an inherent [+ATR] value.

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