

Labialisation in Kohomono

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Abstract

Kohomono language is a member of the Upper Cross family, classified under the Benue Congo phyla. Secondary articulation is an important phonological phenomenon in the Kohomono phonology that has been under described. The main objective of this paper therefore, is to examine and analyze the phonetic and phonological environments that trigger the secondary articulation of labialization which involves a superimposition of lip rounding in the primary place of articulation in the language. Phonetically, the symbol used to denote labialization is the raised [w] on the labialized sound. Primary data for this work was made up of selected items from the SIL comparative wordlist. These items were translated by the native speakers of the language. From the analysis of data, labialization in Kohomono can be automatic and non-automatic affecting only the velar plosives /g/ and /k/ and the glottal fricative /h/. The triggers of labialization in the language are basically the close back rounded vowel /u/ and in non-conditioned phonetic environments of close-mid and open front vowels.

Keywords: phonology, secondary articulation, labialization, phoneme, segments

Introduction

In the description of the articulation of segmental speech sounds, a lot of focus has been on the most prominent position of the articulators, known as primary articulation. There are many segmental speech sounds in whose production, the articulators take more than one position. Multiple articulations in the vocal tract involve modifications such as secondary articulation, double articulation and coarticulation. The focus of this work is streamlined to a secondary articulation (labialization) in the Kohomono language, a member of the Upper Cross language family. It is a language that is spoken in the central region of Cross River State, Abi Local Government Area precisely. As an Upper Cross language, it is a sub group of the Cross River phyla, which is classified under the Benue Congo language family. The language is spoken by over Thirty-Five thousand people as a first language (Ethnologue 2015). Kohomono is one of the minority languages spoken in the state, it spans across seven communities namely; Ebom, Usumutong, Afafanyi, Ediba, Anon, Ebijakara and Ebiriba.

The language has a lot in common with languages such as Legbo, Lokaa, Agoi, Agwagune, Mbembe and the Efik language. The lexicons are similar, the phonemes are very close, the syntactic structures are not too different. A lot of borrowed words in the language are gotten from the Efik and Igbo languages due long standing contacts basically for economic and commercial purposes and close geographical locations between these Kohomono speaking communities with some communities in Ebonyi state such as Afikpo. So far, the language has no written form and has only enjoyed skeletal attention from researchers such as Cook (1969), Faraclass (1986), Essien (1995), Williamson and Blench (2000), Williamson (2004), Njoku (2016) etc.

So far there is been no documented report on the existence of palatalization, labialization or other modifications on segments in the language. This has led to a partial and inconclusive description of some of the works that have been carried out on the phonology of the language. It is against this background that this paper is birthed on, to give an in-depth description of labialization in the Kohomono phonology.

Statement of problem

The Kohomono language falls under what Blench (2012, p.6) refers to as ‘declining’ and ‘moribund’. Moribund languages are languages that are in decline despite having a viable number of speakers. The reason for this is the lack of intergenerational transfer from the older generation to the younger generation among the Bahomonos thereby leading to a linguistic gap. The youths have abandoned their indigenous language for the English language, Nigerian pidgin and other languages.

Another reason for this setback may be attributed to the fact that most Kohomono speakers are bi-lingual. The older generation is very fluent in Efik and Igbo due to economic and religious contacts while the younger generation uses the Nigerian Pidgin and the English language for communication. Besides, the language has no reputation in terms of administration outside its linguistic communities. Till date, there are no substantial materials in terms of texts, primers or any form of orthography of the language compared to other sister languages like Legbo and Lokaa. The effect of this is that many children and youths cannot even as much as greet and sing in the Kohomono language. The foregoing inspires the desire to make linguistic enquiry into the basic phonology of the language which is believed is a right step to the language’s development.

Literature Review

The term secondary articulation refers to the articulations that involve a more open constriction in the vocal tract in addition to a simultaneous greater constriction in the production of a speech sound. In this case, the articulation that involves greater constriction is known as primary articulation, while the articulation that involves a more open constriction is known as secondary articulation. The terms signify only the constriction of the articulators and do not imply any significance to them. That is, a secondary articulation is as significant as the primary articulation in the production of speech sounds in so far as it distinguishes it from another sound. Secondary articulation has also been described by Ladefoged & Maddieson (1996: 354) as an “an articulation of a lesser degree of stricture accompanying a primary articulation of a higher degree”. Mu’azu (2005) further explains that, if a sound is produced with two places of articulations, the secondary articulation is the point of articulation with the lesser degree of stricture. Mbah & Mbah (2000) assert that “Secondary articulation is the superimposition of

some additional articulation on the primary articulation.” This implies that secondary articulation depends on the primary place of articulation.

It is a phonological phenomenon that is widely attested to in many languages and probably the most common phonological assimilatory process. Four main types of secondary articulation are found in the production of speech sounds in world’s languages, these are labialization, palatalization, velarization and pharyngealization. This work as earlier stated will only focus on labialization based on its significance on the Kohomono phonology.

Labialization is a phonological phenomenon that is operational in languages of the world. Labialization is a secondary articulation involving lip rounding or the super-imposition of lip-rounding quality of a vowel on a segment. It could also be seen as when lip rounding and protrusion occur with contoid articulation (Ladefoged and Johnson, 1994, Lodge 2004, Gussenhoven and Jacobs 2011 and Omachonu 2011.). Michael (2000:68) posits that “...labialisation is a term used for secondary articulation of consonant in the environment of a following rounded high vowel”. She emphasises that this process does not affect only the stop phonemes but fricatives as well. Approaching this from the autosegmental frame, she argues that the process involves partial assimilation of the lips and tongue features of the vowel by the preceded consonant.

Ekpe (2015:161) defines labialisation as a secondary articulation involving lip rounding in the pronunciation of speech sounds; he adds that labialisation is believed to result from the following rounded vowels. The environment normally provides a motivation for lip rounding. Ordinarily, the velar sound is produced without any lip rounding. However, in certain environments, these sounds are produced with a level of lip rounding which therefore implies that labial consonants cannot be labialized because they already possess protruding lip feature inherently. Phonetically, the symbol used to denote labialization is the raises [ʷ] on the labialized phoneme.

English does not have a separate labialized series of consonants, but when a consonant is followed by /w/, it becomes labialized. I illustrate English labialization with examples from the voiceless velar consonant. The examples in (1) provide voiceless velar stops combined with /w/ followed by a series of different vowels.

Example 1: Labialisation in English

queen	/kwin/	[kʷɪn]
quick	/kwɪk/	[kʷɪk]
quail	/kwel/	[kʷeɪl]
quell	/kwel/	[kʷɛl]
quack	/kwæk/	[kʷæk]
qua	/kwa/	[kʷa]
quote	/kwot/	[kʷoot]
quantity	/kwɔntəti/	[kʷɔntəti]
quite	/kwait/	[kait]

(Source: Davis and Hammond 1995)

As indicated by the data in (1), a labialized velar stop can co-occur with a wide range of vowels and is not phonemic.

Labialization in some languages of the world is phonemic, in the sense that it can bring about a change in meaning. In Nawuri, a kwa language spoken in Ghana for instance, There is surface contrast between the labialized consonants kʷ, cʷ, sʷ, bʷ, pʷ, fʷ, and mʷ and the non-labialized consonants k, c, s, b, p, f, and m, as exemplified in (2).

Example 2: Labialised and Non-Labialised Consonants in Nawuri

Labialised	Non-Labialised
kʷi ‘to differ’	ki: ‘to look’
sʷa ‘to be wounded’	sa: ‘to draw water’
bʷi ‘to wither’	bi: ‘to sing’
pɸʷae ‘new’	pipe: ‘red’

(Source: Casali 1990)

All of these examples show contrast before a following non-round vowel, and this is in fact the only environment in which labialized and non-labialized consonants contrast in Nawuri. Same situation is applicable in the Igbo, a South Eastern language in Nigeria as postulated by Nkamigbo (2014). Examples of distinctive labialized consonants in Igbo are shown in 3:

Example 3: Labialized and non-labialized consonants in Igbo

/rè/ ‘come true (of dream and divination)’	/rʷè/ ‘become soft enough for eating’
/rá/ ‘lick’	/rʷá/ ‘grip’
/lá/ ‘go home’	/lʷá/ ‘come back home’
/lé/ ‘look’	/lʷé/ ‘swallow’
/tó/ ‘loosen or extricate’	/tʷó/ ‘surpass in age’
/dó/ ‘pull’	/dʷó/ ‘struggle for ownership’

(Source: Nkamigbo 2014)

Alerechi (2018) also notes that the Ikwere language, spoken in the Southern part of Nigeria has significant instances of Labialisation. This is shown in example 4:

Example 4: Labialisation in Ikwere

ákʷá	‘cry’
kʷɔ́rɔ́	‘carry (baby at back)’
ágʷɔ́	‘snake’
gʷèré	‘take’
ékʷè	‘seat’
kʷà	‘clap’

It was also noted in the language, the language also has evidence of phonetic labialization of consonants. Thus in anticipation of a close back rounded vowel, consonants are modified in such a way that the vowel feature of raised back tongue position is superimposed as a secondary modification on the consonant being affected.

In Anaang, Ekpe (2015, P.93) labialization of consonants is seen in the environment of a high back vowel /u/. The process in this language is not phonemic but rather allophonic. Examples are shown below:

Example 4: Labialisation in Anaang

/èdù/	[èdʷù]	‘behaviour’
/íkút/	[íkʷüt]	‘tortoise’
/kút/	[kʷüt]	‘see,
/éfùt/	[éfʷüt]	‘buttock’
/núk/	[nʷük]	‘push’
/ímúk/	[ímʷük]	‘shortness’

/átú/	[átwú]	‘crowd’
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(Source: Ekpe (2015)

Labialisation in Anaang affects both stops and fricatives which are not labials and it is triggered only by the back high (rounded) vowels. The result of this process stems from partial assimilation of lip and tongue features of the vowel on the preceding consonant.

Based on the literatures reviewed thus far from different scholars, it is generally agreed that there is always a motivating factor for labialisation to take effect.

Methodology

This study is conducted through library research and fieldwork. Library research is used, according to Goldstein (1965), as a prefield work preparation. Goldstein stresses this idea by saying “Systematic fieldwork usually begins at desk, in the library and the archives”. It involves assessing studies conducted previously on phonology. The data for this study are obtained dominantly through fieldwork by using elicitation, wordlist paradigm and close observation. The words are collected from the native speakers of the target language. Eight native speakers of the language are selected. The informants were preferred for the very reason that they are monolingual speakers. Convenient sampling technique is employed in selecting key informants among the residents of the area depending on their language accuracy. Data was then proceeded through articulatory and acoustic procedures. Some data were also drawn from previous works on the language such as (Etu et al 2019)

Data Analysis

a. An overview of Kohomono segment phonemes

The kohomono phonology is made up of consonants and vowels that have the capacity to bring about a change in the meaning of words, such sounds are known as phonemes. Phonemes are the functional distinctive unit of a language.

i. Kohomono phonemic consonants

Different consonantal sounds result according to the place of articulation which is where in the vocal tract the air flow restriction occurs and the manner of articulation which handles how the air escapes from the mouth or nostril as the case may be. So far, twenty-three phonemic consonants sounds have been identified from the data elicited from the raw data in the language. There are ten (10) plosives /p, b, t, d, k, g, kʷ, gʷ, kᵖ, gᵇ/, four (4) nasals /m, n, ɳ, ɲ/, five (5) fricatives /f, v, s, z, h/, one (1) affricate /dʒ/ and three (3) approximants /ɹ, j, w/. These sounds were ascertained as phonemes through the principles of contrast, variation and distribution.

In establishing the phonemic status of two phonetically similar sounds in a language, we rely heavily on whether or not such sounds occur in the same environment and whether such occurrence leads to a difference in meaning of the words of the language. If the replacement of one of the sounds by the other in the same environment results in a difference in meaning, we will simply say that such sounds are phonemic (i.e; they can be used to contrast meaning of words in the language).

The summary of the Kohomono phonemic consonant sounds is shown in the chart table 1:

Table 1: The Kohomono phonemic consonant chart

PLACE	Bilabial	Labio-dental	Alveolar	Post-alveolar	Palatal	Vocalic	Labialized vocalic	Labiovocalic	Glottal
Nasal	m		n		j	ŋ			
Plosive	p b		t d			k g	kʷ gʷ	kp gb	
Affricates				č					
Fricative		f v	s z	ʃ					h
Approximant			r		j	w			

(Source: fieldwork 2018)

Kohomono consonants in terms of distribution are more commonly found at the word initial and medial positions than final positions

ii. Kohomono phonemic vowels

There are ten (10) phonemic vowels in Kohomono. Seven (7) of them are short vowels /i, e, ε, a, u, o, ɔ/, while three (3) are the long vowels /a:/, /o:/, /ɔ://. All of the seven short vowels do exhibit length in the language but only the central and back vowels with length are phonemic, others are just allophones. Figures 1 gives us a summary of the placement of these vowels based on their tongue heights and positioning.

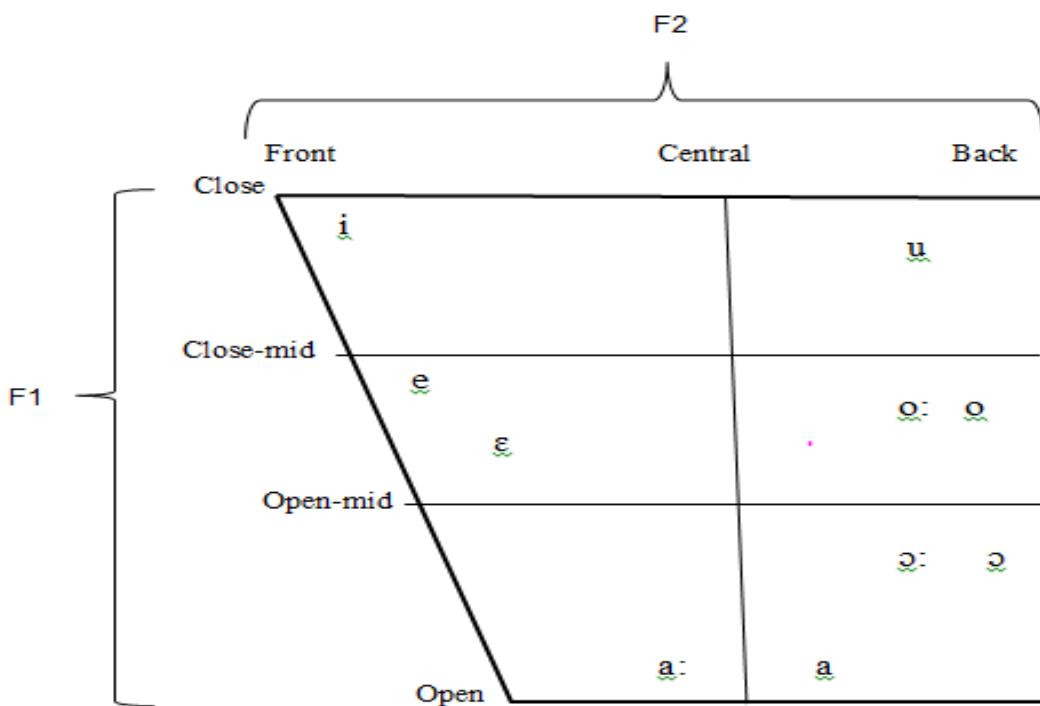


Figure 1: The phonemic vowel chart of Kohomono

There are no restrictions regarding distribution of vowels in the language, all of the phonemic vowels found in Kohomono can be found in all word positions. Modifications such as nasalization is seen when a vowel is preceded by a nasal or is between two nasal consonants.

b. Labialisation in Kohomono

Kohomono records the two types of labialization; the plain velar consonants /g, k/ and the glottal fricative /h/ in the language are labialized when followed by a close back vowel /u/ or the close-mid back vowel /o/. Consider the following examples in 5:

Example 5

/k/ before back vowel /o/ and /u/

- a) /kóí/ → [k^wòí] ‘vomit’
- b) /ikuó/ → [ík^wó] ‘sing’
- c) /kòkó/ → [k^wók^wò] ‘a baby’
- d) /ikóí/ → [ík^wóí] ‘squat’
- e) /kùré/ → [k^wùré] ‘remain/stay’
- f) /òkúmákùm/ → [òk^wúmák^wùm] ‘slice’
- g) /órómákùm/ → [órómák^wùm] ‘friend’

Example 6

/g/ before back vowels /u/ and /o/

- a) /règói/ → [règ^wóí] ‘drum’
- b) /àgó/ → [àg^wó] ‘you’
- c) /vágù/ → [vág^wù] ‘spread out (maize)’
- d) /gɔ/ → [g^wɔ] ‘that’

/h/ before back vowels /u/ and /o/

- a) /óhùm/ → [óh^wùm] ‘seed’
- b) /réhùm/ → [réh^wùm] ‘termite hill’

c) /rímèrèhú/ → [rímèrèhwú] ‘turtle (water)’

From the data in (5), it is observed that the underlying phonetic plain velar consonants are phonetically realized as labialized velar before the back vowel /o/ and the rounded vowel /u/. Alerechi (2018:15) posits that ‘it is in anticipation of a close back rounded vowel, consonants are modified in such a way that the vowel feature of raised back tongue position is superimposed as a secondary modification on the consonant being affected. For a phonological process such as labialization to occur, there must be a trigger and a target. The trigger for labialization in this case is the close and close-mid back vowels /u, o and ɔ/, while the target could be a fricative or a stop. This type of labialization is said to be automatic.

The other type of labialization which is termed non-automatic to the labialized consonants /kʷ/ and /gʷ/ whose occurrence in synchronic evidence, does not present any conditioning factor as seen below in 7;

Example 7

a) /ígʷà/	[ígʷà]	‘soup/broth’
b) /gʷà/	[gʷà]	‘woman’
c) /gʷàgʷàné/	[gʷàgʷàné]	‘child’
d) /gʷé/	[gʷé]	‘that’
e) /gʷén/	[gʷén]	‘one’
f) /íkʷà/	[íkʷà]	‘to take revenge’
g) /ókʷà/	[ókʷà]	‘play’
h) /ékʷà/	[ékʷà]	‘fence’

The examples in (7) do not present any conditioning factor as the labialized sounds precede both rounded and unrounded vowels. The changes that might have occurred at the deep structure or underlying level could be that of a deleted segment probably a vowel. However, enough proof has not been gathered so far to explain if any vowel deletion process actually took place in the language. Non-automatic labialization is also found in some other Nigerian languages like in Igbo, Tiv and Idoma (Nkamigbo 2014).

Conclusions

Labialisation in Kohomono affects mostly the velar plosives /g/ and /k/ and the glottal fricative /h/ which are not labials but are triggered by back high (rounded) vowels in automatic labialization and close-mid and open unrounded vowels in non-automatic labialization. The result of this process stems from partial assimilation of lip and tongue features of the vowel on the preceding consonant. As evident in the corpus and analysis above, labialization affects only the consonants. Here the consonant picks the feature of the vowel, thereby resulting in secondary articulation of lip rounding. The result of this study is line with other studies that have been carried out in other Nigerian languages as reviewed in the literature.

Recommendation

The crux of this work has been on an aspect of the Phonology of Kohomono, an under described language and based on the findings and several observations, the following recommendations are necessary:

- a) More linguistic analysis should be carried out on indigenous languages such as Kohomono for development and preservation.
- b) More parameters for the study of indigenous languages should be put in place by the Nigerian Languages Project for the proper documentation, codification and development.

- c) Governmental as well as non-governmental agencies need to carry out more public sensitizations on our indigenous languages through the sponsorship of researches especially for minority languages facing extinction.

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