A FEATURE-DRIVEN ANALYSIS OF LABIALIZATION AND PALATALIZATION AS PHONOLOGICAL PROCESSES IN HAUSA

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APPROVAL PAGE

This is to certify that, this research work has been carefully read and approved as meeting part of the requirements for the reward of B.A Degree in Linguistics in the Department of Modern European
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DEDICATION

This research work is dedicated to my father Malam Hassan Abubakar Sauwa and my mother malama Habiba Haruna Sauwa, and the entre members of our family for giving me the much needed support up to this level of my educational pursut. May Allah reward them with Aljanna Firdaus, Amin.
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I am first and foremost grateful to Allah (S.W.A) who spared my life and enables me to achieve this goal. I am also sincerely grateful to my able and dedicated supervisor in person Malam Garba Ibrahim, whose meaningful and valuable criticism, suggestions, correction and advice, contributed immensely in making this project work successful. I wish him successful in his entire life endeavors.

Also my special thank goes to my parents whose sponsor me to archive my goal, I pray to Allah to reward them with Aljanna Firdaus, Ameen.

I am also grateful to all lecturers of the Department of Modern European Languages and Linguistics, Usmanu Danfodiyo University Sokoto and my family who supported me throughout my educational pursuit.

Finally, I will not forget to express my appreciation to my course mates I equally remain grateful to all whose name have not appear in this short piece of acknowledgement. May Allah (S.W.A) reward all of you abundantly.
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CHAPTER ONE

1.0 GENERAL INTRODUCTION

This research work would be carried-out in one of the four (4) major areas of linguistics (phonology). Phonology is the systematic study of sounds system of a language. However, the research work does not include all aspects of phonology rather it will be restricted to two important phonological processes in Hausa language: Labialization and Palatalization which are secondary articulations in Hausa language. Dustan, E (1996).

It is obvious that Hausa is the most widely spoken language among its different users in northern part of the country among different dialects such as Kananci, Sakkwatanci, Katsinanci, Kabanci, Zamfaranci, and the like. Dustan, E (1996).

Mu’azu (2005), sees labialization as a secondary articulation in which lip rounding is added to a non-labial sound as in the case of articulation of /kw/, /kw/, and /gw/ consonants which are specifically referred to as labialized velars. Palatalisation is a verbal noun derived from the verb to “palatalized” means to add a palatal
articulation (raise the front of the tongue towards the hard palate) to a non-palatal consonant under certain conditions. Palatalization is also a secondary articulation; there may be modification which adds an in colouring to the sound. The question now is, what are the kinds of consonants and under what conditions are they palatalized? Generally speaking, consonants that are commonly palatalized in Hausa under particular circumstances are twofold, namely the alveolars /s/, /t/, /d/ and /z/, and the velars /w/, /k/, /k/, and /g/. Sani M. A. Z. (2005).

1.1 STATEMENT OF THE PROBLEM

Hausa language is spoken in Nigeria particularly in the Northern region of the country since time immemorial. It is no doubt, the most widely spoken language in Nigeria. In particular the language is spoken as L1 in many states of the Northern Nigeria which include: Kano, Katsina, Daura, Zamfara, Kebbi and etc. This study examines two (2) phonological processes: (labialization and palatalization) in Hausa language. It is part of the study to identify the nature and conditions for each of them in Hausa language.
1.2 PURPOSE OF THE STUDY

Several studies were conducted in linguistic area of Hausa language but much attention has not been given to phonological processes such as glottalization, labialization, pharyngealization etc, in Hausa language. This has motivated the researcher to conduct a study on two selected phonological processes: (labialization and Palatalization) in Hausa language as contribution to the development of Hausa phonology.

1.3 THE SIGNIFICANCE OF THE STUDY

The importance of this study cannot be over-emphasized, this is because it serves as a yardstick to determine where an why non-labialized sounds can be labialized and the non-palatalized sounds can also be palatalized in Hausa language. It could also be serves as a solid foundation for other researchers who have interest and ready to carry-out their research in a topic related to this in future. That is to say they can build on this as a sample. This study could supply learners of Hausa phonology the needed knowledge upon which they become sound and up to date as on these phonological
processes of Hausa language. Finally Hausa experts could use the result of this work to improve on their language teaching skills.

1.4 OBJECTIVES OF THE STUDY

The main objectives of this study are presented below;

1. To identify the sounds that is originally non-labialized, but can be labialized.

2. To identify the sounds that is originally non-palatalized, but can be palatalized.

3. To identify the phonological conditions or rules responsible for labialization and Palatalization in Hausa language.

1.5 RESEARCH QUESTION/HYPOTHESIS

This study is designed to answer the following question:

1. What are the kinds of sounds being labialized in Hausa language and under what conditions?

2. What are the kinds of sounds being palatalized in Hausa language and under what conditions?

3. How labialized and palatalized forms are described?
1.6 SCOPE AND LIMITATION

The scope of this study is on labialization and Palatalization as phonological processes in Hausa language.

1.7 DEFINATION OF TERMS

At this juncture some important terms that would be frequently mentioned in this research work, would be defined so as to make content of the research vivid.

a. **Palatal**: This is a sound produced when the front of the tongue and the hard palate approach one another or make contact, as in articulation of (j)

b. **Bilabial**: This is where the lower lip approaches or make contact with the upper one, as in the articulation of (b), (b) and (m)

c. **Velar**: This is when the back of the tongue and hard of the palate make contact as in the articulation of (k), (k), (n) and (g).

d. **Alveolar**: This is when the lip of the tongue approaches or makes contact with the alveolar ridge as in the articulation of (t), (d), (l), (r), (n), (s), (z) etc.
e. **Palatalization**: Means change or process resulting in a non-palatal sound articulated broadly in the palatal. Example in Hausa “kyawo” beauty.

e. **Labialization**: Is an additional of lip rounding to non-labial consonant sounds in Hausa Example, “sako” message, “sakon” the message.
2.0 INTRODUCTION

This chapter focuses on the review of related literature. Its aims at revising the previous work done or carried out by other scholars in the field of phonology as a whole and Hausa phonology in particular. The chapter examines the nature of language, brief account of Hausa language and its different dialects and phonological processes.

2.1 THE NATURE OF LANGUAGE

Many scholars defined language in different perceptions but relatively the same. Saussaure cited Hartmann (1972) “regard language as the innate capability of native speakers to understand one form of grammatical sentences and as the actual utterance at a given time”. According to the American anthropological linguist Edward Sapir (1921:8) “Language is a purely human and non instinctive method of communicating ideas, emotions and desires by means of systematic voluntarily produced symbols”. This definition emphasizes a number of important aspects of a language. Language is purely human activity. Although some animals have communicating system which have contain analogies to human
language. All human beings use language to interact with other members of the same speech community. Language is an instrument of communication; it is to be learnt as a system of arbitrary conventional symbols. Such symbols are primarily vocal and auditory produced by the so called organs of speech, but secondary systems such as written and other codes may complement the vocal cord systems. Edward Sapir (1921).

Matthews P.H (1997) sees Language as “the phenomenon of vocal and written communication among human beings generally.

2.2 BRIEF ACCOUNT OF HAUSA LANGUAGE

The Hausa language is a member of the west Chadic languages sub-group of the Chadic language group, which in turn is part of the Afro-Asiatic language family. It is spoken from the time immemorial to date originally by more than twenty five (25) million people, as a first language and as a second language by eighteen (18) million people, an approximate total of forty three (43) speakers. As at when the projection was made. Hausa is the most widely spoken language with the exception Arabic, French, English, Portuguese and Swahili in Africa. Hausa is one of the three (3)
language accorded with the status of majority languages in Nigeria. In fact, it is the most widely spoken language in Nigeria, and second largest in the world.

Native speakers of Hausa, the Hausa people are mostly found in African countries such as Niger, Cameroun, Ghana, etc, but the language is used as a trade language across the north or a much larger south of West Africa (Benin, Togo, Ivory coast and so on and so forth). Central Africa (Chad, central African Republic, equatorial Guinea and North western Sudan, particularly among the radio stations such as BBC, VOA, RFI broadcast in Hausa language. It is taught in universities in African and around the world. The language is formally divided into major and minor dialects; Eastern Hausa dialect include Kananci which is spoken in Kano, Bausanci in Bauchi, Dauranci in Daura, Hudduranci in Katagun Misau and part of Borno and Hadeja in Hadeja. Western Hausa dialects include Sakkwatanci in Sokoto, kabanci in Kebbi, and Katsinanci in Katsina etc.

Kananci dialect is usually considered the standard and thus giving it high prestige. The western and eastern Hausa dialects of
Kurfayanci, Damagaranci and Adaranci represented the traditional northern most limits of native Hausa communities. These are spoken in the arid zone boarding, and considerably within the sahara desert of west and central Niger in Tilberi, Tahoua, Doso, Maradi, Agadas and Zindar regions, while mutually comprehensible with other dialects especially Sakkwatanci.

Hausa is also spoken in various parts of Cameroun and Chad which considered the mixed dialects of northern Nigeria and Niger Republic. French has made a great influence in the way Hausa is spoken by the native Hausa speakers in those countries. Newman, P. (2000)

2.3 AN OVERVIEW OF PHONOLOGY

Phonology is that branch of linguistics that studies the organization of speech in human language. It is the component of grammar that accounts for the general pattern or structure of sounds and the way sounds relates to one another in normal speech.
In human language, sounds, (consonants, vowels and suprasegments) enter into different relationships that produce the meaning. For instance, some combinations of sounds are acceptable and meaningful while some are regarded as anomalous and meaningless. The various meaning combinations and the way they affect pronunciation are the main focus of phonology.

**Phonology and Phonetics**

Phonetics and phonology are two related areas of linguistics that deal with sounds, but they deal with different aspects of sounds. While phonetics studies the physical properties of speech, the perceptions and production of sounds, that is how sounds are produced with different organs of speech, parts of the body and how people hear (perceive) such sounds. Phonology is concerned with how the sounds described in phonetics are patterned, combined, to bring about meaning. Phonology talks about the abstract units of sounds like the phonemes and allophones and it discusses phonological processing like the interaction of sounds in collocation, with precise rules that affect the sound that we hear—deletion, insertion, assimilation etc.
The Phoneme

The concept of phoneme is very important in phonology, it is the speech sound that is capable of distinguishing meaning between a set of words that are minimally different, that is, a set of words that are alike in virtually all things except for one sound difference. That bit of the sound that would bring about a change of meaning minimally different words is said to be a significant sound, a phoneme.

Looking for contrasts in minimal parts is one way of identifying phonemes. According to Fromkin and Rodman (1978): when two different forms are identical in every way except for one sound segment which occurs in the same place in the string, the two words are called minima pairs.

This implies the substitution of one sound for another in the same environment in word. Consider the following sets of minimal pairs in English.

Fan sit bat beg toad
Van set mat bed road
In each of the minimal pairs illustrated above, one observes that the substitution of one sound for another results in a change in meaning. For instance, the substitution of [F] for [v] in [van -Fan] results in two totally different words, van “a vehicle” and fan “a wind blowing instrument”.

It is important to remark that two words may end up with the same meaning as shown in the following words:

Economics
Iconomics

Here, there is e and i different but there is no expected corresponding change in meaning. A situation where the substitution of one sound for the other does not change meaning, then we have the sounds in free variation. The set in above does not constitute separate phonemes. They are only be regarded as phonemes and only we find evidence that they contrast meaning elsewhere in the Language. The determining factor in the identification of phonemes according to Fromkin and Rodman (1978) is “whether there is a change in form and a change in meaning”.

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Allophones are different sounds that do not contrast meaning rather “they are phonetic variants of the same phonemes, depending in the environment in which they occur with” (Udoh 2005:19).

A basic means of testing for allophones is by looking for sounds that are in complementary distribution (sounds that are mutually exclusive of one another). Two sounds are in complementary distribution if within a linguistic system one of the sounds occurs in a predictable environment where the other does not occur.

**2.4 PHONOLOGICAL PROCESSES**

In general, phonological processes are those changes which segments under that result in the various phonetics realizations of underlying phonological segments. When sounds are combined to form morphemes or morphemes are combined to form words or other larger units, some segments are juxtaposed within the same morpheme boundaries (that is, segments of combined morpheme). When this happens, some of the juxtaposed segments, under various conditions, may undergo changes. Some of these changes
may be affected by the environment (initial, find etc. while others may be affected by adjacent segments. There are many of such processes and these are usually divided into assimilatory and non-assimilatory. Examples of both include; Palatalization, labialization, insertion, elision, pharyngealisation, nasalization, glottalization e.t.c.

1. Nasalization: is a phonological process in which a segment which is in relationship/neighborhood with nasal phoneme becomes nasalized. This process may be regressive or progressive depending on the language. In some languages consonants are the only nasal segments while vowels are always oral. Often when such vowels occur after the nasal consonants, the vowel takes on the nasal quality of the consonants. In Igbo, vowels after nasal consonants are nasalized as in ‘I’ imi [imi] ‘nose’ nne [nne]. The vowels in the final position are nasalized and this is indicated with a [~] diacritic. This nasalization is progressive in nature.

2. Elision: this is a phonological process involving the omission, deletion, or total loss of a sound segment. The process may
affect a vowel or a consonant. Segment that are heard in the
delebrate pronunciation of a vowel in isolation may get elided in fast speech. The process is one of those that cause some alteration in the structure of the syllable, or in sequences of consonants and vowels occurring in a string of a word or across words or morpheme boundary. Many examples of deletion can be cited from English in some r-less dialects of English, where final –r is deleted before another consonant or in phrase – final position. Mother [m] ‘mother and child’ [m and ild], ‘far’ but [fa:r] in some dialects.

3. Insertion: this is a phonological process whereby a segment which did not exist originally is introduced in a particular environment. A vowel can be inserted to break a cluster of two or more consonants. It can be initially, before a consonant or finally at the end of a word, after a final consonant. For example, In Hausa, a vowel is used to break up a cluster of a borrowed English word as in: bread

There are many phonological processes across languages. These processes form part of the phonological system of the language in
which they are found. However, there are processes which tend to be universal and such processes are usually assimilatory in nature. Nasalization, for example, is found in Hausa, Igbo, Yoruba, English and many other languages. Despite the presence of this process in many languages, its nature may differ slightly from one language to another. Roach, P. (1982).

2.5 SOME PHONOLOGICAL PROCESSES IN HAUSA

Having examined phonological process in general (i.e across languages), I shall now give a brief description of some of the phonological processes available in Hausa. In particular; I shall now look at such processes as glottalization, insertion, nasalization and so on.

**Glottalization:** glottalization is the complete or partial closure of the glottis during the articulation of another sound. It is a phonological process involving this complete or partial closure. Glottalization is the addition of glottal stop /ʔ/ in the articulation of a sound (a vowel or consonant). In Hausa, a glottal stop usually follows a final syllable of a word (whether a single word or the last world in a sentence), e.g ‘Kande?’, ‘Adu?’, etc. when each of the
word is followed by another word r words, the glottal stop /ʔ/ disappears, e.g Kande ce ‘it is Kande’ Tanko ne ‘it is Tanko’. This process forms part of the phonological processes in Hausa. Mu’azu (2005).

**Insertion**: insertion is one of the phonological processes in Hausa, where a vowel is inserted to break up a cluster in a borrowed word or to make the syllable structure conforms to that of the language (i.e Hausa). Example of insertion can be seen in the following words which the language borrowed from English. Their Original forms are given below to show where the insertion occurs.

<table>
<thead>
<tr>
<th>English word</th>
<th>Insertion in Hausa</th>
</tr>
</thead>
<tbody>
<tr>
<td>School /sku:l/</td>
<td>sukul</td>
</tr>
<tr>
<td>Bocket /boket/</td>
<td>bokiti</td>
</tr>
<tr>
<td>Bread /bred/</td>
<td>burodi</td>
</tr>
</tbody>
</table>
It is to be noted that even in pronouncing English words, Hausa speakers do not wrongly insert vowel to break up cluster. This is in the case of school /sukul/ where the Hausa speakers insert a /u/ to break up the ‘sk’ cluster. Mu’azu (2005).

**Nasalization:** Nasalization is a phonological process in which a nasal quality or feature is added to a segment, usually a vowel which in its original form does not have that feature of nasality. In Hausa, oral vowels such as /o/, /u/, /a/, etc. become nasalized when they proceed nasal consonants like /n/, /m/, etc. this usually occurs when a nasal is used as a suffix to indicate definite article i.e it is added as definite article marker. For example in the following: Mu’azu (2005).

Gida + n “House” - Gidan “the house”

Aladu + n “Pigs” - Aladun “the pigs”

Koko + n “local cup” - Kokon “the local cup”

In the example above, the oral vowels /a/, /o/ and /u/ have been nasalized, and therefore nasalization has taken place.
There are many other phonological processes in Hausa. The ones discussed above give a clear illustration of how the processes occur in the language. It should be clear that labialization and Palatalization are two of such assimilatory phonological processes in Hausa language. I shall now have a look at them subsequently.

2.6 LABIALIZATION IN HAUSA

Labialization as an assimilatory phonological process in Hausa occurs when a rounding feature is added to a sound segment (typically a consonant) which originally i.e in its isolated form does not poses that rounding of the lips feature. This is realized in Hausa when any of the back rounding vowels follow either of the following phonemes: /k/, /ƙ/ and /g/. when this happens the phoneme becomes labialized. In other words, the back rounded vowel, /o/ and /u/ affects the preceeding /k/, /ƙ/ and /g/ sound segments in the neighborhood.

Generally speaking, in Hausa, simple or plain velars tend to be labialized when they immediately precede a back vowel. In other words, any single velar consonant that immediately comes before a
back vowels is, by implication, a labialized one. A few examples can be cited for illustration, as follows:

<table>
<thead>
<tr>
<th>Set (A)</th>
<th>Set (B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mako “a week”</td>
<td>Makwan “the week”</td>
</tr>
<tr>
<td>Bako “a guest”</td>
<td>Bakwan “the guest”</td>
</tr>
<tr>
<td>Bargo “a blanket”</td>
<td>Bargwan “the blanket”</td>
</tr>
<tr>
<td>Mugu “a wicked”</td>
<td>Mugwaye (wicked ones)</td>
</tr>
</tbody>
</table>

It can be noticed from the example above that the velars in the words set (A) written as simple ones in the current orthography, are in fact labialized ones, the labialization appearing very clearly in the pronunciation of the words is under set (B). Hence, the actual representation of those in set (A) words is “Makwo”, “Bakwo”, “Bargwo” and “Mugwu” respectively. The “w” inserted between the assimilating /o/ and assimilated /k/, /k/ and
/g/ indicates that labialization has taken place. The presence of definite article /n/ made the process clear. In a nutshell, two processes of labialization are possible in Hausa. Labialization as a secondary articulation and as an assimilatory process.

**2.7 PALATATALIZATION IN HAUSA**

The word “Palatalization” to begin with, is a verbal noun derived from the “to palatalize” meaning to add a palatal articulation to a non-palatal consonants under certain conditions. It is very common in Hausa.

Generally speaking, consonants that are commonly palatalized in Hausa under particular circumstances are two fold, namely the alveolar /s/, /t/, /d/ and /z/ and the velars /w/, /k/, /ƙ/ and /g/. and as for condition governing such Palatalization, this is the front vowel /i/ or /e/, where it immediately follows:

Consequently the alveolar /s/ becomes /sh/, /t/ becomes /c/, /d/ and /z/ each becomes /j/. and for velars, /w/ becomes /y/, /k/ becomes /ky/, /ƙ/ becomes /ky/ and /g/ becomes /gy/. These will be examined as follows: Mu’azu (2005).
### 2.8 THE ALVEOLARS AND LABIO-VELAR ‘W’

There are many ways to plural formation in Hausa, among which are the following:

- In some cases: “aCe” suffix is added to the root, where “C” is identical with the root final consonant, e.g. from the singular noun wuri “place”-“aCe” (=are) is added to the root wur-to get wurare ‘places’

- At times “aCe” suffix is added to the root, e.g. from gaba “joint”-“oCi” (= obi) is added to the root gab-to get gabobi joints”

- Or, where: “I” suffix is added to the root e.g. kwado “frog” – ‘i’ is added to the root kwad – to arrive at the plural kwadi “frogs”. Now, in the light at this, let us take a look at some singular nouns, whose root final consonants are specifically /s/, /t/, /c/, and /z/ or /w/ and see that precisely happens in such circumstances

<table>
<thead>
<tr>
<th>Singular noun</th>
<th>Root word</th>
<th>Plural suffix</th>
<th>Implication</th>
<th>Effect of</th>
</tr>
</thead>
</table>

33
<table>
<thead>
<tr>
<th>Added</th>
<th>Palatalization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kasa “country”</td>
<td>Kas- -aCe (= ase) Kasase* Kasashe (countries)</td>
</tr>
<tr>
<td>Kusa “nail”</td>
<td>Kus- -oCi (= osi) Butotii* Butoci (kettles)</td>
</tr>
<tr>
<td>Gida “house”</td>
<td>Gid- -aCe (= ade) Gidade* Gidaje (houses)</td>
</tr>
<tr>
<td>Gada “bridge”</td>
<td>Gad- -oCi (= odi) Gadoii* Gidoji (bridges)</td>
</tr>
<tr>
<td>Reza “blade”</td>
<td>Rez- -oCi (osi) Rezoii* Rezoji (blades)</td>
</tr>
<tr>
<td>Wawa “fool”</td>
<td>Waw- -aye (= awe) Wawawi* Wawaye (fools)</td>
</tr>
</tbody>
</table>

Adopted by Mu’azu (2005).

From the table above, it is quite clear that those consonants /s/, /t/, /d/, /w/, and /z/ are all palatalized under appropriate conditions, i.e. where a front vowel /i/ or /e/ immediately follows.

2.9 **THE VELARS /K/ /G/ / K /**

In fact, as we pointed out, the velars /k/, /k/ had /g/ like those five that have been examined, are palatalized when immediately followed by a front vowel, turning into /ky/, /ky/, and
/gy/respectively, as a result. Let us exemplify this with the following words:

Bakanike 'mechanic'
Wake “religious poem”
Mage 'cat'
Kifi "fish"
Baki "black"
Shishshigi "interference"

The velars followed by /e/ in the first three words and by /i/ in the other three are affected clearly by palatalisation under those circumstances. Hence 'bakanikye "wakye", "magye", "kyifi", "bakyi" and shishshigi respectively. This palatalisation, however, is the first three words for instance, when the referential suffix - "n" is added thereby turning the open final syllable into a closed one as follows:

- Bakanike + "n" bakanikyan "the mechanic"
- Wakye + "n" wakyan "the religious poem"
- Magye + "n" magyan "the cat"
Here, with the addition of the referential suffix and the pronunciation of the final syllable of each word with "a" rather than with obviously one would feel the "y~" element, i.e. the palatalisation very clearly noticed. Compare this with the case where such consonants is /r/, /ts/, or /d', as in the word kare "dog", kitse "suet" and kade "sheanut", where it remains unchanged when the referential suffix -"n" is added and the syllable in question pronounced with 'a':

- Karan "the dog"
- Kitsan 'the suet'
- Kadan "the sheanut'

Such is palatalisation as it affects Hausa. The alveolars /s/ /t/ /d/ and Iżl and the velars /w/ /k/, /k/ and /g/ are palatalized when followed immediately by a front vowel, ɪl or ɪd. Consequently /s/ changes to /sh/, /t/ changes to /c/ /d/ and /z/ each changes to /j/, while /w/ changes to /y/ similarly, /k/ changes to /ɪcy/, /ɛ/ changes /ɛy/ and /g/ changes to /gy/. (Mu’azu, 2005).
CHAPTER THREE

DATA PRESENTATION AND ANALYSIS

4.1. DATA PRESENTATION ON LABIALIZATION
Labialization occurs when a consonant that is produced without lip rounding becomes rounded to the influence of a rounded vowel. Mostly (u), after it. The process involves the super-imposition of lip rounding on a non-rounded consonant. Labialized consonants are normally represented with superscripted (ⁿ) on the relevant segment, e.g (kwudi) “money”.

The following words are labialized in Hausa language. The words and their glosses as follows:

<table>
<thead>
<tr>
<th>Hausa</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>kùdị</td>
<td>[kwudi] “money”</td>
</tr>
<tr>
<td>kùnne</td>
<td>[kwunne] “ear”</td>
</tr>
<tr>
<td>kusa</td>
<td>[kwsa] “near”</td>
</tr>
<tr>
<td>gumi</td>
<td>[gwumi] “sweat”</td>
</tr>
<tr>
<td>fara</td>
<td>[hwara] “grasshopper”</td>
</tr>
<tr>
<td>fara</td>
<td>[hwari] “white”</td>
</tr>
<tr>
<td>fari</td>
<td>[hwari] “draught”</td>
</tr>
<tr>
<td>fara</td>
<td>[hwaci] “flat tyre”</td>
</tr>
</tbody>
</table>
fara → [hwara]  “start”

4.2 DATA ANALYSIS ON LABIALIZATION

Analysis 1.

kudi → [kwudi]  “money”

kunne → [kwunne]  “ear”

kusaa → [kwasa]  “near”

In the above data, the underlined syllable contains the consonant /k/ voiceless, velar, plosive, and /u./, back rounded vowel. But in pronunciation the /k/ is realized as voiceless labialized, velar, plosive [kw] as a result of the vowel sound /u/; that follow it. This result from the fact that segments have a natural tendency to resemble their neighbours, as a result of assimilation. For instance, the vowel /u/ transfer its labial feature to the consonant /k/ to becomes labialized.

This shows that labialized consonant (cw) alternate with their counterpart in certain position in Hausa. (i.e velar obstruents are often labialized before close rounded vowels. However, /k/ is the
underlying consonant while \([kw]\) is the phonetic or derived consonant.

This can be represented by the following phonological rule:

\[
/k/ \rightarrow [kw]/ ----/u/
\]

**Analysis 2.**

\[\text{gumi} \rightarrow [gwumi] \quad \text{“sweat”}\]

In the data above, the underlined syllable contains the consonant \(/g/\) voiced, velar, plosive and vowel \(/u/\) close, rounded, back vowel. However, in pronunciation, the \(/g/\) is realized as voiced labialized velar, plosive \([gw]\) because of the \(/u/\) close, back, rounded vowel sound that follow It. However, in the above data, the \(/g/\) is the underlying consonant, while \([gw]\) is the phonetic or derived consonant.

This could be represented by phonological rule as follow:

\[
/g/ \rightarrow [gw]/ ---- /u/
\]

**Analysis 3.**
fara $\rightarrow$ [hw\(_r\)ara] “grasshopper”

fara $\rightarrow$ [hw\(_r\)ari] “white”

fari $\rightarrow$ [hw\(_r\)ari] “draught”

fara $\rightarrow$ [hw\(_c\)aci] “flat tyre”

fara $\rightarrow$ [hw\(_r\)ara] “start”

In the underline syllables in the above data. The cluster [hw\(_r\)] is an allophone of the same phoneme /f/ voiceless, Labio-dental fricative. For some Hausa speakers, mostly speakers of Sakkwatanci dialect, whenever a front vowel follow the /f/ sound, they labialized it to becomes [hw\(_r\)], but in other dialects such as kananci, they are not labialized. In fact, the labialized consonants in sakkwatanci for example, twaka “pepper” and runhwa “stall” not labialized in other dialects, for example in kananci, the above words are pronounced as follows: tanka meaning "pepper", runfa meaning “stall”. This means that the labialized consonants are not phonemes, but rather allophones of their counterparts.

This can also be represented by phonological rules as follows:
With regard to the data above, it is clear that the speakers of Hausa language, especially in Sakkwatanci dialect, unconsciously labialized the above words in the course of pronunciation. Event though, the orthography usually remains the same as that of standard dialect, but there is lip rounding (which is known as labialization) when pronouncing the above words.

In a real situation, labialization takes place when back vowels /u/ and /o/ follows velars such as /k/, /g/, and /ƙ/. This phonological process is commonly found across all dialects of Hausa language.

These evidently show that the labialized consonants are not phonemes, but rather allophones of their counterparts.

4.3 DATA PRESENTATION ON PALATALIZATION

The following data on palatalization was analyzed even though Palatalization is almost universal in nature. This is because, according to mu’azu (2005) “whenever, front vowels such as /i/ and
/e/ follow velars such as /k/, /g/, and /k/ in Hausa language; there is tendency for these velars to be palatalized.

<table>
<thead>
<tr>
<th>Hausa</th>
<th>Palatalized form</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wake</td>
<td>wakye</td>
<td>beans</td>
</tr>
<tr>
<td>Baki</td>
<td>bakyi</td>
<td>mouth</td>
</tr>
<tr>
<td>Baki</td>
<td>bakyi</td>
<td>black</td>
</tr>
<tr>
<td>Keta</td>
<td>kyeta</td>
<td>wickedness</td>
</tr>
<tr>
<td>Kifi</td>
<td>kyifi</td>
<td>fish</td>
</tr>
<tr>
<td>Kishi</td>
<td>kyishi</td>
<td>thirst</td>
</tr>
<tr>
<td>Buki</td>
<td>bukyi</td>
<td>ceremony</td>
</tr>
<tr>
<td>Gero</td>
<td>gyero</td>
<td>millet</td>
</tr>
<tr>
<td>Geza</td>
<td>gyeza</td>
<td>stick/cane</td>
</tr>
<tr>
<td>Gini</td>
<td>gyini</td>
<td>building</td>
</tr>
<tr>
<td>Gishiri</td>
<td>gyishiri</td>
<td>salt</td>
</tr>
<tr>
<td>Ciniki</td>
<td>cinikyi</td>
<td>bargaining</td>
</tr>
<tr>
<td>Ciki</td>
<td>cikyi</td>
<td>stomach</td>
</tr>
<tr>
<td>------</td>
<td>-------</td>
<td>---------</td>
</tr>
<tr>
<td>Magi</td>
<td>magyi</td>
<td>magi</td>
</tr>
<tr>
<td>Gehe</td>
<td>gyehe</td>
<td>side</td>
</tr>
<tr>
<td>Keya</td>
<td>kyeya</td>
<td>lice</td>
</tr>
<tr>
<td>Ketara</td>
<td>kyetara</td>
<td>to cross</td>
</tr>
<tr>
<td>Bakanike</td>
<td>bakanikye</td>
<td>mechanic</td>
</tr>
<tr>
<td>Shishshigi</td>
<td>shishshigyi</td>
<td>interference</td>
</tr>
</tbody>
</table>

### 4.4 DATA ANALYSIS ON PALATALIZATION

**Analysis 1.**

1. baki $\rightarrow$ [bakij] \hspace{1cm} “mouth”

In the data above the underlined segments are /k/ voiceless, velar, the plosive and /i/ front, high vowel. But in pronunciation the /k/, becomes voiceless palatalized velar plosive [kʃ] as a result of /i/ sound that follow it. However /k/
is the underlying consonant, while [] is the phonetic or derived consonant.

This can be represented by phonological rule as:

\[
/k/ \rightarrow [k]\] /i/
\]

Analysis 2.

baki \rightarrow [bak\text{i}] “back”

The underline syllable in the data above contains /k/ voiceless, velar, plosive, and /i/ front, high, vowel. But in pronunciation the /k/ sound is realized as palatalized velar ejective [k\text{i}] as a result of /i/ front vowel that follow it.

This can also be represented by phonological rule as:

\[
/k/ \rightarrow [k\text{i}] /i/
\]

Analysis 3.

wake \rightarrow [wak\text{i}e] “beans”
The underlined syllable in the above data consists of /k/ voiceless, velar, plosive and /e/ front vowel. But in pronunciation /k/ becomes palatalized [kʲ] as a result of the /e/ which follow it.

This can be represented in the following phonological rule:

\[
/k/ \rightarrow [kʲ]/\longrightarrow /e/
\]

**Analysis 4.**

gero $\rightarrow$ [gēro] “millet”

The underlined syllable in the data above contains /g/ voiced, velar, plosive and front vowel /e/. But in pronunciation /g/ is realized as voiced palatalized, velar, plosive [gʲ] as a result of the /e/ front vowel that follow it.

This can be represented by phonological rule as follow:

\[
/g/ \rightarrow [gʲ]/\longrightarrow [e].
\]

In respect of the above data presented, it is clear shows that there is element of Palatalization whenever the front vowel
follows a velar sound, since Palatalization is a process of adding a palatal articulation to a non palatal sound under certain conditions. In pronouncing words such as ciki “stomach”, gehe “side”, and gishiri “salt” there is a slight raising of tongue towards hard palate as what happens in the pronunciation of palatal sound /j/. Unlike when other vowel with the exception of front ones follows velars, there should be no Palatalization at all. For example, koko “name of town”, kaka “grandfather” and guga “pressing”. It therefore proved that Palatalization occurs in Hausa language regardless to the dialect in so far as front vowels are preceded by velars.

CHAPTER FOUR

SUMMARY
5.1. SUMMARY

This research work was carried out based on phonology of Hausa language and it concerns two phonological process specifically in Hausa language. The phonological processes include labialization and Palatalization that often occur in communication in subconscious manner among the speakers of Hausa language. In the preceding chapter the researcher discovered two divisions of labialization and how it occur in Hausa language. The phenomenon of Palatalization in Hausa language as well as the processes or conditions that make it possible to occur in Hausa language have been discussed. The research work comprises of four chapters but inter-related in the area of the research work.

Chapter one is concerned with general introduction of the research work which consists of the statement of the problem, purpose of the study, significance of the study, objectives of the study, research question, scope and limitation and definition of terms.

Chapter two briefly discussed the nature of language, brief account of Hausa phonology, an account of phonology, phonological
processes in Hausa, labialization as phonological process, Palatalization in Hausa and labialization in Hausa.

Chapter three is concerned with research methodology which begins with introduction, population of the study, sample and sampling techniques, research instruments, method of data collection and lastly method of data analysis.

In chapter four the collected data was presented and analysed.

4.2 CONCLUSION

This research work proved that Palatalization and labialization as phonological processes are commonly found in Hausa language. It is only that the process of occurrence in each of the processes differs in some respect from one dialect to another in Hausa language.

However, the variation is not phonemic. For example if two words are compared like safe “morning” and swahe “morning” sata “stealing” and swata “stealing” the differences between the words or pair of words in their initial consonants do not cause change in their meaning therefore, [sw] is the allophone of [s] in Hausa.
In respect of Palatalization, it has been seen that it is universal in all of dialect Hausa, because it is morphophonemic. Whenever front vowel comes before velar will lead to the occurrence of Palatalization in Hausa. Lastly, from the data collected and presented in chapter four, it proved that there are phenomena of Palatalization and labialization in Hausa language.

4.3 SUGGESTIONS

After the researcher carried out his research work on two phonological processes (Labialization and Palatalization) in Hausa. However, the discovery made by him, does not mean that is the only discovery needed in relation to the research work. This is why, I suggest that other researchers should engage themselves in research work not only on labialization and Palatalization but in all phonological processes in Hausa language.

REFERENCES


