A STUDY OF VOWEL ALTERNATION IN HAUSA

BY

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S.O.A.S.

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CORRIGENDUM

As reduced i: & u: within a closed syllable, ɪ & ʊ respectively are inadvertently referred to as the underlying forms (cf. pp.86 & 94). As already indicated in the table on page 37, they have allophonic status in those circumstances, the underlying forms being /i:/ & /u:/. Any confusion which this may arouse is highly regretted.

ABSTRACT

This study aims at finding out the particular phonetic contexts within which the alternation of [ɪ], [ɨ] & [ʊ] in Hausa takes place in an utterance, and where it does not. It also aims at establishing the underlying forms from amongst these vowels as well as identifying the underlying causes for the alternation or non-alternation.

The work is divided into ten chapters:

Chapter One introduces the work. It discusses the Hausa consonants based on the standard dialect, the vowels as shared by both the standard and non-standard dialects, and their phonological status.

Chapter Two is basically divided into two sections, with the first one discussing the 'general' type of vowel alternation (dialectal and non-dialectal), and the second section dealing with the alternation of [ɪ], [ɨ] & [ʊ] 'specific' in the standard dialect.

Chapters 3, 4, 5, 6 & 7 look into the [ɪ/ɨ/ʊ] alternation in the Zaria, Bauchi, Daura, Katsina & Sokoto dialects respectively, all relative to the standard.

Chapter Eight is devoted to establishing the underlying forms in the words where a labial and/or coronal precede(s).

Chapter Nine examines the -ɪj- and -ʊw- sequences in relation to the alternation under consideration.

Finally, Chapter Ten sets out the conclusions reached in the study.

D E D I C A T I O N

To My Dear Mother, Hajiya Malama Halima

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THE DATA

The data for this thesis is based on five months of fieldwork conducted in the six principal Hausa dialect areas in Northern Nigeria, namely Kano, Zaria, Bauchi, Daura, Katsina and Sokoto. A questionnaire containing lists of words and sentences with their English equivalents was prepared. In each sample utterance one or more vowel slot preceded by a particular consonant was left to be filled in. From each dialect area five speakers, mostly students, were selected for this purpose.

After each speaker had filled in the questionnaire according to what he considered to be his normal pronunciation, an individual interview was carried out. Each one in turn was provided with a fresh questionnaire and requested to say each utterance as naturally as possible into a tape-recorder after the investigator had read out the English equivalent. It was extremely laborious, but that was how it went. The purpose was to compare the vowel he had entered in the questionnaire and the one he had actually uttered, which to a large extent did not correspond, typically on point of the vowel [ɨ] in relation to [ɪ] & [ʊ].

A Hausa native speaker, I, the investigator was born and bred in Zaria before moving to Kano where I have lived for eleven years. So that apart from my home dialect I have had the opportunity to acquaint myself pretty well with the standard. Regarding the other four dialect areas also, I have been to each one on several occasions and made a lot of contact with the people, not to speak of the day-to-day social interaction with friends and colleagues who come from there. Therefore,

in general all these dialects have been familiar to me even before this work was undertaken. Consequently, the findings from the field-work are considered to be accurate.

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CHAPTER ONE

1.0 INTRODUCTION

This study seeks to look into the alternation of vowels [ɪ], [i̱] & [ʊ] in Hausa, a Chadic language in the Afro-Asiatic family of languages. Its general objective is to make a significant contribution to the study of Hausa phonology by digging deep into this particular aspect which seems to attract little attention amongst Hausaists and linguists. The investigation will therefore cover all the six main dialects spoken in Northern Nigeria: the standard (mostly Kano), Zaria, Bauchi, Daura, Katsina and Sokoto dialects.

As to the scope of the study, it is basically concerned with three things: a) to try to identify the particular phonetic contexts within which the alternation of these three vowels takes place in an utterance and where it does not; b) to try, where possible, to establish the underlying forms from amongst the three; and, c) to identify, where possible, the underlying causes for the alternation or non-alternation.

With regard to the presentation of the material the type of transcription adopted is 'phonetic'. While length of consonant will be indicated by doubling the symbol, vowel length will be shown by adding a colon to the symbol. Similarly, a grave accent (ˋ) will be used over a vowel to indicate low tone, a circumflex (ˆ) to indicate falling tone, whereas high tone will be left unmarked. A prosodic glottal stop (ʔ) marking the end of certain utterances will also be shown.

1.1 THE HAUSA CONSONANTS

A 'consonant', in phonetic context, is a speech sound made by a closure or narrowing in the vocal tract, so that the air-flow is either completely blocked, or so restricted that audible friction is produced (Crystal, 1980). This is contrasted with a 'vowel' which is made without a complete closure in the vocal tract or a degree of narrowing which would produce such audible friction. The sounds [b], [k], [θ], [m] and [z] for instance, found in the English words 'board', 'kid', 'think', 'gum', and 'zone' respectively are all consonants, while [æ], [ʌ], [ɪ], [ɛ] and [ʊ] as in 'cat', 'cut', 'bid', 'bed' and 'full' respectively are vowels.

Standard Hausa[1], in point of fact, has a total number of thirty-four (34) different consonant sounds, as follows:

Phonetic	Description	Orthographic
b	voiced bilabial plosive	b
ʔb	glottalized bilabial plosive	ɓ
t	voiceless alveolar plosive	t
d	voiced alveolar plosive	d
k	voiceless dorsal plosive	k
g	voiced dorsal plosive	g
c	voiceless palatal plosive	ky
ɟ	voiced palatal plosive	gy
kw	voiceless labialized-dorsal plosive	kw

[1] It is largely based on Kano dialect, one of four dialects constituting what Hausa dialectologists term East Hausa, the other three being Zaria, Bauchi and Daura. West Hausa, on the other hand, is composed of Sokoto and Katsina dialects.

Phonetic	Description	Orthographic
gw	voiced labialized-dorsal plosive	gw
ʔ	glottal stop	' [2]
ʔj	palatalized glottal stop	'y
ɸ	voiceless bilabial fricative	f
ɸj	palatalized bilabial fricative	fy
s	voiceless alveolar fricative	s
z	voiced alveolar fricative	z
ʃ	voiceless palato-alveolar fricative	sh
h	voiceless glottal fricative	h
m	voiced bilabial nasal	m
n	voiced alveolar nasal	n
ɲ	voiced palatal nasal	"
ŋ	voiced dorsal nasal	"
tʃ	voiceless palato-alveolar affricate	c
dʒ	voiced palato-alveolar affricate	j
s'	voiceless alveolar ejective	ts
c'	voiceless palatal ejective	ƙy
k'	voiceless dorsal ejective	ƙ
kw'	voiceless labialized-dorsal ejective	ƙw
j	voiced palatal approximant	y
w	voiced labio-dorsal approximant	w
l	voiced alveolar lateral	l
r	voiced alveolar trilled	r

[2] In the standard orthography, this symbol is found in word-medial environment only.

Phonetic	Description	Orthographic
ʔd	glottalized post-alveolar flapped	ḍ
ɽ	voiced post-alveolar flapped	r[3]

[3] The orthography does not distinguish the two r's, i.e. the 'trilled' and the 'flapped'.

1.1.1 ENVIRONMENTAL DISTRIBUTIONS

1.1.1.1 Word Initial

With the exception of the voiced palatal nasal [ɲ] and the voiced dorsal nasal [ŋ], all the other consonants occur in this position, as follows:

Transcription	Orthography	Meaning
bà:kw'o:	baƙo	guest [+ male]
ʔbaʊna:	ɓauna	bush cow
tʊɾcè:	turke	peg
do:cì:	doki	horse
kàsa:là:	kasala	weakness
gàɾi:	gari	town
càʊta:	kyauta	prize, present, gift
ɟa:ɾa:	gyara	repair-work
kwa:nò:	kwano	pan
gwà:zaɾmà:	gwazarma	white grub of dung hills
ʔùba:	uba	father
ʔjantʃì:	'yanci	freedom
ɸaɾkwo:	farko	beginning
ɸjaʊtʃè	fyauce	swoop on
sanì:	sani	knowledge
zu:tʃɪ̀ja:	zuciya	heart
ʃè:k'a:	sheƙa	nest
hannu:	hannu	hand
madara:	madara	milk
na:mà:	nama	meat

Transcription	Orthography	Meaning
tʃa:ra:	cara	cock-crow
ʤɪni:	jini:	blood
s'a:ni:	tsani	ladder
c'a:ma:	ƙyama	aversion
k'auje:	ƙauye	village
kw'a:ɾo:	ƙwaro	insect
ja:ɾo:	yaro	boy
wa:k'a:	waƙa	song
lawaʃi:	lawashi	onion-tops
ro:ba:	roba	rubber
ʔda:ci:	ɗaki	room
ɾuwa:	ruwa	water

1.1.1.2 Intervocalic

In this position, with the exception of the palatalized bilabial fricative [ɸj], the voiced palatal nasal [ɲ] and the voiced dorsal nasal [ŋ], all the othersoccur:

Transcription	Orthography	Meaning
ʔabuʔ	abu	thing
gaʔba:	gaɓa	joint, syllable
bu:ta:	buta	kettle
gado:	gado	bed
baka:	baka	bow
ta:ga:	taga	window
ʔbacaluʔ	ɓakyalu	idler

Transcription	Orthography	Meaning
mà:ɟa:zò:	magyazo	stunted person or animal
tàkwàra:	takwara	namesake
ʔagwada:	agwada	coney, hyrax
baʔà:	ba'a	mockery
ʔja:ʔja:	'ya'ya	children
sà:Φa:	safa	socks
k'asa:	ƙasa	earth, country
to:zo:	tozo	hump
k'àʃi:	ƙashi	bone
bùhu:	buhu	sack
kàma:	kama	resemblance
banaʔ	bana	this year
hantʃì:	hanci	nose
da:ʤì:	daji	forest
mò:s'i:	motsi	movement
mac'a:Φi:	maƙyafi	instrument used for drying meat before a fire
sa:k'à:	saƙa	weaving
lakw'àme	laƙwame	eat up greedily
ka:ja:	kaya	luggage
s'a:wa:	tsawa	thunder
salo:	salo	style
taràʔ	tara	nine
bàʔdiʔ	baƌi	next year
kw'à:ɾo:	ƙwaro	insect

1.1.1.3 Syllable-Final (Word Medial)

While the consonants [b, ɸ, s, z, m, n, ɲ, ŋ, l, r and ɽ] can occur freely in this position, the rest cannot, except where they geminate, as shown below in the 'intensive form of the verb' and in the 'participial adjective'. However, here too, with the palatalized glottal stop [ʔj] this is not possible:

Transcription	Orthography	Meaning
s'abgà:	tsabga	whip
ʔbaʔbʔbàzɟeʔ	ɓaßɓazge	pull off branch, maize-cob, etc.
ɽù̀ʔbaʔbʔbe:	rußaßße	rotten one [+ male]
tà̀ttà:ɽuʔ	tattaru	assemble all
ɸì̀tà̀ttu:	fitattu	famous [+ plural]
dò̀ddò̀:ciʔ	doddoki	beat severely
gwù̀dà̀ddu:	gudaddu	fugitive [+ plural]
kakkà̀:maʔ	kakkama	arrest
wà̀ŋkà̀kwkwu:	wankakku	washed [+ plural]
gaggà̀maʔ	gaggama	finish
gwò̀:gà̀gwgwu:	gogaggù	ironed [+ plural]
caccà̀:ɽaʔ	kyakkyara	pour out much fluid
ɟaɟɟà̀:ɽaʔ	gyaggyara	repair, improve
kwakwkwà̀nta:	kwakkwanta	lie down
gwagwgwà̀daʔ	gwaggwada	measure
ʔaʔʔà̀ɸaʔ	a''afa	throw into one's mouth, like groundnuts
s'aɸtà̀:	tsafta	cleanliness
ɸjaɸjɸjà̀:ʔdeʔ	fyaffyade	flog
kaskà̀:	kaska	tick

Transcription	Orthography	Meaning
tʃà̀zbi:	cazbi	rosary
ʃaʃʃà̀:ɾeʔ	shasshare	sweep, clean
bù̀:saʃʃe:	busasshe	dry one [+ male]
hʊhhù̀:ɾaʔ	huhhura	blow with the mouth
ɾʊ̀hwà̀hhu:[4]	ruhwahhu	covered type, as in shoe [+ plural]
tà̀mbajà̀:	tambaya	question
bɪndɨgà̀:	bindiga	gun
kwʊɲjà̀:	kunya	shyness
kaɲwa:	kanwa	potash
tʃʊtʃtʃù̀:ɾaʔ	cuccura	knead into balls
ʔà̀mɪ̀ntatʃtʃɪja:	amintacciya	trusted one [+ female]
ʤɛʤʤ è̀:ɾaʔ	jejjera	arrange in order
hù̀:daʤʤ e:	hudajje	pierced one [+ male]
s'as's'à̀:gaʔ	tsattsaga	cut open, split
nà̀s'as's'e:	natsattse	disciplined one [+ male]
c'ac'c'a:mʊ̀ʃe:	ƙyaƙƙyamushe	emaciate
k'ak'k'aʊɾà̀tʃe:	ƙaƙƙaurace	boycott
ɸè̀:k'à̀kw'kw'u:	feƙaƙƙu	sharpened, as in pencil [+ plural]
kw'akw'kw'à̀:tʃeʔ	ƙwaƙƙwace	take by force
jajjà̀:gaʔ	yayyaga	tear into pieces
jà̀:jà̀jju:	yayayyu	weaned, as in child [+ plural]
wawwà̀ɾce:	wawwarke	recover from sickness
sà̀lka:	salka	kind of water-bottle
bʊrʄè:	burge	impress (vb.)

[4] Pronunciation in West Hausa as against ɾʊ̀ɸà̀ɸɸu: in East Hausa.

Transcription	Orthography	Meaning
ʔdaʔdʔdàʊɾeʔ	ɗaɗɗaure	tie up, imprison
ɾù:ʔdaʔdʔdɪja:	ruɗaɗɗiya	confused one [+ female]
tʊɾmi:	turmi	mortar

1.1.1.4 Syllable-Final (Word-Final)

In this environment, only [t, k, c, Φ, s, ʃ, m, ŋ, l and r] occur to the exclusion of the rest. A glottal stop [ʔ] too, can occur here, but not as a consonant. On the contrary, as a prosodic marker at the end of certain categories of lexical units that come in pausal position.[5] Take the following examples:

Transcription	Orthography	Meaning
bʊt	but	ideophone, emphasizing sudden leap
tak	tak	ideophone, emphasizing quantifier 'one'
wac/ʔac	waky/aky	interjection, expressing regret or dismay
kaΦ	kaf	ideophone, emphasizing completeness

[5] The most noticeable category of lexical units so characterized being a short vowel ending one , such as biyu/[bɪjuʔ], 'two' - Ya ba ni biyu/[ja:ba:nìbɪjuʔ], 'He gave me two'; goma/[gwo:màʔ], 'ten' - Mun sami goma/[mʊnsà:mɪgwo:màʔ], 'We got ten'; Karfi/[k'aɾΦiʔ], 'place name' - Ta tafi Karfi/[ta:tàΦɪk'aɾΦiʔ], 'She went to Karfi'; kwalekwale/[kwàlɛkwàleʔ], 'canoe' - Na ga kwalekwale/[na:gakwàlɛkwàleʔ], 'I saw a canoe'; talotalo/[tàlɔtàloʔ], 'turkey' - Sun yanka talotalo/[sʊŋjaŋkàtàlɔtàloʔ], 'They killed a turkey'.

Transcription	Orthography	Meaning
takwàs	takwas	eight
kaʃ	kash	bother!
ʃam	sham	ideophone, emphasizing body stretching
nâŋ	nan	here
kal	kal	ideophone, emphasizing good quality of wash
bɪ̀jar	biyar	five

1.2 THE HAUSA VOWELS

A 'vowel', as briefly mentioned in 1.1, is a speech sound produced without a closure in the vocal tract or a degree of narrowing that would bring about audible friction. To recapitulate the English examples given, [æ], [ʌ], [ɪ], [ɛ] and [ʊ] as in the words 'cat', 'cut', 'bid', 'bed' and 'full' respectively are all vowel sounds. Now, in view of the non-continuing changing quality of such vowels during production, they are termed 'monophthongs'. They are contrasted with 'diphthongs' which are vowels of continuing changing quality, such as [ai], [au] and [ɔi] in the words 'bite', 'bout' and 'boy' respectively.

Generally speaking, in Hausa, the standard and non-standard alike, the same kind of vowel system operates. Apart from various variants, twelve (12) different vowels are found to be functioning. And, of this number, ten (10) are monophthongs, the remaining two (2) being diphthongs. Similarly, in terms of duration five (5) of the monophthongs are 'short' and five are 'long', as described in 1.2.1 & 1.2.2 below:

1.2.1 THE MONOPHTHONGS

"long"

Phonetic	Description	Orthographic
i:	close front (with lips spread)	i
u:	close back (" " rounded)	u
e:	half-close front (with lips spread)	e
o:	half-close back (" " rounded)	o
a:	open central (with lips neutral)	a

The "short" vowels, when pausal, have the same phonetic quality as their long counterparts. In non-pausal position however, they in most cases differ. So that the non-pausal qualities are described below:

ɪ	front spread (between close & half-close and slightly centralized)	i
ʊ	back rounded (between close & half-close and slightly centralized)	u
ɛ	half-open front (with lips neutral)	e
ɔ	half-open back (with lips rounded)	o
a	same quality as [a:]	a

1.2.2 THE DIPHTHONGS

Phonetic	Description	Orthographic
aɪ[6]	Begins with an open central vowel position and moves towards a close front vowel position. The lips go from neutral to spread	ai
aʊ[7]	Begins with an open central vowel position and moves towards a close back rounded vowel. The lips go from neutral to close rounded	au

Now, take an example of each vowel in a lexical unit, accordingly:

A

Transcription	Orthography	Meaning
ci:ɸi:	kifi	fish
tu:ɽu:	turu	rebellion
be:be:	bebe	deaf-mute [+ male]
zo:mo:	zomo	rabbit
ta:na:	tana	worm

[6] The [eɪ] variant begins from a half-open front position and moves towards a close front position. The lips go from neutral to spread.

[7] The [oʊ] variant begins from a half-open back position and moves towards a close back position. The lips go from neutral to round.

B

Transcription	Orthography	Meaning
tʃɪcì:	ciki	stomach
tàɸi ʔ	tafi	go
tʊdù:	tudu	hill
ʔàbù ʔ	abu	thing
ɸɛntì:	fenti	paint
màː ɟe ʔ	mage	cat
zɔ̂bba:	zobba	rings
maŋgwàɽò ʔ	mangwaro	mango
s'àɽo:	tsaro	defence
do:sà ʔ	dosa	do repeatedly

C

waɪgà:	waiga	look back
taʊna:	tauna	chewing
kâɪ	kai	head
tàbà:ɽaʊ ʔ	tabarau	spectacles

1.2.3 THE VOWEL [ɨ]

The vowel [ɨ] is a 'short' monophthong with the quality 'close central unrounded'. It is a major variant in the Hausa phonological system. However, it has no particular symbol as yet in the orthography. As a variant for the vowel [ʊ] or [ɪ] (or sometimes for both) it is written sometimes as 'u' and sometimes as 'i', as below:

Orthography	Transcription	Meaning
ɗunki/ɗinki	ʔdʊŋci:/ʔdɨŋci:/ʔdɪŋci:	sewing
fushi/fishi	ɸʊʃi:/ɸɨʃi:/ɸɪʃi:	anger
zube/zibe	zʊbe:/zɨbe:/zɪbe:	tribal mark
nufi/nifi	nʊɸi:/nɨɸi:/nɪɸi:	intent
turke/tirke	tʊɽce:/tɨɽce:/tɪɽce:	peg

Cases are also to be found where 'i' exclusively is used in reference to it:

niƙa	nɨk'aʔ	grind
rina	ɽɨnaʔ	dye
ridda	rɨddaʔ	apostasy
ɗiga	ʔdɨgaʔ	drop
dila	dɨla:	fox
likkafa	lɨkka:ɸa:	stirrup
tsira	s'ɨɽaʔ	germinate
tinƙaho	tɨŋk'a:ho:	putting on airs
siddabaru	sɨddabaruʔ	magic
zirnaƙo	zɨrna:kw'o:	hornet

1.3 THE PHONEMES

A 'phoneme', by definition, is a minimal unit of sound capable of distinguishing words of different meanings (Hyman, 1975). Two phonetically similar sounds are said to be phonemes if they occur in the same phonetic environment in a lexical unit, and if the substitution of one sound for the other brings about a difference in meaning. The consonant sounds [p] and [b] in the English pairs of words 'pin' and 'bin', 'rapid' and 'rabid' and, 'rip' and 'rib' are thus, both phonemes. Similarly, [ɛ] and [æ] in 'bet' and 'bat' in the case of vowels.

In standard Hausa, all those consonant sounds other than the voiced palatal nasal [ɲ] and the voiced dorsal nasal [ŋ] discussed under 1.1, are 'distinctive' and therefore, phonemes. The two exceptions [ɲ] and [ŋ] are never contrastive, but in simple terms, variants of contrastive 'n' in specific environments.[8] For the vowels, on the other hand, in both the standard and non-standard dialects those twelve (12) presented under 1.2, are likewise 'contrastive' and thus, phonemes. A few examples with minimal pairs can be cited to clarify matters:

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[8] [ɲ] is found syllable-finally in word medial position before the palatal approximant [j], as in kwuɲjà: and, [ŋ] in this position before a back consonant, as in kaŋwa: (1.1.1.3) and, word-finally, as in nâŋ (1.1.1.4).

Φ & b

Φaɽi:	"	baɽi:
drought	"	leaving out
ʔaΦa:wa:	"	ʔaba:wa:
popping into the mouth	"	kind of thread

t & d

taʊɽi:	"	daʊɽi:
toughness	"	infant's tonic
kw'o:ta:	"	kw'o:da:
haft	"	kidney

ʃ & ʧ

ʃuːɽiː	"	ʧuːɽiː
kicking	"	lump of something
kaːʃɪjaː	"	kaːʧɪjaː
cashier	"	circumcision

g & w

gaːwaː	"	waːwaː
corpse	"	fool
s'aːgaː	"	s'aːwaː
tribal mark	"	thunder

kw & kw'

kwa:ʕi:	"	kw'a:ʕi:
senior wife	"	strength

a: & a

s'a:ʕi:	"	s'aʕi:
arrangement	"	protection
kwu:ʕa:	"	kwu:ʕa?
hyena	"	place name

o: & i:

mo:ta:	"	mi:ta:
motor vehicle	"	grumbling
ta:ʕo:	"	ta:ʕi:
conference	"	cough

i: & a:

mi:ci:	"	ma:ci:
wound	"	mark

aɪ & aʊ

ʔaɪci:	"	ʔaʊci:
work	"	expansion

a: & aʊ

s'a:ni:	"	s'aʊni:
ladder	"	hill

e: & e

du:s'e:	"	du:s'eʔ
stone, rock, mountain	"	place name

o: & o

ɾo:gwò: " ɾo:gwò?

cassava " place name

However, note that where a common noun is turned into a place name by shortening the final vowel to be accompanied by a glottal stop in pause, as in the case of kwu:ɾa: & kwu:ɾa?, du:s'è: & du:s'è?, and, ɾo:gwò: & ɾo:gwò?, the phonemic contrast in each case is maintained only in 'statement' form, whereas the vowels in question tend to neutralize in the corresponding 'interrogative' form:

S. Ya ga kura & Ya tafi Kura

[ja:gakwu:ɾa:] " [ja:tàɸɪkwu:ɾa?]

He saw a hyena " He went to Kura

Q. Ya ga kura? " Ya tafi Kura?

[ja:gakwu:ɾâ:?] " [ja:tàɸɪkwu:ɾâ:?]

Did he see a hyena? " Did he go to Kura?

S. Sun hau dutse & Sun nufi Dutse

[sʊŋhaʊdu:s'è:] " [sʊnnʊ̀ɸɪdu:s'è?]

They climbed a rock " They went in the direction of Dutse

Q. Sun hau dutse? " Sun nufi Dutse?

[sʊŋhaʊdu:s'ê:?] " [sʊnnʊ̀ɸɪdu:s'ê:?]

Did they climb a rock? " Did they go in the direction of Dutse?

S. Ta sayi rogo & Ta taɓa zuwa Rogo

[ta:sàjɪɽo:gwò:] " [ta:ta?bàzʊwà:ɽo:gwò?]

She bought cassava " She once went to Rogo

Q. Ta sayi rogo? " Ta taɓa zuwa Rogo?

[ta:sàjɪɽo:gwô:?] " [ta:ta?bàzʊwà:ɽo:gwô:?]

Did she buy cassava? " Has she ever been to Rogo?

The few minimal pairs cited as example testify the phonemic status of those consonant and vowel sounds. However, with regard to the consonants [ɸ] and [h] in the standard dialect there is a further explanation in view of their unique phonological features before a vowel, as follows:

The bilabial fricative [ɸ]

This sound occurs before all vowels:

Before -a (including 'aɪ' & 'aʊ')

ɸa:ta:	skin
ɸaʃi:	robbery
ɾʊmɸa:	stall
kamɸaɪʔ	pants
ɸaʊɸaʊʔ	never

Before -i

ɸi:ʔda:	flaying
ɸi:ɸi:kwo:	preference
ɾa:ɸi:	stream
taɸiʔ	go
ɸɪtaʔ[9]	go out

[9] Under certain circumstances [ɨ] is also substituted for [ɪ] in this dialect. Thus, ɸɨtaʔ is another form of pronunciation for this word

Before -e

ɸe:sa̋ʔ	spray
ɸe:ɾe̋ʔ	peel with knife
k'aɾɸe̋:	steel
ta̋ɸeʔ	be in state of coming
ɾʊ̋ɸeʔ	be in state of shutting

Before -u

ɸû:	ideophone, associated with how an angry person leaves a place after getting annoyed
ɸʊʃi:	anger
ɸʊska̋:	face
ɾʊ̋ɸuʔ	be well shut
ʃa̋:ɸuʔ	be well painted

Before -o

ɸô: (Eng.)	small plastic container on which a child is seated to urinate or pass stool
ɸo:dűʔ (Eng.)	Ford brand of motor vehicle
ɸamɸő: (Eng.)	pump
nʊɸo:ʔ	walk in this direction towards
tʊɸo:ɸi:	clothes

The glottal fricative [h]

Like the bilabial fricative [ɸ], the glottal fricative [h] is found before all vowels:

Before -a (including 'aɪ' & 'aʊ')

ha:	what is said to a child to open the mouth
haɽi:	attack
haɪhʊwa:	child delivery
haʊni?	executioner
bahagwo:	lefty [+ male]

Before -i

hi:ra?	chatting
hi:la: (Ar.)	guile
hɪmma: (Ar.)	diligence
la:hɪra: (Ar.)	the hereafter
hîl (Eng.)	heel of shoe

Before -e

hê:?	exclamation made by a praise-singer's mate during performance to draw the attention of the audience
he:lʊma? (Eng.)	headman

he:dùkwatà: (Eng.)	headquarters
he:dìmastà: (Eng.)	headmaster
ʔàlhe:rì: (Ar.)	good turn, kindness

Before -u

hu:ɣàʔ	blow
hu:hù:	package of kolanuts
bùhu:	sack of something
hùkwu:mà: (Ar.)	authority, government
hʊʔdʊbà: (Ar.)	sermon

Before -o

ho:lo:kw'o:	dust-storm
ho:lè:	enjoy oneself
sàho:ɣami:	wastrel [+ male]
tìŋk'a:hò:	putting on airs
ʔò:hoʔ	I neither know nor care; it is no concern of mine

Now, as seen above, both [Φ] and [h] occur independently before 'a/aɪ/aʊ', 'i', 'e', 'u' and 'o' in pure Hausa words and a few English and Arabic loans. This suggests that the two consonants are different phonemes in this dialect. Another evidence in support of this can be seen in the following minimal pairs:

ɸaɽi:	&	haɽi:
drought	"	attack
ɸa?di:	"	ha?di:
saying	"	mixing up
ɸanta:	"	hanta:
kind of orange drink	"	liver
siɬɸiri: (Ar.)	"	siɬhiri: (Ar.)
a zero	"	sorcery, magic

Nevertheless, on the evidence of Bargery (1934), [h] was an allophone of /ɸ/ before -u in words such as hʊ?du? 'four', hu:?da: 'making ridges on farm' and hu:ʤi: 'piercing'. Today, in all dialects these words are pronounced with initial h-. Similarly, in a few English loans, words with initial f- or p- followed by -o in English are pronounced with h-, as in ho:to: 'photo', ho:da: 'talcum powder' and ho:li? the phrase 'fall in', as used in military drill exercise. Here, on the grounds that other loans from English with initial f- or p- followed by other vowels are pronounced with ɸ- in this dialect, such as ɸim 'film', ɸe:da: 'pedal', ɸʊla:wa:[10] 'flour/flower' and ɸa:ti: 'a reception/political party', one can regard this [h] to be an allophone of /ɸ/ before -o.

So that as a whole, since all those thirty-two (32) consonant sounds are contrastive in standard Hausa and all the twelve (12) vowels shared by both the standard and non-standard dialects are similarly contrastive, one can right away say that the standard dialect has a

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[10] The 'ʊ' here however, is never found in the English equivalent. It is employed by Hausa to break the consonant cluster fl- which is otherwise contrary to its phonological system.

total of thirty-two (32) consonantal phonemes and twelve (12) vowel phonemes. Hence, /b, ʔb, t, d, k, g, c, ɟ, kw, gw, ʔ, ʔj, Φ, Φj, s, z, ʃ, h, m, n, ʧ, ʤ, s', c', k', kw', j, w, l, r, ʔd, ɽ, i:, ɪ, u:, ʊ, e:, ɛ, o:, ɔ, a:, a, aɪ and aʊ/.

1.4 THE ALLOPHONES

A phonetic realization of a phoneme in a particular environment is referred to as 'allophone'. The phrase 'particular environment' is of great significance in so far as the particular allophones of a given phoneme in a given language occur under predictable conditions. As Gimson puts it, "no two realizations of the same phoneme which have a markedly different phonetic quality occurring in the same situation" (1971: 47). They have a complementary distribution, on the contrary. The so-called 'clear' and 'dark' l's in English provide a good example. That although the lateral [l] and the 'velarized' lateral [ɫ] belong to the same phoneme /l/, the former (clear) occurs word-initially and the latter (dark) word-finally, as in the pairs of words 'leaf & feel', lamb & seal', link & zeal'.

There are quite a number of instances of a phoneme having more than one phonetic realization in Hausa, both in the standard and in other dialects. The same allophone is in one case referable to one phoneme, and in another to a different phoneme, according to lexical, grammatical or sometimes historical considerations. For example, the singular noun bu:tà: 'kettle' gives plural bu:to:ʧi: and the verb zânta: 'have a chat with' gives verbal noun zàntʃe: where [ʧ] is the allophone of /t/ before a front vowel. In the word ʧa:ʧaʔ 'gambling' however, [ʧ] occurs not before a front vowel, and requires one to recognize /ʧ/ as a phoneme in Hausa, and not merely as an allophone of /t/, even if it could be established that ʧa:ʧaʔ is a loan word - which, with a short final vowel followed by a glottal stop, it might be. There are a lot of words in Hausa with ʧ- followed by -a, but in the

grammatical process of plural formation or, of switching from one form of grade to another in the verbal system for instance, even neologisms or new loans show the 'ta/tʃi/tʃe' relationship, e.g. ʔàkantà: 'accountant' / ʔakanto;tʃi: (pl.) and ɸàhɪntà: 'understand' / ɸàhɪntʃe:[11] (same).

On the other hand, we find the words tè:kwuʔ 'ocean', te:làʔ 'tailor', dʒantèʔ 'fever', tî: 'tea', ti:tì: 'street', tì:lo: 'one' and the like, where we might expect tʃ- if the 'ta/tʃi/tʃe' relationship was a purely phonological feature of Hausa. Such considerations apply to the other sets given in Figure I. Nevertheless, in the examples cited, the allophones are related to the corresponding phonemes, even if the same articulations are not always to be so related in the language.

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[11] While ɸàhɪntà: falls under the category of 'A' form of grade II verb, syntactically used when there is no object following, e.g. ja:ɸàhɪntà:, 'He understands', ɸàhɪntʃe: on the other hand, is in the 'B' form of same grade, employed when an object pronoun follows, e.g. ja:ɸàhɪntʃe:niʔ ,'He understands me'.

THE CONSONANTAL ALLOPHONES FOR THE STANDARD DIALECT

Allophones			Phoneme		Environment Found	Example		
tʃ	&	t	t	tʃ	before vow. [+ fr.]	tu:to:tʃi:	'flags'	tu:to:ti:*
				t	elsewhere	tu:tà:	'flag'	
dʒ	"	d	d	dʒ	before vow. [+ fr.]	ɟɪdà:dʒe:	'houses'	ɟɪdà:de:*
				d	elsewhere	ɟɪda:	'house'	
dʒ	"	z	z	dʒ	before vow. [+ fr.]	kà:dʒi:	'chickens'	kà:zi:*
				z	elsewhere	kà:za:	'hen'	
ʃ	"	s	s	ʃ	before vow. [+ fr.]	k'asà:ʃe:	'countries'	k'asà:se:*
				s	elsewhere	k'asa:	'country'	
j	"	w	w	j	before vow. [+ fr.]	ba:ji:	'slaves'	ba:wi:*
				w	elsewhere	ba:wà:	'slave' [+ male]	
h	"	Φ	Φ	h	before vow. [+ bk.]	hʊ?du?	'four'	Φʊ?du?*
						hò:to:	'photo'	Φò:to:*
				Φ	elsewhere	ci:Φi: 'fish', Φe:sà 'spray', k'aΦà: 'foot'		
ŋ	"	m	m	ŋ	word-final, except in the case of -m ending ideophones and certain English loans[12]	ma:làŋ	'teacher, learned'	ma:làm*
						mʊ̀tʊ̂ŋ	'human being'	mʊ̀tʊ̂m*
				m	elsewhere			

[12] Examples are, for ideophones - tìndʒɪm 'emphasizing fullness of a pit with water, like a well' NOT tìndʒɪŋ*, kam 'emphasizing holding something tightly' NOT kaŋ*; and, for English loans - bâm, 'bomb' NOT bâŋ*, Φîm, 'film' NOT Φîŋ*

(Figure I)

Allophones	Phoneme		Environment Found	Example		
c, kw & k	k	c	before vow. [+ fr.]	cè:ce:	'bicycle'	kè:ke:*
		kw	before vow. [+ bk.]	tarkwò:	'trap'	tarkò:*
		k	elsewhere	kàrà:tu:	'reading'	
c',kw' " k'	k'	c'	before vow. [+ fr.]	za:c'i:	'sweet'	za:k'i:*
		kw'	before vow. [+ bk.]	kw'o:ɸà:	'door'	k'o:ɸà:*
		k'	elsewhere	k'aɾì:	'tumour'	
ɟ, gw " g	g	ɟ	before vow. [+ fr.]	mà:ɟe?	'cat'	mà:ge?*
		gw	before vow. [+ bk.]	gwo:mà?	'ten'	go:mà?*
		g	elsewhere	gàɾi:	'town'	
ɲ,ŋ,m " n	n	ɲ	syllable-final before the palatal approximant 'j' word-medially	gaɲje:	'leaf'	ganje:*
		ŋ	word-final and before cons. [+ bk.] word-medial	tʃâŋ gàŋga:	'there' 'drum'	tʃân* gànga:*
		m	utterance-medial before cons. [+ lab.]	saɾcɪmbautʃi?	'Emir of Bauchi'	
				sumɸìta?	'they've gone out'	
				ɟɪdammu:sa:	'Musa's house'	
				zâmba:ʃì?	'I will give him'	
		n	elsewhere	na:mà: 'meat', hantà: 'liver'		

With regard to the kinds of allophones found within the vowel system however, let us refer once again to the phonological behaviour of those twelve (12) vowels first, as cited as example in 1.2. It may have been noticed that all the examples in question were centred round open syllable (CV / CV:) both pausally and non-pausally without exception, in the case of those under 'A' and 'C' and, with some exceptions ([e] & [o] never occurring medially) in the case of those under 'B'.

Now, let us consider the situation in other circumstances, namely in a closed syllable (CVC). Here, generally speaking, only [ɪ, ʊ, ɛ/a/jɛ/ja, ɔ/a/wɔ/wa] and [a] all of which are short, occur to the exclusion of a long vowel or a diphthong which has to be shortened or monophthongized accordingly. Examine the following three categories of examples respectively:

I

ɪ	cɪrcì:	kindness
ʊ	ʔbʊntù:	rice-husks
ɛ [12]	kàɽêŋ	the dog
a	kàɽâŋ	" "
jɛ	mà:ɟêŋ	the cat
ja	mà:ɟâŋ	" "

---

[12] & [13] The palatal prosody of [ɟ] in mà:ɟêŋ/mà:ɟâŋ or the labial prosody of [kw] in tarkwɔ̀ŋ/tarkwàŋ is shared by both consonant and vowel, being a feature of the whole syllable. It is contrasted with the palatality in [ɟ] as in ɟa:ɽa:, 'repairs' or the labiality in [kw'] as in kw'alloʔ, 'ball' which is not so shared, this, being for the consonant entirely.

ɔ [13]	sɔ̀:sɔ̂ŋ	the sponge
a	sɔ̀:sâŋ	" "
wɔ	tarkwɔ̀ŋ	the trap
wa	tarkwàŋ	" "
a	ɸaɾkwo:	beginning

II

ʔda:cì: 'room' + -n > ʔda:cɪ̀ŋ 'the room'

ʔda:cì:ŋ*

ʃa:nu: 'cattle' + -n > ʃa:nûŋ 'the cattle'

ʃa:nû:ŋ*

dàʔbe: 'floor' + -n > dàʔbɛ̂ŋ/dàʔbâŋ 'the floor'

dàʔbɛ̂:ŋ*

baŋgwo: 'wall' + -n > baŋgwɔ̂ŋ/baŋgwâŋ 'the wall'

baŋgwɔ̂:ŋ*

ɾì:ga: 'gown' + -r > ɾì:gâr 'the gown'

ɾì:gâ:r*

III

kâɪ 'head' + -n > kâŋ 'the head'

kaɪŋ*

tàbà:ɾaʊʔ 'spectacles' -n > tàbà:ɾâŋ 'the spectacles'

tàbà:ɾaʊ̂ŋ*

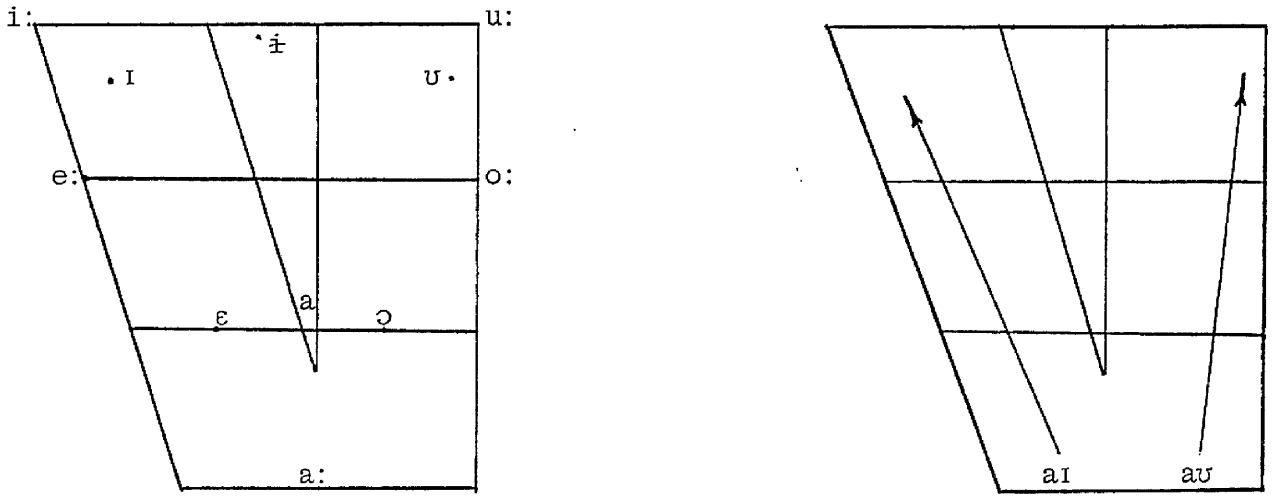
However, attention is drawn to the fact that in the examples cited under I, the [ɪ] & [ʊ] under those circumstances, i.e., in a closed syllable, are allophones of /i:/ & /u:/ respectively. But, in open-syllable medial position they are not, in so far as [ɪ] & [i:] on the one hand, and [ʊ] & [u:] on the other are found to contrast in this environment, as depicted in the pairs of words ɸɪtò: & ɸi:tò:, meaning 'ferrying' & 'whistling' respectively, and bʊʔdèʔ & bu:ʔdèʔ, meaning 'cover, especially with dust' & 'open' respectively. In other words, [ɪ] & [ʊ] are here both different phonemes as /i:/ & /u:/ are. Against this, neither [e] nor [ɛ], and neither [o] nor [ɔ] are ever found open-syllable-medially. And, for [a], although it has rather the same phonetic quality as its long counterpart [a:], the two are contrastive both in this environment and word-final, as respectively exemplified in 1.3 with the pairs of words s'a:ɣì: & s'aɣì:, 'arrangement' & 'protection', and kwu:ɣa: & kwu:ɣaʔ, 'hyena' & 'place name'. The vowel allophones are provided in Figure II.

THE ALLOPHONES OF VOWELS SHARED BY BOTH THE STANDARD AND NON-STANDARD DIALECTS

Allophones	Phoneme		Environment Found	Example	
ɪ & i:	i:	ɪ	closed syllable	ma:ʃɪ̀ŋ	'the spear'
		i:	elsewhere	ma:ʃì:	'spear'
ʊ " u:	u:	ʊ	closed syllable	kwʊlci:	'truncheon, club'
		u:	elsewhere	kwu:ka:	'crying, complaint'
ɛ/a/jɛ/ja " e:	e:	ɛ	closed syllable after cons. [+ fr.]	zà:ʔbɛ̂ŋ	'the election'
		a	" " " " "	zà:ʔbâŋ	" "
		jɛ	" " " " [+ bk.]	ɽàkjɛ̂ŋ	'the sugar-cane'
		ja	" " " " "	ɽàkjâŋ	" "
		e:	elsewhere	tè:kwuʔ	'ocean'
ɔ/a/wɔ/wa " o:	o:	ɔ	closed syllable after cons. [+ fr.]	kwàndɔ̂ŋ	'the basket'
		a	" " " " "	kwàndâŋ	" "
		wɔ	" " " " [+ bk.]	ɽo:gwɔ̀ŋ	'the cassava'
		wa	" " " " "	ɽo:gwàŋ	" "
		o:	elsewhere	zo:mo:	'rabbit'
a " a:	a:	a	closed syllable	hù:lâr	'the cap'
		a:	elsewhere	hù:la:	'cap'
a " aɪ	aɪ	a	closed syllable	mâŋ	'the oil'
		aɪ	elsewhere	mâɪ	'oil'
a " aʊ	aʊ	a	closed syllable	câŋ	'the beauty'
		aʊ	elsewhere	câʊ	'beauty'

(Figure II)

THE VOWEL CHART



(Figure III)

CHAPTER TWO

2.0 VOWEL ALTERNATIONS : General

In Chapter One, the kinds of consonants found to operate in Standard Hausa and the kinds of vowels shared by both the standard and non-standard dialects were introduced. Thirty-two (32) consonants and twelve (12) vowels we said, are phonemes among which a fair number have more than one allophone occurring under predictable conditions. For instance, the phoneme /t/ has an allophone [tʃ] before a front vowel and [t] elsewhere; /d/ has [dʒ] before a front vowel and [d] elsewhere; /k/ has [c] before a front vowel, [kw] before a back vowel and [k] elsewhere; /g/ has [ɟ] before a front vowel, [gw] before a back vowel and [g] elsewhere; /i:/ has [ɪ] in a closed syllable and [i:] elsewhere; /u:/ has [ʊ] in a closed syllable and [u:] elsewhere; /aɪ/ has [a] in a closed syllable and [aɪ] elsewhere; /aʊ/ has [a] in a closed syllable and [aʊ] elsewhere. Now, in this chapter, instances of some of the vowels 'alternating' with one another will be examined.

Two or more linguistically similar units can be said to alternate if one can be replaced by the other in the same context within an utterance without altering the sense or rendering it meaningless. In other words, under such circumstances one unit precisely serves as an alternative pronunciation of the other. Vowel alternation in Hausa can, in fact, be conveniently classified into two. These are, the type that can be termed 'general', and the alternation of [ɪ], [i̟] and [ʊ] 'specific'. For the moment however, as the title signals, the discussion will centre round the first type.

In Hausa, the standard and non-standard dialects alike, both monophthongs and diphthongs have a tendency to alternate within certain utterances.[14] Investigation reveals that except in a very few cases it is a 'long' vowel always alternating with another 'long', a 'short' with a 'short' and a 'diphthong' with another 'diphthong'.

The 'general' type of vowel alternation, so to speak, is restricted to certain lexical units alone, in medial and final environments. Besides, the alternation is in the vast majority of cases 'dialectal' whereby one's pronunciation of a particular word with a particular vowel therein can readily reveal the dialect area where that person comes from. This, indeed, implies that there are a few cases where the phenomenon affects the entire language. Thus, we can sub-classify this 'general' type of vowel alternation into: A. Non-Dialectal and B. Dialectal.

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[14] An 'utterance' here can be a lexical unit or a sentence.

A. Non-Dialectal

As already indicated, there are only a few cases under this sub-category of 'general' vowel alternation, the non-dialectal. Among the few notable examples are the following:

I Short & Short (Word-Medial)

ʤɪhà:	~	ʤàhà:	direction, state
ʔìʃìrìŋ	~	ʔàʃìrìŋ	twenty
ʃɪc'ɪjantʃì:	~	ʃac'ɪjantʃì:	act of shamelessness
mʊ̀ba:jɪʔà:	~	mʊ̀ba:jaʔà:	a homage paid to a newly appointed chief
ʔbàrʔbàʃi:	~	ʔbʊ̀rʔbʊ̀ʃi:	crumb, flake
wala:kantʃì:	~	wʊla:kantʃì:	contempt
ɣìŋɣìɾìm	~	gwʊ̀ŋgwʊ̀ɾʊ̀m	ideophone, expressing hugeness

II Short & Short (Word-Final)

ʔàkwà:tʊ̀ʔ	~	ʔàkwà:tì?	box

III Long & Long (Word-Medial)

ni:sà:	~	ne:sà:	make a sigh

IV Long & Long (Word-Final)

kwʊ̀ʤè:ɾi:	~	kwʊ̀ʤè:ɾu:	chairs

V Long & Short (Word-Medial)

ʔàgwo:gwo:	~	ʔagwagwo:	clock
sabò:dàʔ	~	sabàdà/sabàddàʔ	because
ʃè:daɽi:	~	ʃàdaɽi:	mat of reeds, grass used for curtain or sitting

VI Diphthong & Monophthong (Word-Medial)

saɪha:nì:	~	sàha:nì:	kettle

B. Dialectal

It was mentioned before that the 'dialectal' sub-category of 'general' vowel alternation is much more common in the language than the 'non-dialectal' correlate. Now, below is a list of examples, with the particular dialect area(s) each item is more associated with, abbreviated against it[15]:

I Short & Short (Word-Medial)

za:bìja:	~	za:bàja: (KT)	woman who leads singing
ʧîŋje?	~	ʧaŋjè? (KT & SK)	eat up
?ìgwa:	~	?àgwa: (SK)	artillery gun
c'ɪʃɪŋc'ɪʃi?	~	kw'ʊʃɪŋkw'ʊʃi? (KT)	rumours
la:lùba:	~	la:làba: (KT & SK)	grope for
tàso:no:	~	tùso:no: (Zr)	dried nose-mucus
sansàna:	~	sunsùna: (Zr)	smell at
kwò:kawà:	~	kwò:kwʊwà: (Zr & SK)	wrestling
?ùŋgwùlu?	~	?àŋgwùlu? (Zr & SK)	vulture
?ùŋgwʊwa:	~	?àŋgwʊwa: (Zr & SK)	ward in a town

II Short & Short (Word-Final)

bè:li?	~	bè:lu? (Zr)	uvula

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[15] The first word in each pair is the form in the standard dialect and, the second being the 'alternative' used elsewhere. Similarly, the abbreviation KT (enclosed in parenthesis) stands for Katsina, Zr for Zaria, SK for Sokoto, Dr for Daura and Bau. for Bauchi.

III Long & Long (Word-Medial)

ʤa:ʤe:	~	ʤe:ʤe: (KT)	word, expressing sympathy to somebody over a misfortune other than death
gwù:gwɔwà:	~	gwò:gwɔwà: (Zr)	whirlwind
tu:bàli:	~	to:bàli: (Zr)	brick
madu:bi:	~	madi:bi: (SK)	mirror
dò:ci?	~	dù:ci? (Zr)	beat

IV Long & Long (Word-Final)

ʒe:mù:	~	ʒe:mè: (KT & SK)	beard
màkàràntu:	~	màkàrànti: (Bau.)	schools
tàkàrdu:	~	tàkàrdi: (Bau.)	papers
me:	~	mi: (KT & SK)	the interrogative particle 'what'
cɪ?dà:	~	cɪ?dì: (KT, SK & Dr)	drumming
ʈe:ma:	~	ʈe:me: (KT & Dr)	coney, hyrax
lùɸa:ɸà:	~	lùɸa:ɸì: (KT)	shroud
zanè:	~	zanì: (Zr)	wrapper
lè:mo:	~	lè:mu: (Zr & KT)	orange
kw'ʊ̀lli:	~	kw'ʊ̀llu: (Zr)	mixture prepared for frying or boiling

However, note that in the alternative form for the second and third words sampled from Bauchi, the -i: is a plural suffix, the stems

being makarant- and takard- respectively. But, although the dialect in question employs this vowel immediately after alveolars 't' and 'd', the phonetic structure of these consonants is in no way affected by the usual phonological rule that palatalizes such consonants under such circumstances (Fig. I). For, one would have expected those words to have surface realization màkàràntʃi:* and tàkàrʤi:* respectively in this particular dialect. This is also true of the second open syllable in madi:bi:, the Sokoto pronunciation of the word for 'mirror' exemplified under III above, where the consonantal element 'd' despite being followed by 'i:' is not palatalized either.

V Diphthong & Diphthong (Word-Medial)

ɾàɪɾajà:	~	ɾàʊɾajà: (KT)	sift

VI Diphthong & Diphthong (Word-Final)

làm?baʊ	~	làm?baɪ (KT)	lying comfortably

VII Diphthong & Monophthong (Word-Medial)

sàɪsajà:	~	sì:sɪjà: (Zr)	hair-cut
naʊʃì:	~	nu:ʃì: (Zr, KT & SK)	punch

Here too, it can be noticed that in the Zaria pronunciation of the word for 'hair-cut' exemplified under VII, despite the fact that the alveolar 's' in the first and second open syllables is followed by a front vowel it is never palatalized to 'ʃ'.

2.1 THE ALTERNATION OF [ɪ], [ɨ] & [ʊ] IN THE STANDARD DIALECT

In the previous section, the kind of vowel alternation termed 'general' with sub-categories 'non-dialectal' and 'dialectal' was discussed. We saw that the alternation in question is confined to vowels in the medial and final positions of certain lexical units. Besides, we noticed that in most cases a long vowel always corresponds to another long, a short one to another short and a diphthong to a diphthong. Now, in this section, vowel alternation of another kind, the one that revolves round [ɪ], [ɨ] & [ʊ] 'specific' will be examined in the standard dialect.

In Hausa, both the standard and non-standard dialects, the short forms of close front unrounded [ɪ], close central unrounded [ɨ] and close back rounded [ʊ][16] that are found exclusively utterance-medially within the phonological system, exhibit a very striking case of alternation. They show a very considerable tendency to alternate with one another under certain circumstances.

Nevertheless, from the point of view of orthography, the close central unrounded [ɨ] as indicated under 1.2.3, has at present, no particular symbol for itself. As a variant for the vowel [ʊ] or [ɪ] (or sometimes for both) it is written sometimes as 'u' and sometimes as 'i', e.g. ɗunki or ɗinki, 'sewing', fushi or fishi, 'anger'. There are also cases where 'i' exclusively is used in reference to it, e.g. niƙa, 'grind' rina, 'dye', ridda, 'apostasy'. The 'Working Party On Hausa Orthography' in its report mimeographed in 1972, gives reason

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[16] In the case of [ɪ] & [ʊ] the quality of closeness implies a position between close and half-close (see 1.2.1)

for the non-introduction of an additional symbol in reference to [ɨ]. Such attempt, the Party believes, could just lead to confusion with the other alternating vowels that have ever since been adopted.

As a result of the research for this work, all the consonantal phonemes that are found to exist in the standard dialect will be re-examined by grouping them into five, viz. the labials, which include /ɸ, b, m, ʔb and ɸj/; the coronals, which include /n, r, ɾ, t, s, z, s', d, ʔd and l/; the palatals, which include /ʃ, ʧ, ʤ, c, ɟ, c' and j/; the dorsals, which include /k, g, k', w, kw, gw and kw'/; and the glottals, which include /ʔ, h and ʔj/. This categorization is of great significance as reference will be made all along, to the behaviour of each consonant when it precedes a close vowel, back or front in an utterance, to determine how much effect its place of articulation may possibly have in the process of alternation. Besides, the kind of 'prosody' inherent in both consonant and following vowel (W- backing of the articulation with lip rounding, and Y- fronting of the articulation with lip spreading) will similarly be examined.

However, the 'palatalized bilabial fricative' and the 'palatalized glottal stop' consonantal phonemes /ɸj and ʔj/ respectively are found in a very limited environment within the phonological system. While [ɸj] is exclusively found before the 'open central unrounded' [a] and the diphthong [aʊ], [ʔj] on the other hand, occurs only before [a], as in the words ɸjà:ʔdiɻ, 'flog' / ɸjaʊʧè:, 'swoop on' and ʔja:, 'daughter' respectively. We can thus eliminate these two from consideration with regard to the alternation of [ɪ], [ɨ] and [ʊ] since these items never follow either /ɸj/ or /ʔj/.

Similarly, it can be recalled that in Figure I we indicated that the phoneme /k/ has the allophone [c] before a front vowel, [kw] before a back vowel and [k] elsewhere; /k'/ has [c'] before a front vowel, [kw'] before a back vowel and [k'] elsewhere; and the phoneme /g/ has [ɟ] before a front vowel, [gw] before a back vowel and [g] elsewhere. The idea is that the consonant sounds [c, c', ɟ, kw, kw' and gw] have all got a dual role to play, viz. before a front or a back vowel each is an allophone of an underlying phoneme /k, k' or g/ accordingly and a phoneme elsewhere, i.e. before a/aɪ/aʊ. The phoneme /w/ on the other hand, we said has [j] before a front vowel and [w] elsewhere. This means the consonant [w], like [k, k' and g] before a/aɪ/aʊ, and unlike them, before a back vowel u/o, is a phoneme in its own right in so far as it occurs independently under those specified conditions:

Before -a/-aɪ/-aʊ

wà:sa:	play
watà:	the moon
ʤìwa:	dizziness
wàìna:	kind of food
wâʊta:	foolishness

Before -u

wʊk'a:	knife
wʊta:	fire
kà:wuʔ	uncle

sʊ̀wu:	going to sleep of foot or hand
gà:wʊrtà?	attain large size; be important

Before -o

wo:ba:	apprehension
wò:ɸi:	useless
wò:ʤɪja:	fat
?bàɽa:wò:	thief [+ male]
?ba:wo:	bark, peelings

Now, turning to the situation where all those ten consonants [k, k', g, c, c', ɟ, kw, kw', gw and w] have a phonemic status, i.e. before a/aɪ/aʊ, this can, indeed, be substantiated by the following wide range of 'minimal pairs' covering <u>all</u> without exception:

I

k & c

kaɽma:	"	caɽma:
a foot soldier	"	quivering, shivering

k & kw

kaɽì: " kwaɽì:

rhythm " valley

k " g

màrka: " màrga:

the period when rains " kind of herb
are at their peak

k " ɟ

ka?dè? " ɟa?dè?

shake off, especially " dislodge an upright object so that
dust it becomes in danger of falling

k & gw

kaɪwa:	"	gwaɪwa:
a present taken to someone in another town or village	"	hernia

k " k'

kaʊʔi:	"	k'aʊʔi:
thickness	"	smell of burning rags, hair, etc.

k " c'

ka:sà?	"	c'a:sà?
be unable to	"	admire, especially a lady

k " kw'

kà:ʔa:	"	kw'à:ʔa:
courtesy	"	cheating

k & w

ka:ɾɪja:	"	wa:ɾɪja:
fence, protection	"	segregation

II

c & kw

cầt	"	kwầt
cake	"	coat

c " g

ʔàlcabbà:	"	ʔàlgabbà:
burnous	"	strengthening lining to the neck of certain garments

c & ɟ

ca:ɽa: " ɟa:ɽa:

old camel, old woman " repairs

c " gw

cauɽo: " gwauɽo:

arrow shaft " bachelor

c " k'

ca:ɽè: " k'a:ɽè:

become upset, as in " come to an end, finish
case of water

c " c'

cà:ɽiʔ " c'à:ɽiʔ

pour out some quantity of " take aim at

c & kw'

ca:ɾè:	"	kw'a:ɾè:
become upset, as in case of water	"	choke while eating

c " w

ca:ɾè:	"	wa:ɾè:
(as above)	"	separate, set apart

III

kw & g

kwàɾi:	"	gàɾi:
quiver	"	town

kw & ɻ

kwa:ɽè " ɻa:ɽè

unveil, strip " repair all of things

kw " gw

kwâl " gwâl

coal " gold

kw " k'

kwaɽi̤: " k'aɽi̤:

valley " tumour

kw " c'

kwa:le̤: " c'a:le̤:

reveal, of secret " ignore

kw & kw'

kwa:ʔi: " kw'a:ʔi:

senior wife " strength

kw " w

kwàndo: " wàndo:

basket " pair of trousers

IV

g & ɟ

ga:ʔa: " ɟa:ʔa:

utensils displayed " repairs
in a bride's room

g & gw

galmi:	"	gwalmi:
saltiness, tastiness	"	club, truncheon

g " k'

gà:gaɽà?	"	k'à:gaɽà?
be beyond one's power to achieve something	" "	become impatient about outcome of something

g " c'

ga:ɽò:	"	c'a:ɽò:[17]
huge article, especially a calabash	"	the neck of a bottle-gourd made into a child's trumpet or into a receptacle for a hunter's charms

[17] ga:ɽò: & c'a:ɽò: are used in Sokoto and Hadejiya (Kano State) respectively.

g & kw'

gamà: " kw'amà:

finish " encounter

g " w

gà:sa: " wà:sa:

competition " play, game

V

ɟ & gw

ɟandaɪʔ " gwandaɪʔ

strong slave, poor " kind of plant
destitute person

ɟ & k'

ɟa:ʕa: " k'a:ʕa:

repairs " shouting, screaming, complaint

ɟ " c'

ɟà:ʃi:[18] " c'à:ʃi:

belching " jealousy

ɟ " kw'

ɟa:ʕè: " kw'a:ʕè:

repair all of things " choke while eating

ɟ " w

ɟa:ʕè: " wa:ʕè:

(as above) " separate, set apart

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[18] A Sokoto word, as against ɟà:s'a: in the standard dialect.

VI

gw & k'

gwale`: " k'ale`:

disappoint " of children's game, cross the little finger over the fourth one

gw " c'

gwa:le`: " c'a:le`:

bulge, especially one's eyes " ignore

gw " kw'

gwàΦa: " kw'àΦa:

forked stick " tutting

gw & w

gwalle:	"	walle:
vanity; self appreciation - all the affectations of one sex to attract the attention of the other	"	nakedness

VII

k' & c'

k'a:wà:	"	c'a:wà:[19]
desire	"	the name of a bird

k' " kw'

k'aɽja:	"	kw'aɽja:
falsehood	"	calabash

[19] This word is used in Kebbi (Sokoto State)

k' & w

k'a:ɾi̗:	"	wa:ɾi̗:
an increase	"	one of two equal halves

VIII

c' & kw'

c'a̗ʊɾi:	"	kw'a̗ʊɾi:
kind of grasshopper	"	shin bone

c' " w

c'a:di:	"	wa:di:
a leper	"	going about

IX

kw' & w

kw'a:ɣi:	"	wa:ɣi:
strength	"	unpleasant odour

The forty-five (45) minimal pairs provided, clearly testify the phonemic status of /k, k', g, c, c', ɟ, kw, kw', gw & w/. However, since /k, k' & g/ precede only a/aɪ/aʊ as phonemes, and that when a front vowel follows they have the surface realization of [c, c' & ɟ] respectively or, when a back vowel follows, with the surface realization of [kw, kw' & gw] respectively, i.e. their phonemic status automatically getting lost under those circumstances, they too, can be eliminated from consideration as we have done with /Φj/ and /ʔj/. So that we are now left with twenty-seven (27) consonants on the list, twenty-one (21) as phonemes and six (6) as allophones. The possibility or otherwise of [ɪ/ɨ/ʊ] alternations will be examined in examples where these consonants immediately precede.

Preceding Consonants To Be Examined For

The Alternation Of [ɪ], [ɨ] & [ʊ]

When 'PHONEMIC'

- Labials: /b, Φ, m & ʔb/
- Coronals: /n, r, ɾ, t, s, z, s', d, ʔd & l/
- Palatals: /ʃ, ʧ, ʤ & j/[20]
- Dorsal: /w/
- Glottals: /ʔ & h/

When 'ALLOPHONIC'

- Palatals: [c, c' & ɟ]
- Dorsals: [kw, gw & kw']

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[20] While j is a palatal consonant, ʃ, ʧ & ʤ are not pure palatals. They are alveo-palatals to be precise, but the feature value of palatality which they have, has the same significant effect on this type of vowel alternation as the one with j, as we shall see as we go along.

An 'utterance', as indicated before, can be 'short' (lexical unit/word) or 'long' (sentence). For the present purpose, a capital 'A' will be used in reference to a short utterance and a capital 'B' to a long one. In 'A' three particular cases will be examined:

1) the case in a simple word

2) the case of the underlying /ʊ/ in the plural morpheme {-ʊCa:}

3) the case where i: and u: are reduced

In 'B' four cases will be examined, as follows:

1) a labial preceding what is considered as an underlying /ɪ/

2) a coronal preceding an underlying /ʊ/

3) a labial preceding an underlying /ʊ/ with 'spreading' in the following segment

4) a labial/a coronal preceding an underlying /ɪ/ with 'rounding' in the following segment

'A'

2.1.1 THE CASE IN A SIMPLE WORD

The alternation of [ɪ], [i̱] & [ʊ] in a 'simple' word can, generally speaking, best be treated according to whether the segment affected is single or otherwise. In other words, whether the alternation affects one segment only, or more than one in succession. For this reason, therefore, the two possibilities will be looked into separately.

2.1.1.1 IN A SINGLE SEGMENT

We will examine first, the situation in a single segment of a word. Here, thirty-five different words are selected as specimen: five with preceding labials, ten with coronals, six with phonemic palatals, two with phonemic dorsal, six with glottals and lastly, three each with allophonic palatals and dorsals respectively in the same position.

2.1.1.1.1 Preceding Consonant [+ lab.]

First of all, let us examine the empty vowel slot in each of the following words, where the preceding consonant is a labial:

1.	b-ci:	ceremony
2.	b-gwu:	beating
3.	ta:ʔb-kaʔ	manage

4. ɸ-ta? go out

5. m-lci: power

In the standard dialect, the kinds of vowels that fill these slots revolve round these three (ɪ, ɨ & ʊ). Below is a table showing which occur in which slot, according to the pronunciation of the words by the five selected speakers of this dialect:

	A	B	C	D	E
1. b-ci:	ɪ	ɨ	ɨ	ɪ	ɨ
2. b-gwu:	ʊ	ʊ	ʊ	ʊ	ʊ
3. ta:?b-ka?	ʊ	ʊ	ɨ	ʊ	ʊ
4. ɸ-ta?	ɨ	ɪ	ɪ	ɨ	ɨ
5. m-lci:	ɨ	ʊ	ɨ	ʊ	ʊ

The pronunciation of the first word as bɪ̀ci: is favoured by <u>two</u> as against <u>three</u> as bɨ̀ci:, that of the second as bugwʊ̀: is maintained by <u>all</u>; that of the third as ta:?bʊ̀ka? is favoured by <u>four</u> and, as ta:?bɨ̀ka? by <u>one</u>; that of the fourth as ɸɨ̀ta? is favoured by <u>three</u> as against <u>two</u> as ɸɪ̀ta; and, finally, the pronunciation of the last word as mɨlcɪ̀: is favoured by <u>two</u> as against <u>three</u> as mʊlcɪ̀:. So that in 1 & 4, [ɪ] and [ɨ] are seen to alternate, [ʊ] and [ɨ] are seen to do in 3 & 5, whereas [ʊ] alternates with neither in 2.

2.1.1.1.2 Preceding Consonant [+ cor.]

A coronal precedes each empty slot in the following:

1.	n-s'e:	sink down
2.	r-bu:tu:	writing
3.	ɽ-ga:	Fulani cattle encampment
4.	t-ɽmi:	mortar
5.	s-Φe:to:	police inspector
6.	z-Φa:	sweat
7.	s'-ns'u:	bird
8.	ʔaʊd-ga:	cotton
9.	ʔd-mi:	warmth
10.	ʔda:l-bi:	student [+ male]

The table below represents the vowel(s) for each slot:

		A	B	C	D	E
1.	n-s'e:	i̱	i̱	i̱	i̱	i̱
2.	r-bu:tu:	i̱	ʊ	ʊ	ʊ	ʊ
3.	ɽ-ga:	i̱	i̱	i̱	ʊ	ʊ
4.	t-ɽmi:	i̱	i̱	i̱	i̱	i̱
5.	s-Φe:to:	i̱	i̱	i̱	i̱	i̱
6.	z-Φa:	i̱	ʊ	i̱	ʊ	i̱
7.	s'-ns'u:	ʊ	i̱	ʊ	ʊ	ʊ
8.	ʔaʊd-ga:	i̱	i̱	ʊ	i̱	i̱
9.	ʔd-mi:	i̱	i̱	ɪ	i̱	ʊ
10.	ʔda:l-bi:	i̱	i̱	i̱	i̱	i̱

All five speakers employ [ɨ] in 1, 4, 5 & 10, while [ɨ] alternates with [ʊ] in 2, 3, 6, 7 & 8 and, with both [ʊ] and [ɪ] in example 9.

2.1.1.1.3 Preceding Consonant [+ phon.pal.]

A phonemic palatal precedes each slot in the following:

1.	ʃ-ɽwa:	kite
2.	ʃ-daʔ	six
3.	ʧ-kwo:wa:	overcrowd
4.	ʧ-ɽeʔ	remove
5.	ʤ-wa:	dizziness
6.	j-ŋwa:	hunger

The vowel table:

		A	B	C	D	E
1.	ʃ-ɽwa:	ʊ	ʊ	ɪ	ʊ	ʊ
2.	ʃ-daʔ	ɪ	ɪ	ɪ	ɪ	ɪ
3.	ʧ-kwo:wa:	ʊ	ɪ	ʊ	ɪ	ʊ
4.	ʧ-ɽeʔ	ɪ	ɪ	ɪ	ɪ	ɪ
5.	ʤ-wa:	ɪ	ʊ	ɪ	ʊ	ʊ
6.	j-ŋwa:	ɪ	ʊ	ɪ	ɪ	ɪ

In these examples, the vowels that fill the slots centre round [ɪ] & [ʊ] <u>only</u> to the exclusion of [ɨ]. In numbers 1, 3, 5 & 6 the

two are found to alternate, while only [ɪ] is seen to occur in 2 & 4.

2.1.1.1.4 Preceding Consonant [+ phon. dor.]

Each slot is preceded by the phonemic dorsal /w/ in the words below:

1. w-ja: neck
2. w-ta: fire

The vowel table:

	A	B	C	D	E
1. w-ja:	ʊ	ʊ	ʊ	ɪ	ʊ
2. w-ta:	ʊ	ʊ	ʊ	ʊ	ʊ

It can be seen from the table that just as when a phonemic palatal precedes, [ɨ] never occurs in this situation. In the first word, [ʊ] & [ɪ] are found to alternate, while [ʊ] is maintained by all speakers in the second.

2.1.1.1.5 Preceding Consonant [+ glot.]

A glottal consonant precedes each slot in the following:

1.	ʔ-ba:	father
2.	ʔ-do:	eye
3.	h-kwu:ma:	authority
4.	h-ka:ja:	narrative

The vowel table:

		A	B	C	D	E
1.	ʔ-ba:	ʊ	ʊ	ʊ	ʊ	ʊ
2.	ʔ-do:	ɪ	ɪ	ɪ	ɪ	ɪ
3.	h-kwu:ma:	ʊ	ʊ	ʊ	ʊ	ʊ
4.	h-ka:ja:	ɪ	ɪ	ɪ	ɪ	ɪ

The pronunciation of each word under these circumstances is quite consistent, with [ʊ] in 1 & 3, and [ɪ] in 2 & 4. Again, [ɨ] never occurs.

2.1.1.1.6 Preceding Consonant [+ al. pal.]

An allophonic palatal precedes each slot in the following:

1.	c-s'o:	plaiting of hair
2.	ɸɪc'-huʔ	the science of Islamic law
3.	ɟ-zoʔ	the mythical spider of fables
4.	c-ʕa:	calling

The vowel table:

		A	B	C	D	E
1.	c-s'o:	ɪ	ɪ	ʊ	ɪ	ʊ
2.	ɸɪc'-huʔ	ɪ	ɪ	ɪ	ʊ	ɪ
3.	ɟ-zoʔ	ɪ	ʊ	ɪ	ɪ	ɪ
4.	c-ʕa:	ɪ	ɪ	ɪ	ɪ	ɪ

It is noticeable here that while [ɪ] & [ʊ] feature in the pronunciation of the first three words, [ɪ] alone occurs in the fourth word. In other words, while the two alternate in 1 - 3, it is the opposite in 4. [i] never occurs.

2.1.1.1.7 Preceding Consonant [+ al. dor.]

In the following, an allophonic dorsal precedes each slot:

1.	ʔakw-ja:	goat
2.	hʊŋkw'-jiʔ	place name
3.	gwa:gw-ji	gnaw at
4.	kw-saʔ	near

The vowel table:

		A	B	C	D	E
1.	ʔakw-ja:	ʊ	ʊ	ʊ	ɪ	ʊ
2.	hʊŋkw'-jiʔ	ʊ	ʊ	ʊ	ɪ	ʊ
3.	gwa:gw-ji	ʊ	ɪ	ʊ	ʊ	ʊ
4.	kw-saʔ	ʊ	ʊ	ʊ	ʊ	ʊ

Here too, [i] is not reflected at all, whereas [ʊ] features in all examples and, in three cases [ɪ] alternates with it.

2.1.1.2 IN MORE THAN ONE SEGMENT

In 2.1.1.1 various instances where [ɪ], [ɨ] & [ʊ] are found to alternate in a single segment of a simple word were examined. We saw in one case where the three vowels alternate (cf. example 9; 2.1.1.1.2), and in other cases just two. In addition, we witnessed a situation where the alternation does not apply at all (cf.2.1.1.1.5). This section will look into other cases where the alternation occurs in two successive segments.

Generally speaking, for the particular alternating vowels that occur in two successive slots, this is a matter of combination from amongst the three. In theory, there are nine possible combinations:

I	ʊ	&	ʊ
II	ʊ	"	ɨ
III	ʊ	"	ɪ
IV	ɨ	"	ɨ
V	ɨ	"	ɪ
VI	ɨ	"	ʊ
VII	ɪ	"	ɪ
VIII	ɪ	"	ʊ
IX	ɪ	"	ɨ

Now, let us consider the two successive empty slots in the following words, with the preceding consonant revolving round labials and coronals:

1.	b-nd-ga:	gun
2.	ɸ-t-la:	lamp, light
3.	ɸ-ɸɸ-ce:	wing
4.	d-dd-ɟe:	heel
5.	t-mb-ʔdi:	regurgitation
6.	s-m-nti:	cement
7.	s-ɽ-ci:	inlaw [+ male]
8.	l-ll-ʔbi:	veiling
9.	r-b-ʔi:	one-quarter
10.	kwʊd-dd-ɸi:	pond

However, as already indicated, the particular vowels for such slots will depend on those nine combinations. So let us examine the pronunciations of these words in this dialect as provided in the corresponding table:

	WORDS	I ʊ–ʊ	II ʊ–i̱	III ʊ–ɪ	IV i̱–i̱	V i̱–ɪ	VI i̱–ʊ	VII ɪ–ɪ	VIII ɪ–ʊ	IX ɪ–i̱
1.	b–nd–ga:				4					1
2.	ɸ–t–la:				4					1
3.	ɸ–ɸɸ–ce:				2	1		2		
4.	d–dd–ɟe:		1		4					
5.	t–mb–ʔdi:	1			2	1	1			
6.	s–m–nti:				3	2				
7.	l–ll–ʔbi:	1			4					
8.	s–ɽ–ci:		2		3					
9.	r–b–ʔi:	1		1	3					
10.	kwʊd–dd–ɸi:		2		3					
NUMBER OF OCCURRENCES		3	5	1	32	4	1	2	0	2

In this table, it is noticeable that the pronunciation of each word varies according to the vowel combination employed in the successive slots by a speaker. Furthermore, all those combinations other than VIII (ɪ–ʊ) are reflected:

In example 1, pronunciation with combination IV bi̱ndi̱gà: is favoured by <u>four</u> speakers and, with combination IX bɪndi̱gà: by <u>one</u>.

In example 2, the case is the same as the first one. <u>Four</u> favour comb. IV ɸì̱ti̱là:, while <u>one</u> favours IX ɸɪ̀ti̱là:

In example 3, two speakers favour ɸiɸɸicè: comb.IV, one favours ɸiɸɸɪcè: comb.V and two favour ɸɪɸɸɪcè: comb.VII.

In example 4, comb.II dʊddiɟè: and comb.IV diddiɟè: are favoured by one and four speakers respectively.

In example 5, pronunciation with comb.I tʊ̀mbʊ?di: is favoured by one, with comb.IV tì̀mbi?di: by two and, with combs.V and VI tì̀mbɪ?di: and tì̀mbʊ?di: respectively, by one each.

In example 6, combs.IV and V sì̀minti: and sì̀mɪnti: are respectively favoured by three and two speakers.

In example 7, lʊllʊ?bi: comb.I and lilli?bi: comb.IV are favoured by one and four speakers respectively.

In example 8, two favour sʊ̀ɾici: comb.II and three favour comb.IV sì̀ɾici:.

In example 9, combs.I and III rʊbʊ̀?i: and rʊbì?i: respectively are each favoured by one speaker and comb.IV ribì?i: by three.

Finally, in example 10, while comb.II kwʊ̀dʊddiɸi: attracts two speakers, comb.IV kwʊ̀diddiɸi: is favoured by three .

Thus, on the basis of those ten particular words and their various pronunciations by the five selected speakers of this dialect, it is clear that the number of possible vowel combinations per word ranges

from two (cf. 1, 2, 4, 7, 8 & 10) to four (cf. 3 & 5). Similarly, the number of occurrences of those combinations in relation to the whole words ranges from zero (cf. comb.VIII) to thirty-two (cf. comb.IV).

2.1.2 THE CASE OF THE UNDERLYING /ʊ/ IN THE PLURAL MORPHEME {-ʊCa:}

There are very many ways in which singular words are pluralized in Hausa. Among them are the following two:

1) The type that basically requires a suffixation of -ʊna: or -ʊka: to the stem, at times with the gemination of the stem-final consonant, such as ba:k- of bà:ci:, 'mouth' + -ʊna: > ba:kwʊnà: (pl.); dam- of damì:, 'bundle of guinea-corn or millet' > damm- + -ʊna: > dammʊnà: (pl.); and, zaʊɽ- of zaʊɽè:, 'entrance hut leading into a compound' + -ʊka: > zaʊɽʊkà: (pl.) or, with both the gemination of the stem-final consonant and reduplication of the suffix, such as bak- of bàka:, 'bow' becoming bakk- then bak-ʊn-k-ʊna:, with the realization bakwʊŋkwʊnà: (pl.).

2) The one in which a short 'a' in a penultimate syllable of the singular turns into 'ʊ' before -a: is suffixed to the stem, whose final consonant in addition, geminates in certain cases, such as tamb-ɽ- of tambàɽi:, 'a royal drum' > tambʊɽà: (pl.) and, ʃar-ʔd- of ʃarà?di:, 'pre-condition' > ʃarʊʔdʔdà: (pl.).

For the purpose of this work however, these two different ways of plural formation will be collapsed under {-ʊCa:} plural morpheme, with the C standing for any viable consonant, since the ʊ's with which we are concerned are found to behave similarly, as we will see later.

The /ʊ/ in this plural morpheme {-ʊCa:} is considered here to be the underlying form in so far as it occurs after almost all those consonants being examined for ɪ/ɨ/ʊ alternations,[21] unlike the two alternants ɪ & ɨ that tend to have some limitations: [ɪ] occurring as an alternant for the /ʊ/ where the preceding consonant is a palatal, and [ɨ] in turn, occurring where the preceding consonant is a labial or a coronal, as we will see in the forthcoming examples.

2.1.2.1 Preceding Consonant [+ lab.]

The plural nouns below have each an empty vowel slot preceded by a labial consonant:

1.	kwabb-na:	pennies
2.	ka?b-ka:	calabashes of food for a feast
3.	laɸ-za:	speeches, pronunciations
4.	ʏa:m-ka:	pits, holes

---

[21] Only four of the twenty-seven count as exceptions, namely ?, c, c' & ɟ. The last three being allophones conditioned by a following front vowel, naturally one would not expect them to occur under this condition. For the glottal stop ? too, the question of occurrence under this condition does not arise either, in so far as this, as a stem-final consonant does not take the suffix under consideration.

The vowel table:

		A	B	C	D	E
1.	kwabb-na:	ʊ	-	ʊ	ɨ	ʊ
2.	ka?b-ka:	ʊ	ʊ	ʊ	ʊ	ʊ
3.	laΦ-za:	ɨ	ɨ	ʊ	ʊ	ʊ
4.	ʕa:m-ka:	ʊ	ʊ	ʊ	ʊ	ʊ

In this pattern while the [ʊ] is retained by all five speakers in examples 2 & 4, [ɨ] on the other hand, is seen to alternate with it once in the first word and twice in the third.

2.1.2.2 Preceding Consonant [+ cor.]

The empty slots in the words below are preceded by a coronal:

1.	s'aʊn-ka:	hills
2.	ha?dar-rr-ka:	accidents
3.	ta:ʕ-ʕʕ-ka:	conferences
4.	ti:t-na:	streets
5.	hars-na:	languages
6.	da:z-zz-ka:	forests
7.	hans'-ka:	forceps, tongs, pincers
8.	kwand-na:	baskets
9.	ha?d-ra:	accidents
10.	hu:l-na:	caps

The vowel table:

		A	B	C	D	E
1.	s'aʊn-ka:	ɨ	ɨ	ʊ	ɨ	ɨ
2.	ha?dar-rr-ka:	ɨ-ɨ	ɨ-ʊ	ɨ-ɨ	ɨ-ɨ	-
3.	ta:ɽ-ɽɽ-ka:	ʊ-ʊ	ʊ-ʊ	ɨ-ɨ	ʊ-ʊ	ʊ-ʊ
4.	ti:t-na:	ɨ	ʊ	ɨ	ɨ	ɨ
5.	hars-na:	ʊ	ɨ	ʊ	ɨ	ɨ
6.	da:z-zz-ka:	-	ɨ-ɨ	ɨ-ɨ	ʊ-ʊ	ɨ-ɨ
7.	hans'-ka:	ʊ	ɨ	ɨ	ʊ	ɨ
8.	kwand-na:	ʊ	ʊ	ʊ	ɨ	ɨ
9.	ha?d-ra:	ɨ	ʊ	-	ɨ	ʊ
10.	hu:l-na:	ʊ	ɨ	ɨ	ɨ	ʊ

In 1 & 4 as can be seen, the [ʊ] is reflected once each; twice each in 5, 7, 9 & 10; and, three times in 8, while pronunciation with [ɨ] features in the other cases. In 2 & 6, ɨ-ɨ is favoured by three speakers each, while ɨ-ʊ & ʊ-ʊ each attracts one speaker. Similarly, in 3, while ʊ-ʊ is favoured by four, ɨ-ɨ attracts one speaker.

2.1.2.3 Preceding Consonant [+ phon. pal.]

A phonemic palatal precedes each slot in the following:

1.	wa:ʃ-na:[22]	washers (for nuts)
2.	hantʃ-na:	noses
3.	ʔɪnʤ-na:	engines
4.	k'aʊj-ka:	villages

The vowel table:

		A	B	C	D	E
1.	wa:ʃ-na:	ɪ	-	-	ɪ	-
2.	hantʃ-na:	ɪ	-	ɪ	ɪ	ɪ
3.	ʔɪnʤ-na:	ɪ	ɪ	ɪ	ɪ	ɪ
4.	k'aʊj-ka:	ʊ	ʊ	ɪ	ɪ	ʊ

The [ʊ] here features only in example 4 with <u>three</u> occurrences, whereas the alternant [ɪ] predominates the pronunciation.

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[22] wa:ʃo:ʃi and hantʊnà: are alternative forms of the first and second words respectively. In the first one, {-o:Ci:} plural morpheme is suffixed to the stem wa:ʃ- in place of {-ʊna:}, while the stem-final consonant ʧ is depalatalized in the second.

2.1.2.4 Preceding Consonant [+ phon. dor.]

The following have the empty slot preceded by an allophonic dorsal:

1. ʔalkaw-ra: promises
2. ʔaka:w-na: clerks

The vowel table:

	A	B	C	D	E
1. ʔalkaw-ra:	ʊ	ʊ	ʊ	ʊ	ʊ
2. ʔaka:w-na:	ʊ	ʊ	ʊ	ʊ	ʊ

All five speakers maintain the [ʊ]. Neither [ɪ] nor [ɨ] alternates with it under these circumstances.

2.1.2.5 Preceding Consonant [+ glot.]

Preceding each slot in the words below is the glottal fricative:[23]

1. bʊh-na: sacks
2. saŋh-na: kinds of bag

---

[23] The glottal stop as a stem-final consonant, does not take this suffix.

The vowel table:

		A	B	C	D	E
1.	bʊh-na:	ʊ	ʊ	ʊ	ʊ	ʊ
2.	saŋh-na:	ʊ	ʊ	ʊ	ʊ	ʊ

The [ʊ] is generally maintained in the same way as in the case of /w/ preceding.

2.1.2.6 Preceding Consonant [+ al. dor.]

An allophonic dorsal precedes each slot in the following:

1.	baŋkw-na:	banks
2.	sa:kw'-na:	corners, recesses
3.	bargw-na:	blankets

The vowel table:

		A	B	C	D	E
1.	baŋkw-na:	ʊ	ʊ	ʊ	ʊ	ʊ
2.	sa:kw'-na:	ʊ	ʊ	ʊ	ʊ	ʊ
3.	bargw-na:	ʊ	ʊ	ʊ	ʊ	ʊ

Again, it is noticeable here that the [ʊ] is maintained by all five speakers.

2.1.3 THE CASE WHERE i: & u: ARE REDUCED

We will examine here specifically, instances where 'reduction' is effected on i: and u: to function within a closed syllable, and see what effect this may have on the vowel alternation under consideration. In the first chapter it can be recalled, we said that a 'long' vowel or 'diphthong' is never found in a closed syllable, and that it has to be shortened or monophthongized accordingly. To recapitulate a few examples, ʔda:cì:, 'room' + -n > ʔda:cìŋ, 'the room' (ʔda:cì:ŋ)* and kâɪ, 'head' + -n > kâŋ, 'the head' (kâɪŋ)*. For convenience and clarity however, the two vowels i: & u: will be treated separately.

2.1.3.1 THE REDUCTION OF i:

We will look into first, the situation where i: is reduced, as in the word ʕà:kw'umi:, 'a camel' > ʕà:kwumîŋ, 'the camel'. As the vowel when final is i:, the reduced vowel in the closed syllable is referred to as the underlying /ɪ/.

2.1.3.1.1 Preceding Consonant [+ lab.]

The empty slot in each of the following is preceded by a labial and followed by the nasal deictic consonant[24]. The vowel is thus in a closed syllable with low or falling tone:

1. takwo:b–ŋ < takwò:bi:
   the sword sword

2. ʤɪʔb–ŋ < ʤɪ̀ʔbi:
   the perspiration perspiration

3. ɽa:Φ–ŋ < ɽà:Φi:
   the stream stream

4. ɽa:m–ŋ < ɽa:mì:
   the hole hole

The vowel table:

	A	B	C	D	E
1. takwo:b–ŋ	ɪ	ɪ	i̶	i̶	i̶
2. ʤɪʔb–ŋ	ɪ	i̶	i̶	i̶	i̶
3. ɽa:Φ–ŋ	i̶	i̶	i̶	i̶	ɪ
4. ɽa:m–ŋ	i̶	ɪ	i̶	i̶	ɪ

[24] This nasal deictic consonant is otherwise known as the 'referential', associated with masculine object, the corresponding one associated with feminine object being –r, as in hù:la:, 'a cap' + –r > hù:lâr, 'the cap'.

In these examples, the five speakers mostly use [ɨ] as the reduced vowel, speakers C and D employing [i] in all four examples. The other speakers each use the vowel [ɪ] in two of their examples, and each example pronounced with same by one or other of the speakers.

2.1.3.1.2 Preceding Consonant [+ cor.]

A coronal precedes each slot in the following:

1.	ʈa:n-ŋ	<	ʈa:ni:
	the dry season		dry season
2.	la:ba:r-ŋ	<	la̋:ba:ri̋:
	the story		story
3.	bu:ʈ-ŋ	<	bu:ʈi̋:
	the ambition		ambition
4.	kant-ŋ	<	kan̋ti:
	the shop		shop
5.	si:s-ŋ	<	si:si̋:
	the sixpence		sixpence
6.	hɪrz-ŋ	<	hɪrzi̋:
	the seeking for God's protection		seeking for God's protection

7.	sans'-ŋ	<	sans'i:
	the slipperiness		slipperiness
8.	maɪga:d-ŋ	<	maɪ̀ga:di̗:
	the guard		guard
9.	kwʊʔd-ŋ	<	kwʊʔdi:
	the money		money
10.	ʔalka:l-ŋ	<	ʔà̗lka:li̗:
	the judge		judge

The vowel table:

		A	B	C	D	E
1.	ɾa:n-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ
2.	la:ba:r-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ
3.	bu:ɾ-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ
4.	kant-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ
5.	si:s-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ
6.	hɪrz-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ
7.	sans'-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ
8.	maɪga:d-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ
9.	kwʊʔd-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ
10.	ʔalka:l-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ

All speakers pronounce the words with [ɨ]. In other words, under this condition there is no question of vowel alternation, examples

with long -i: final have [ɨ] for the reduced vowel in the closed syllable here.

2.1.3.1.3 Preceding Consonant [+ phon. pal.]

Each slot in the following is preceded by a phonemic palatal:

1.	baːʃ-ŋ	baːʃi̋ː
	the debt	debt
2.	bartʃ-ŋ	bartʃiː
	the sleep	sleep
3.	ʔɪndʒ-ŋ	ʔɪndʒi̋ː
	the engine	engine
4.	ʃaːj-ŋ	ʃaːji̋ː
	the tea	tea

The vowel table:

		A	B	C	D	E
1.	baːʃ-ŋ	I	I	I	I	I
2.	bartʃ-ŋ	I	I	I	I	I
3.	ʔɪndʒ-ŋ	I	I	I	I	I
4.	ʃaːj-ŋ	I	I	I	I	I

The [ɪ] under these circumstances is maintained by all speakers with no alternation.

2.1.3.1.4 Preceding Consonant [+ phon. dor.]

In the environment before a front vowel, like /k, k' & g/, we said /w/ is palatalized, having the surface realization [j]. The singular noun ba:wà:, 'slave [+ male]' for instance, has the plural ba:ji: (ba:wi:)* when the plural suffix -i: is added to the stem ba:w- (see Figure I). However, the exceptional word for 'Indian hemp', wî:wî: in which such palatalization does not apply, provides a good specimen for this purpose:

	A	B	C	D	E
wi:w-ŋ	ɪ	ɪ	ɪ	ʊ	ɪ

The [ɪ] has four occurrences here, whereas the alternant [ʊ] features once.

2.1.3.1.5 Preceding Consonant [+ glot.]

A glottal consonant precedes each slot in the following:

1.	nɑʊʔ-ŋ	<	nɑʊʔi:
	the type		type
2.	ru:h-ŋ	<	ru:hi:
	the soul		soul

The vowel table:

	A	B	C	D	E
1. nɑʊʔ-ŋ	I	I	I	I	I
2. ru:h-ŋ	I	I	I	I	I

As in the case of palatal preceding under the same condition, where we witnessed [ɪ] in the pronunciation of all speakers, here too, [ɪ] is maintained consistently without alternation.

2.1.3.1.6 Preceding Consonant [+ al. pal.]

Each slot in the following is preceded by an allophonic palatal:

1.	do:c-ŋ	<	do:ci:
	the horse		horse

2.	bac'-ŋ	<	bac'i: [+ male]
	the black one		black one
3.	kwo:ɟ-ŋ	<	kwò:ɟi:
	the river		river

The vowel table:

		A	B	C	D	E
1.	do:c-ŋ	I	I	I	I	I
2.	bac'-ŋ	I	I	I	I	I
3.	kwo:ɟ-ŋ	I	I	I	I	I

Here too, there is no case of any vowel alternating with the [I].

2.1.3.2 THE REDUCTION OF u:

We will now focus on the situation where u: is reduced. As the vowel when final is u:, the reduced vowel in the closed syllable will be referred to as underlying /ʊ/.

2.1.3.2.1 Preceding Consonant [+ lab.]

In each of the following, the empty slot within the closed syllable is preceded by a labial consonant:

1.	lamb-ŋ	<	làmbu:
	the garden		garden
2.	jɪmʔb-ŋ	<	jɪmʔbu:
	the clay		clay
3.	sa:m-ŋ	<	sa:mù:
	the wealth		wealth

The vowel table:

		A	B	C	D	E
1.	lamb-ŋ	ʊ	ʊ	ɨ̞	ʊ	ʊ
2.	jɪmʔb-ŋ	ʊ	ʊ	ɨ̞	ʊ	ɨ̞
3.	sa:m-ŋ	ʊ	ʊ	ʊ	ʊ	ʊ

The vowel [ʊ] is maintained by four speakers in the first word, by three in the second and, by all speakers in the third word. On the other hand, a case of [ɨ] alternating with it is witnessed once and twice respectively in the first and second words.

2.1.3.2.2 Preceding Consonant [+ cor.]

A coronal precedes each slot in the words below:

1.	kwʊn-ŋ	<	kwʊ̀nu:
	the gruel		gruel
2.	tattabar-ŋ	<	tàttàbàru:
	the pigeons		pigeons
3.	ʃɪɽ-ŋ	<	ʃɪɽu:
	the silence		silence
4.	kara:t-ŋ	<	kàrà:tu:
	the reading		reading
5.	s-ŋ	<	sû:
	the fishing		fishing
6.	bu:z-ŋ	<	bu:zu:
	the sheep-skin		sheep-skin

7.	ja:s'-ŋ	<	ja:s'u:
	the fingers		fingers
8.	gand-ŋ	<	gandu:
	the farm		farm
9.	ɽu:ʔd-ŋ	<	ɽu:ʔdu:
	the confusion		confusion
10.	sa:bʊl-ŋ	<	sà:bʊlù:
	the soap		soap

The vowel table:

		A	B	C	D	E
1.	kwʊn-ŋ	ɨ	ɨ	ɨ	ɨ	ʊ
2.	tattabar-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ
3.	ʃɪɽ-ŋ	ɨ	ʊ	ɨ	ɨ	ʊ
4.	kara:t-ŋ	ɨ	ʊ	ɨ	ɨ	ɨ
5.	s-ŋ	ɨ	ɨ	ɨ	ʊ	ʊ
6.	bu:z-ŋ	ɨ	ʊ	ʊ	ɨ	ɨ
7.	ja:s'-ŋ	ɨ	ʊ	ʊ	ʊ	ʊ
8.	gand-ŋ	ɨ	ʊ	ɨ	ɨ	ɨ
9.	ɽu:ʔd-ŋ	ɨ	ɨ	ʊ	ɨ	ɨ
10.	sa:bʊl-ŋ	ɨ	ɨ	ɨ	ɨ	ʊ

Out of fifty (50) utterances, thirty-five (35) are pronounced with [ɨ] and fifteen (15) with [ʊ]. Speaker A consistently use

alternant [ɨ], and only the second word is consistently pronounced with same. In addition, under the same circumstances if we compare these vowel distributions on the one hand, with the general realization of a reduced [i:] as [ɨ] rather than [ɪ] (see 2.1.3.1.2) on the other, we can notice considerable cases of 'neutralization', i.e. the neutralization of [ɪ] and [ʊ] to [ɨ]. Compare for example, the case of là:ba:rɨ̀ŋ, 'the story' and tàttàbàrɨ̂ŋ, 'the pigeons'; màɪga:dɨ̀ŋ, 'the guard' and gandɨ̂ŋ, 'the farm', to mention just a few.

2.1.3.2.3 Preceding Consonant [+ phon. pal.]

A phonemic palatal precedes each slot in the following:

1. ʤu:ʤ-ŋ < ʤù:ʤu:
   the evil spirit — evil spirit

2. ma:j-ŋ < ma:ju:
   the witches — witches

The vowel table:

	A	B	C	D	E
1. ʤu:ʤ-ŋ	ɪ	ɪ	ɪ	ʊ	ɪ
2. ma:j-ŋ	ʊ	ɪ	ʊ	ʊ	ʊ

The [ʊ] is reflected once in the first word and four times in the second. Conversely, the alternant [ɪ] features four times in the

first word and once in the second. So that the frequency of occurrence between the two is exactly balanced here.

2.1.3.2.4 Preceding Consonant [+ phon. dor.]

The phonemic dorsal /w/ precedes each slot in the following:

1.	ja:w-ŋ	<	ja:wu:
	the saliva		saliva
2.	sa:w-ŋ	<	sa:wu:
	the feet		feet

The vowel table:

		A	B	C	D	E
1.	ja:w-ŋ	ʊ	ʊ	ʊ	ʊ	ʊ
2.	sa:w-ŋ	ʊ	ʊ	ʊ	ʊ	ʊ

In both words, it can be noticed that the [ʊ] is maintained by all speakers consistently without alternation.

2.1.3.2.5 Preceding Consonant [+ glot.]

A glottal consonant precedes each slot in the following:

1.	rʊkwu:ʔ-ŋ	<	rʊ̀kwu:ʔù:
	the bending over in devotions		bending over in devotions
2.	bʊh-ŋ	<	bʊ̀hu:
	the sack		sack
3.	hu:h-ŋ	<	hu:hʊ̀:
	the package of kola-nuts		package of kola-nuts

The vowel table:

	A	B	C	D	E
1. rʊkwu:ʔ-ŋ	ʊ	ʊ	ʊ	ʊ	ʊ
2. bʊh-ŋ	ʊ	ʊ	ʊ	ʊ	ʊ
3. hu:h-ŋ	ʊ	ʊ	ʊ	ʊ	ʊ

The [ʊ] here again, is maintained by all speakers without alternation.

2.1.3.2.6 Preceding Consonant [+ al. dor.]

Preceding each slot in the following is an allophonic dorsal:

1.	majaŋkw-ŋ	<	mà jà ŋkwu:
	the abattoirs		abattoirs

2.	masa:kw'-ŋ	<	màsà:kw'u:
	the textiles		textiles
3.	kalaŋgw-ŋ	<	kàlàŋgwu:
	the kind of drum		kind of drum

The vowel table:

	A	B	C	D	E
1. majaŋkw-ŋ	ʊ	ʊ	ʊ	ʊ	ʊ
2. masa:kw'-ŋ	ʊ	ʊ	ʊ	ʊ	ʊ
3. kalaŋgw-ŋ	ʊ	ʊ	ʊ	ʊ	ʊ

Under these circumstances too, as can be noticed, the [ʊ] features in all the cases without any alternation.

'B'

2.2 ALTERNATION IN A LONG UTTERANCE

In 2.1 we looked into various cases of the alternation of [ɪ], [ɨ] & [ʊ] in a short utterance or word. We examined both the situation in a single segment and beyond. In this sub-section we will focus on this alternation in a long utterance or sentence. However, as stated from the beginning, four cases will be examined, namely a labial preceding what is considered as an underlying /ɪ/; a coronal preceding an underlying /ʊ/; a labial preceding an underlying /ʊ/ with 'spreading' following; and, finally, a labial/coronal preceding an underlying /ɪ/ with 'rounding' following.

2.2.1 A Labial Preceding Underlying /ɪ/

The following words in pause, have a short -i final vowel followed by a prosodic glottal stop:

1.	hàrbiʔ	shoot at
2.	ʤi:biʔ	the day after tomorrow
3.	zà:ʔbiʔ	elect, choose
4.	kàɽʔbiʔ	receive
5.	haɪɸiʔ	give birth
6.	tàɸiʔ	go
7.	ɟɪɽmiʔ	be older by age
8.	sàllàmiʔ	dismiss

When followed by another item, however, the glottal stop disappears and [ɨ] very often alternates with it in this dialect, regardless of the phonology of that following item. Examine the words as used in a long utterance below, along the line of the corresponding table given at the end:

1. Ya harb- akun

   [ja:hàrb-ʔàkwôŋ]

   He shot at the parrot

2. Jib- Isa zai komo

   [ʤi:b-ʔi:sa:zâɪkwo:mo:ɨ]

   It is the day after tomorrow that Isa will come back

3. An zaɓ- Audu

   [ʔanzà:ʔb-ʔaʊdùʔ]

   Audu is elected/chosen

4. Sun karɓ- nasu

   [sʊŋkàɽʔb-na:sùʔ]

   They received theirs

5. Ta haif- 'ya mace

   [ta:hàɪɸ-ʔja:màʧèʔ]

   She gave birth to a baby girl

6. Mun taf- gida

   [mʊntàɸ-ɟɪda:]

   We went home

7. Ya girm- Isa

   [ja:ɟɪ̀ɽm-ʔi:sa:]

   He's older than Isa

8. An sallam- leburori

   [ʔansàllàm-le:bʊro:ri:]

   Labourers are dismissed

The vowel table:

	A		B		C		D		E	
	ɪ	ɨ	ɪ	ɨ	ɪ	ɨ	ɪ	ɨ	ɪ	ɨ
1.		✓	✓			✓		✓		✓
2.		✓		✓	✓		✓			✓
3.		✓	✓			✓		✓	✓	
4.		✓	✓			✓		✓		✓
5.		✓		✓		✓		✓		✓
6.	✓			✓	✓			✓		✓
7.	✓			✓	✓		✓		✓	
8.	✓		✓			✓		✓		✓
NUMBER OF OCCURRENCES	3	5	4	4	3	5	2	6	2	6

It is noticeable that the short -i in pause realized as [ɪ] without the glottal stop under these circumstances, and [i̞] make a lot of alternation. The alternant [i̞] in relation to the pronunciation of the words by these speakers features twenty-six (26) times (65%) and the [ɪ] fourteen (14) times (35%).

2.2.2 A Coronal Preceding Underlying /ʊ/

In pausal position, the final vowel to each of the following is regularly a short -u accompanied by a glottal stop:

1.	sànu?	be well known
2.	kàmàru?	place name
3.	Φa:ɽù?	place name
4.	kwo:tù?	court
5.	gàmsu?	be satisfied
6.	jànzu?	now
7.	tà:s'u?	be well milked
8.	gwandu?	place name
9.	hà?du?	meet
10.	?u:lù?	woollen thread

However, when followed by another item, [i̞] alternates with it irrespective of the phonology of that item:

1. Musa bai san- ba

   [mu:sa:bàɪsàn-ba?]

   Musa is not known

2. Kamar- babbar ƙasa ce

   [kàmàr-bàbbark'asa:ʧè:]

   Cameroun is a large country

3. Far- muka tafi

   [Φa:ɾ-mʊkàtàΦi?]

   It's F. we've been to

4. An buɗe kot- da wuri

   [?ambu:?dɛ̀kwo:t-dàwʊɾi?]

   The court has opened early

5. Mun gams- da haka

   [mʊŋgàms-dàhakà?]

   We are satisfied with that

6. Yanz- za mu tafi

   [jànz-za:mʊ̀tàΦi?]

   It's now that we are going

7. Saniyar ba za ta tats- ba

   [sa:nɪ̀jârbàza:tàtà:s'-ba?]

   The cow cannot be milked

8. Gwand- a jihar Sakkwato take

[gwand-ʔàʤɪhàrsakwkwatɔtacèʔ]

G. is in Sokoto State

9. Mun haɗ- kan hanya

[mʊŋhàʔd-kâŋhaŋjà:]

We met on the way

10. Ul- za a saya

[ʔu:l-za:ʔàsàja:]

It is woollen thread that will be bought

The vowel table:

	A		B		C		D		E	
	ʊ	ɨ	ʊ	ɨ	ʊ	ɨ	ʊ	ɨ	ʊ	ɨ
1.	✓			✓		✓			✓	
2.	✓		✓		✓		✓		✓	
3.	✓		–	–	–	–	–	–	✓	
4.		✓	✓			✓			✓	
5.	✓			✓	✓				✓	
6.		✓	✓		✓		✓			✓
7.		✓		✓	✓		✓			✓
8.		✓	✓		✓		✓		✓	
9.		✓	✓		✓				✓	
10.		✓		✓	✓		✓		✓	
NUMBER OF OCCURRENCES	4	6	5	4	7	2	5	4	8	2

The pausal -u realized as [ʊ] without the glottal stop under this condition, and [ɨ] alternating with it, is evident. Nevertheless, unlike [ɪ] following a labial consonant where the alternant [ɨ] surfaces more as seen previously, it is the reverse here. While the [ʊ] features twenty-nine (29) times (about 60%), the corresponding alternant [ɨ] has just eighteen (18) occurrences (about 38%).

2.2.3 A Labial Preceding Underlying /ʊ/ With 'Spreading' Following

The following in pause regularly end in a short -u accompanied by a glottal stop:

1.	ʔàbùʔ	thing
2.	ba:bùʔ	none
3.	kàɾʔbuʔ	be welcome
4.	tàʔbuʔ	be crazy
5.	kàɸuʔ	be deep-rooted
6.	ju:sʊɸùʔ	proper name
7.	gàmuʔ	meet
8.	na:mùʔ	ours

Nevertheless, when followed by a spread item, [ɪ] occasionally alternates with it:

1. Wannan ab- ya ba da mamaki
   [wannàŋʔàb-ja:ba:dàmà:ma:cì:]
   This thing has given surprise

2. Bab- inda za a samu
   [ba:b-ʔɪndàza:ʔàsa:mù:]
   Nowhere can it be obtained

3. Sun karɓ- ya ce

[sʊŋkàɾʔb-jatʃêː]

They were welcome he said

4. Ta taɓ- ya ce

[taːtàʔb-jatʃêː]

She was crazy he said

5. Musulunci ya kaf- ya ce

[mʊsʊlʊntʃìːjaːkàɸ-jatʃêː]

Islam is deep-rooted he said

6. Yusuf- ya dawo

[juːsʊɸ-jaːdaːwoːʔ]

Y. is back

7. Mun gam- yau

[mʊŋgàm-jâʊɨ]

We met today

8. Nam- ya fi

[naːm-jaːɸiʔ]

Ours is better

The vowel table:

	A		B		C		D		E	
	ʊ	ɪ	ʊ	ɪ	ʊ	ɪ	ʊ	ɪ	ʊ	ɪ
1.	✓			✓		✓	✓		✓	
2.	✓		✓		✓		✓		✓	
3.	✓		✓		✓		✓		✓	
4.	✓		✓		✓		✓		✓	
5.	✓		✓		✓		✓		✓	
6.	✓		✓		–	–	✓		✓	
7.	✓		✓			✓	✓		✓	
8.	✓		✓			✓	✓		✓	
NUMBER OF OCCURRENCES	8	0	7	1	4	3	8	0	8	0

It can be noticed that [ɪ] under those circumstances alternates with the [ʊ] in a very few cases. Generally, it has four (4) occurrences (10%), while the [ʊ] features thirty-five (35) times (about 88%), and not at all with three of the speakers.

2.2.4 A Labial/Coronal Preceding Underlying /ɪ/ With 'Rounding' Following

The final consonant in each of the words below is either a labial or a coronal and, in pausal position, each is regularly followed by a short -i accompanied by a glottal stop:

1.	hàrbi?	shoot at
2.	zà:?bi?	elect, choose
3.	tàɸi?	go
4.	dà:mi?	worry
5.	?àni:ni?	3/10 of a penny
6.	bàɽi?	wait, let
7.	ɸa:cɪtì?	packet
8.	tà:s'i?	milk
9.	là:di:di?	female proper name
10.	bà?di?	next year
11.	kàlli?	have a look at

When followed by a rounded item however, in certain cases [ʊ] and [ɨ] make alternation with it:

1. Ya harb- Uba
   [ja:hàrb-?ʊ̀ba?]
   He shot at Uba

2. An zaɓ- wani

   [ʔanzà:ʔb-waniʔ]

   Someone is elected/chosen

3. Ya taf- wurin

   [ja:tàɸ-wʊɽî̞ŋ]

   He went to the place

4. An dam- Uba

   [ʔandà:m-ʔʊ̀baʔ]

   Uba is disturbed

5. Anin- uku ne

   [ʔà̀ni:n-ʔʊkwʊ̀ne:]

   It was 3/10 of a penny

6. Bar- Husaini ya dawo tukuna

   [baɽ-hʊ̀saɪnì̀jàda:wo:tʊ̀kwʊ̀naa]

   Wait until Husaini comes back

7. Fakit- hudu muke so

   [ɸa:cɪt-huʔdʊmʊcè:sô:]

   It's four packets that we want

8. Ya tats- guzuma

   [ja:tà:s'-gwʊzʊma:]

   He milked an old cow

9. Ladid- Uwa ce ga Musa

[là:di:d-ʔʊwa:tʃè:gàmu:sa:]

L. is a mother to Musa

10. Baɗ- Uba zai komo

[bàʔd-ʔʊ̀bazâɪkwo:mo:ʔ]

It is next year that Uba will return

11. Sun kall- wasu daga ciki

[sʊŋkàll-wasʊdàgàtʃɪci:]

They had a look at some

The vowel table:

	A			B			C			D			E		
	ɪ	ɨ	ʊ	ɪ	ɨ	ʊ	ɪ	ɨ	ʊ	ɪ	ɨ	ʊ	ɪ	ɨ	ʊ
1.		✓		✓				✓		✓				✓	
2.		✓		✓					✓			✓			✓
3.		✓		✓				✓		✓			✓		
4.			✓	✓			–	–	–		✓			✓	
5.			✓			✓			✓			✓			✓
6.	–	–	–			✓		✓			✓			✓	
7.			✓		✓			✓			✓			✓	
8.			✓		✓				✓		✓			✓	
9.			✓			✓		✓				✓			✓
10.			✓			✓			✓			✓		✓	
11.			✓			✓			✓			✓			✓
NUMBER OF OCCURRENCES	0	3	7	4	2	5	0	5	5	2	4	5	1	6	4

From 1 - 4 (where labial precedes), [ɨ] & [ʊ] both alternate with the [ɪ] in 2 and 4, while [ɨ] exclusively does in 1 and 3; [ʊ] alternates with the surface [ɨ] of the underlying /ɪ/ (where coronal precedes) from 6 - 9; only [ʊ] features in 5 and 11; there are no alternants ɪ/ʊ. As a whole, two speakers, A & C use only [ɨ] & [ʊ] but all the five have some alternation from utterance to utterance.

2.3 THE MOTIVATION FOR THE ALTERNATION OR NON-ALTERNATION OF THE VOWELS

We discussed in the foregoing section various instances of the alternation of ɪ, ɨ & ʊ in both 'short' and 'long' utterances in the standard dialect. We noticed different sorts of alternations revolving round these vowels under various circumstances, such as alternation of the whole three, ɪ/ɨ/ʊ, e.g. ʔdɪ̀mi:/ʔdɨ̀mi:/ʔdʊ̀mi:, 'warmth' (cf. 2.1.1.1.2 & 2.2.4); that of ɪ/ɨ, e.g. ɸɪ̀taʔ/ɸɨ̀taʔ, 'go out' (cf. 2.1.1.1.1, 2.1.3.1.1 & 2.2.1); that of ʊ/ɨ, e.g. ta:ʔbʊ̀ka/ta:ʔbɨ̀ka, 'manage' (cf. 2.1.1.1.1, 2.1.1.1.2, 2.1.2.1, 2.1.2.2, 2.1.3.2.1, 2.1.3.2.2, 2.2.2 & 2.2.4); and that of ɪ/ʊ, e.g. ʃɪɽwà:/ʃʊɽwà:, 'kite' (cf. 2.1.1.1.3, 2.1.1.1.4, 2.1.1.1.6, 2.1.1.1.7, 2.1.2.3, 2.1.3.1.4, 2.1.3.2.3 & 2.2.3). Similarly, we noticed other cases where such alternation never occurs, e.g. ʔʊ̀ba:, 'father', hɪ̀ka:jà:, 'narrative' (cf. 2.1.1.1.5, 2.1.2.4, 2.1.2.5, etc.). Now, in this section, an attempt will be made where possible, to find out what the motivation for the alternation and non-alternation of these vowels could be, and try to see in the case of the alternation in a 'simple' word (2.1.1.1.1 - 2.1.1.2) if the underlying form can be established. For simplicity and clarity however, the two cases will be dealt with separately.

2.3.1 THE NON-ALTERNATION

First, let us consider the case of the underlying /ʊ/ in the plural morpheme {-ʊCa:}. In 2.1.2 where this was presented, we noticed that the /ʊ/ has the constant pronunciation [ʊ] after con. [+ dor.] and con. [+ glot.] but makes alternation with [ɪ] after con. [+ pal.], and with [ɨ] after con. [+ lab.] and con. [+ cor.]. For the first part, i.e. the case of non-alternation, we witnessed it in words like ʔalkawʊra̋:, 'promises', baŋkwʊna̋:, 'banks', saŋhʊna̋:, 'kinds of bag'. The question to ask here, what is the motivation for pronouncing such words all with [ʊ]? In fact, there seem to be <u>two</u> contributory factors here: a) all the preceding consonants have the feature value of backness, i.e. they are [+ back]; b) the rounding in the morphologically-fixed back vowel -ʊ- goes right through the whole syllable.[25] These put together would phonetically make it impossible for the /ʊ/ to have any other surface realization. Hence, the constant pronunciation. Again, this would cover similar instances with the [ʊ] (as reduced u:) in a closed syllable, such as bʊ̀hʊ̂ŋ, 'the sack', mà jàŋkwʊ̂ŋ, 'the abattoirs', etc., and the non-alternating [ʊ] in the simple word, such as the one in wʊta:, 'fire', hʊ̀kwu:mà:, 'authority', etc.

Next, the /ɪ/ (as reduced i:) in a closed syllable, we said is the underlying vowel under those circumstances (2.1.3.1). However,

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[25] The evidence of [h] sharing the rounding in [ʊ] like other back consonants in the same condition, can be noticed in the pronunciation of a reduced [o:] in a closed syllable with the consonant preceding, where it is very pronounced, e.g. ʃa:hò:, 'hawk' but ʃa:hwɔ̀ŋ/ʃa:hwàŋ, 'the hawk', màka:hò:, 'blindman' but màka:hwɔ̀ŋ/màka:hwàŋ, 'the blindman'.

while it has two possible surface realizations, e.g. when the preceding consonant is [+ lab.], as in takwɔ̀:bîŋ/takwɔ̀:bi̋ŋ, 'the sword', it has only one realization [ɪ] when such consonant is [+ pal.], or [+ glot.], e.g. ba:ʃɪ̀ŋ, 'the debt', and do:cɪ̀ŋ, 'the horse', or nawʊ?ɪ̀ŋ, 'the type' and ru:hɪ̀ŋ, 'the soul'. Here, a glottal consonant too, under this condition, has in fact a certain degree of palatality like the other palatal consonants.[26] Besides, phonetically, the features [+ pal.] for consonants and [+ front] for vowels have much in common. So that this close relationship would naturally maintain the surface realization of the underlying vowel as [ɪ] under these circumstances. Likewise this covers similar cases in the simple word, such as in ʃɪdà?, 'six', ʧɪɽɛ̀, 'remove', ?ɪdɔ̀:, 'eye'. Note that the 'rounding' that follows in the latter word does not affect the [ɪ] realization.

2.3.2 THE ALTERNATION

We will examine here, where possible, the motivation for the different sorts of alternations concerning those three vowels, viz. ɪ/i̋/ʊ, ʊ/i̋, ɪ/i̋ and ɪ/ʊ, taking each case separately.

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[26] This can best be exemplified with the pronunciation of the front vowel [ɛ] in a closed syllable with a glottal consonant preceding. To the proper names ʤà:?e? and mà:he? both ending in short [e] accompanied by a prosodic glottal stop, when the deictic -ŋ is added the final glottal stop disappears and the realization becomes ʤà:?jêŋ/ʤà:?jâŋ and mà:hjêŋ/mà:hjâŋ respectively.

2.3.2.1 The Case Of ɪ/ʊ

For convenience we are starting with the final case, ɪ/ʊ. Let us refer once again to the situation with the underlying /ʊ/ in the plural morpheme {-ʊCa:}. In 2.1.2.3 where a phonemic palatal precedes, we saw this underlying form having the alternants [ʊ] & [ɪ], in some individuals. Under these circumstances, in this dialect some speakers prefer [ɪ] as was the case with the majority of the five selected speakers for the words wa:ʃɪnà:, 'washers for nut', hantʃɪnà:, 'noses', ʔɪndʒɪnà:, 'engines'; some maintain the pronunciation with the [ʊ], k'aʊjʊkà:, 'villages'; and, indeed some with both, k'aʊjʊkà:/k'aʊjɪkà:.

Generally speaking, the motivation in phonetic terms, for the alternation [ɪ] under this condition is the feature value [+ pal.] inherent in the preceding consonant. The situation is a sort of struggle one might say, between two forces. On the one hand, there is the morphological force that dictates the vowel as [ʊ], and there is the phonetic force on the other that occasionally changes it to [ɪ]. So that where [ɪ] features in pronunciation of the segment and not the [ʊ] it is the phonetic force that wins, and where the [ʊ] is maintained the morphological force does.

Next, in 2.1.3.1.4 where we examined the situation with an underlying /ɪ/ preceded by the phonemic dorsal /w/ and followed by the deictic -ŋ, in wî:wîŋ/wî:wûŋ, meaning 'the Indian hemp', [ʊ] is seen to alternate with the [ɪ]. Here, the occasional realization of the /ɪ/ as [ʊ] is brought about by the feature value [+ round] attached to the preceding consonant. In other words, the struggle here involves the rounding of this consonant affecting the surface representation of the

underlying /ɪ/. In cases where [ʊ] is reflected in the pronunciation the /w/ predominates and, otherwise the [ɪ]. Compare this with other cases under the same circumstances where a non-rounded consonant precedes.

Next, in 2.1.3.2.3 where a phonemic palatal again precedes, and the vowel is followed by the deictic -ŋ, the underlying /ʊ/ has, on average, equal realization amongst [ʊ] and [ɪ]. The situation is the same as the one we witnessed in 2.1.2.3, the feature [+ pal.] in the preceding consonant being the motivation. The segment is pronounced with [ʊ] in line with the morphology, and with [ɪ] where the preceding palatal consonant predominates. Hence, ʤù:ʤûŋ/ʤù:ʤîŋ, 'the evil spirit', or ma:jûŋ/ma:jîŋ, 'the witches'.

Lastly, in 2.2.3 we saw a few cases where an underlying /ʊ/ features as [ɪ]. Here, obviously, the motivation for such realization under those circumstances is the immediately following palatal approximant [j], otherwise it would not be possible. Hence, we had [ɪ] alternating with the [ʊ] in, for example, the sentence:

[wannàŋʔàbʊ̀ja:ba:dàmà:ma:cì:] /
[wannàŋʔàbì̀ja:ba:dàmà:ma:cì:]
'This thing has given surprise'

In all these four cases revolving round ɪ/ʊ alternation exclusively, the underlying form is known, /ʊ/ in 2.1.2.3, 2.1.3.2.3 & 2.2.3 and, /ɪ/ in 2.1.3.1.4. However, another question is, what about the situation in a 'simple' word where the underlying vowel seems to be unknown? The reference here is to the cases presented in

2.1.1.1.3, 2.1.1.1.4, 2.1.1.1.6, 2.1.1.1.7 and 2.1.1.2.

Generally speaking, in 2.1.1.1.3 where the preceding consonant is a phonemic palatal one thing is evident. In all the cases where ɪ/ʊ alternation is seen to occur there is a 'rounding' in the following segment. Compare for instance, ʃɪɽwà:/ʃʊɽwà:, 'kite' on the one hand, and ʃɪdà?, 'six' or ʧɪɽɛ̀, 'remove' on the other, which have no alternative pronunciation (ʃʊdà?)* or (ʧʊɽɛ̀)*. So one can say here that the underlying vowel is /ɪ/, and that it sometimes has the surface realization [ʊ] in view of the said rounding in the following segment.

In 2.1.1.1.4 this alternation occurs in the word for 'neck' wʊjà:/wɪjà: as opposed to wʊta:, the word for 'fire'. Here, in view of the close phonetic affinity between the preceding [w] and [ʊ], both being [+ back, + round], and in view of the presence of [j] in the following segment in the first word, one can conclude that the underlying vowel is /ʊ/ and, that its pronunciation as [ɪ] occasionally noticed is brought about by that [j]. The word wʊta: has one possible pronunciation with [ʊ] in this regard as there is nothing to motivate the underlying /ʊ/ to have another realization, [ɪ].

In 2.1.1.1.6 where an allophonic palatal precedes and the vowel is followed by 'rounding', [ɪ] & [ʊ] are seen to alternate. Here, since the preceding consonant is an allophone conditioned by a following front vowel as [ɪ], in this condition, /ɪ/ is the underlying form and that its occasional realization as [ʊ] is motivated by that rounding: cɪs'ò:/cʊs'ò:, 'plaiting of hair', ɸɪc'ɪhù?/ɸɪc'ʊhù?, 'the science of Islamic law'.

In 2.1.1.1.7 [ʊ] & [ɪ] are seen to alternate in the words ʔàkwʊjà:/ʔàkwɪjà:, 'goat' and gwà:gwʊ̀ji/gwà:gwɪ̀ji, 'gnaw at'. Here

too, the preceding consonants kw- and gw- being allophones conditioned by a following back vowel as [ʊ], in this condition, /ʊ/ is the underlying form and that the [ɪ] occasionally featuring in the pronunciation is motivated by the following [j].

Lastly, in 2.1.1.2 where the two vowels alternate in combinations I and III (ʊ-ʊ/ʊ-ɪ) in the trisyllabic word rʊbù?i:/rʊbì?i:, 'one quarter', the word itself comes from the Arabic monosyllabic 'rubʕ' with a consonant cluster involving the voiced bilabial stop [b] and the voiced phryngeal fricative [ʕ] respectively at the end. Hausa however, in its phonological system does not allow final consonant clusters[27], and deals with this by vowel insertion. Similarly, the consonant [ʕ] is never found in Hausa and instead, a glottal stop [?] replaces it. But glottal stop as a consonant never occurs word-finally, so an i: is here employed to follow it. Now, back to the said vowel insertion. The vowel so inserted between the two consonants under such circumstances is, in most cases, a copy of the one in the immediately preceding syllable: a, ʊ or ɪ, such as sàbà?ɪŋ, 'seventy' from 'sabʕi:n'; rʊkwʊ̀ni:, 'part of' from 'rʊkn'; and ɸɪ?ì̀li:, 'verb' from 'fɪʕl'. So it is evident enough that in the case of rʊbù?i:/rʊbì?i: the underlying vowel is /ʊ/, a copy of the one in the preceding syllable rʊ$, and its realization as [ɪ] in some pronunciations is motivated by the final -i:.

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[27] Medially it allows abutting consonants where the first consonant in the sequence marks the end of a preceding closed syllable, and the second consonant signals the beginning of the following syllable, e.g. saɣ$ci: in saɣci: 'king', sàn$da: in sanda: 'stick', tàm$bajà: in tambaja: 'question'.

2.3.2.2 The Case Of ɪ/ɨ

We will consider here the motivation for the alternation of [ɪ] and [ɨ]. We saw in 2.1.3.1.1 where i: is reduced to function in a closed syllable, with a con. [+ lab.] preceding, that the underlying /ɪ/ has both [ɪ] & [ɨ] realizations in this dialect, e.g. takwɔ̀:bɪ̂ŋ/ takwɔ̀:bɨ̂ŋ, 'the sword', ʤɪ̀ʔbɪ̂ŋ/ʤɪ̀ʔbɨ̂ŋ, 'the perspiration'. Similarly, we noticed the same kind of situation in 2.2.1 where, within long utterance, with a con. [+ lab.] preceding, the underlying /ɪ/ is realized both as [ɪ] and as [ɨ], e.g. ja:hàrbɪʔàkwʊ̂ŋ/ja:hàrbɨʔàkwʊ̂ŋ, 'he shot at the parrot'. Now, what is the motivation for this alternation?

The situation here in fact, is quite different from the previous one. The motivation for /ɪ/ having alternative realization [ɨ] under those circumstances does not seem to be apparent. We noticed that the occurrence in this dialect is so regular that an -i: in immediately following segment does not prevent it, e.g. ja:ɟɪ̀ɳmɪʔi:sa:/ ja:ɟɪ̀ɳmɨʔi:sa:, 'he is older than Isa'. On the part of the preceding consonant [+ lab.] which is also [+ front] in a way, as [ɪ], it does not seem to have any phonetic quality that would centralize [ɪ] to [ɨ]. So the reason for the ɪ/ɨ alternation remains unexplained.

2.3.2.3 The Case Of ʊ/ɨ

We are faced with the same kind of problem here. The underlying /ʊ/ is, in some cases, pronounced as [ɨ]. We saw this in the case with the plural morpheme {-ʊCa:}, e.g. kwabbʊnà:/kwabbɨnà:, 'pennies',

s'ʊnʊkà:/s'ʊnɨkà:, 'hills'; in the reduced u:, e.g. jim?bʊ̂ŋ/jɪm?bɨ̂ŋ, 'the clay', kwʊ̀nʊ̂ŋ/kwʊ̀nɨ̂ŋ, 'the gruel'; and within long utterance, e.g. jànzʊza:mʊ̀tàɸi?/jànzɨza:mʊ̀tàɸi? , 'it is now that we are going'.

With regard to cases where the preceding consonant is [+ lab.], under normal circumstances one would not expect [ɨ] to serve as alternative pronunciation of /ʊ/. For, at least a labial consonant and an [ʊ] vowel are more phonetically associated, the articulation of both involving the lips, among other things. However, this labiality does not prevent it occurring. And, for the following segment too, nothing seems in sight as to what motivates this alternation. Similarly, pertaining to cases where the preceding consonant is [+ cor.] the situation remains just that. One might argue that since the realization of [ɪ] when preceded by a coronal is [ɨ] (see 2.1.3.1.2) then /ʊ/ can have this surface realization. But [ɪ] and [ʊ] are never the same. So here again, the motivation for /ʊ/ having alternative realization [ɨ] under those circumstances remains obscure.

2.3.2.4 The Case Of ɪ/ɨ/ʊ

The whole three vowels are found to alternate under certain conditions. In 2.2.4 we saw this kind of situation where a con. [+ lab.] precedes and the vowel is followed by a rounded segment, e.g. ?anzà:?bɪwani?/?anzà:?bɨwani?/?anzà:?bʊwani? , 'someone is elected/chosen'. The underlying vowel here is /ɪ/, then why do [ɨ] & [ʊ] make alternation with [ɪ]? In the case of the realization of the underlying vowel as [ɨ], in fact we made a similar attempt in 2.3.2.2 to

find the motivation but failed. Nevertheless, in regard to the realization as [ʊ] it is obviously brought about by the quality [+ round] in the following [w].

We also noticed this ɪ/ɨ/ʊ alternation in the 'simple' word ʔdɪ̀mi:/ʔdɨ̀mi:/ʔdʊ̀mi:, 'warmth' in 2.1.1.1.2. Which one could possibly be the underlying form? Here, [ɨ] could certainly not be in view of the fact that it has no phonemic status in the language. It is never found to contrast with either [ɪ] or [ʊ]. Even in such cases where it seems to occur on its own, as in dɨla:, 'fox', nɨk'à, 'grind' (see 1.2.3) it is never a phoneme underlyingly. On the contrary, it is an allophone of an underlying /ɪ/. For, the latter as we saw, has this surface realization [ɨ] when a coronal precedes. In fact, the symbol 'i' rather than 'u' reflected in the orthography in such typical cases testifies this claim. Now, turning to the other two vowels, [ɪ] & [ʊ], which could be the underlying form? Here, obviously one would be inclined to posit /ʊ/ and relate the realization [ɪ] to the final -i:.

2.4 CONCLUSION

We made a survey in 2.1 on the alternation of [ɪ], [ɨ] & [ʊ] in the standard dialect, and discovered that the process occurs in particular ways under particular conditions. It occurs in both 'short' and 'long' utterances. There are cases in short utterances where the alternation affects more than one segment. Four forms of alternations are associated with those three vowels, namely ɪ/ɨ/ʊ, ɨ/ɪ, ɨ/ʊ and ɪ/ʊ. While the motivation for ɪ/ʊ alternation is explicable by the phonetic context in which it occurs, for the other alternations involving [ɨ], it seems to be obscure. In this dialect, underlying /ɪ/ and /ʊ/ both often have alternative surface realization [ɨ] when a con. [+ lab.] precedes. In other words, [ɪ] and [ʊ] tend to centralize to [ɨ] under this condition. An underlying /ɪ/ is regularly centralized when a con. [+ cor.] precedes. An underlying /ʊ/ is realized both as [ʊ] and [ɨ] when a con. [+ cor.] precedes. The vowel [ɨ] is never an underlying form, i.e. is never a phoneme. On the contrary, it is an allophone of /ɪ/ after a con. [+ cor.] and a variant of [ɪ] and/or [ʊ] elsewhere.

CHAPTER THREE

3.0 THE [ɪ], [ɨ] & [ʊ] ALTERNATION IN THE ZARIA DIALECT

In Chapter Two, we discussed in the first section the 'general' type of vowel alternation under the headings 'non-dialectal' and 'dialectal', and concentrated throughout the second section on the alternation of [ɪ], [ɨ] & [ʊ] 'specific' in the standard dialect. We saw that in this dialect the latter alternation occurs almost exclusively in particular ways under particular conditions. It occurs in both short and long utterances and takes four forms, viz. alternation of the three together, ɪ/ɨ/ʊ, that of ɪ/ɨ, that of ɨ/ʊ and, ɪ/ʊ alternation. We also looked at the conditions governing each of these kinds of alternations.

In this chapter, we will look into the situation in the Zaria dialect. In this dialect as in the standard and in all others, there are particular phonetic sequences which regularly prevent any alternation. The situation in the standard dialect has already been dealt with in the previous chapter. As the case is not different from the other dialects, no further mention will be made of it. Considerable attention, however, will be paid to cases of significant similarities and differences. The items sampled are the same throughout, and the number of selected speakers being also the same, five in each case.

'A'

3.1 IN A SINGLE SEGMENT

As in the previous chapter, we are starting with the vowel alternation that affects a single segment of a simple word in this dialect.

3.1.1 Preceding Consonant [+ lab.]

		A	B	C	D	E	
1.	b-ci:	ʊ	ʊ	ɪ	ʊ	ɪ	ceremony
2.	b-gwu:	ʊ	ʊ	ʊ	ʊ	ʊ	beating
3.	ta:ʔb-kaʒ	ʊ	ʊ	ʊ	ʊ	ʊ	manage
4.	ɸ-taʔ	ɪ	ɪ	ɪ	ɪ	ɪ	go out
5.	m-lci:	ʊ	ʊ	ʊ	ʊ	ɪ	power

The first major difference between this pattern of pronunciation and that of the standard dialect is the absence of the central unrounded [ɨ] in this context. In the first word, three speakers favour [ʊ] while two prefer [ɪ]; [ʊ] is maintained by all in the second as well as in the third word; all employ [ɪ] in the fourth one; and lastly, four speakers favour [ʊ] as against one for [ɪ].

3.1.2 Preceding Consonant [+ cor.]

		A	B	C	D	E	
1.	n-s'e:	ɨ	ɨ	ɨ	ɨ	ɨ	sink down
2.	r-bu:tu:	ʊ	ʊ	ʊ	ʊ	ʊ	writing
3.	ɽ-ga:	ʊ	ɨ	ɨ	ʊ	ɨ	Fulani cattle encampment
4.	t-ɽmi:	ʊ	ɨ	ɨ	ʊ	ʊ	mortar
5.	s-Φe:to:	ɨ	ɨ	ɨ	ɨ	ɨ	police inspector
6.	z-Φa:	ʊ	ɨ	ɨ	ʊ	ɨ	sweat
7.	s'-ns'u:	ʊ	ʊ	ʊ	ʊ	ɨ	bird
8.	ʔaʊd-ga:	ɨ	ɨ	ʊ	ɨ	ʊ	cotton
9.	ʔd-mi:	ʊ	ɨ	ɨ	ɨ	ɪ	warmth
10.	ʔda:l-bi:	ɨ	ɨ	ɨ	ɨ	ɨ	student [+ male]

The alternation is the same in both dialects even to the case of the ninth word having three pronunciations, ʔdʊ̀mi:/ʔdɨ̀mi:/ʔdɪ̀mi:, and the distribution is similar. The chief difference is the pronunciation of the second word consistently with [ʊ] and of the fourth one with both [ɨ] & [ʊ].

3.1.3 Preceding Consonant [+ phon. pal.]

		A	B	C	D	E	
1.	ʃ-ɽwa:	ɪ	ɪ	ʊ	ɪ	ɪ	kite
2.	ʃ-daʔ	ɪ	ɪ	ɪ	ɪ	ɪ	six
3.	ʧ-kwo:wa:	ʊ	ɪ	ɪ	ʊ	ʊ	overcrowd
4.	ʧ-ɽeʔ	ɪ	ɪ	ɪ	ɪ	ɪ	remove
5.	ʤ-wa:	ɪ	ɪ	ʊ	ʊ	ɪ	dizziness
6.	j-ŋwa:	ʊ	ɪ	ɪ	ʊ	ʊ	hunger

As in the standard dialect, [ʊ] is seen to alternate with the [ɪ] in those words in which 'rounding' follows, i.e. 1, 3, 5 and 6.

3.1.4 Preceding Consonant [+ phon. dor.]

		A	B	C	D	E	
1.	w-ja:	ʊ	ʊ	ʊ	ʊ	ʊ	neck
2.	w-ta:	ʊ	ʊ	ʊ	ʊ	ʊ	fire

Although [j] follows the vowel in the first word, all five speakers maintain [ʊ] unlike in the standard dialect where one speaker is found to use [ɪ].

3.1.5 Preceding Consonant [+ al. pal.]

		A	B	C	D	E	
1.	c-s'o:	ɪ	ʊ	ɪ	ɪ	ɪ	plaiting of hair
2.	ɸɪc'-huʔ	ɪ	ɪ	ʊ	ɪ	ʊ	the science of Islamic law
3.	ɟ-zoʔ	ʊ	ɪ	ɪ	ɪ	ɪ	the mythical spider of fables
4.	c-ɽa:	ɪ	ɪ	ɪ	ɪ	ɪ	calling

Here too, as in the standard dialect, [ʊ] alternates with the [ɪ] where 'rounding' follows.

3.1.6 Preceding Consonant [+ al. dor.]

		A	B	C	D	E	
1.	ʔakw-ja:	ʊ	ɪ	ʊ	ʊ	ɪ	goat
2.	huŋkw'-jiʔ	ʊ	ɪ	ʊ	ʊ	ʊ	place name
3.	gwa:gw-ji	ɪ	ʊ	ʊ	ɪ	ʊ	gnaw at
4.	kw-saʔ	ʊ	ʊ	ʊ	ʊ	ʊ	near

Cases of alternation of [ɪ] with the [ʊ] occur in the first three words as in the standard dialect, with none in the fourth word where there is no following [j] consonant.

3.2 IN MORE THAN ONE SEGMENT

The vowel distribution here for those ten words differs to a large extent from the standard dialect. While in the standard dialect all combinations were found except VIII (ɪ-ʊ) here, in addition, combinations III and VII are absent. The pronunciation of the first and second word is consistent with comb.IX bɪndigà: and ɸìtɨllà:[28] respectively. Another case of consistent pronunciation is with the ninth word where comb.I is employed, rʊbʊ̀ʔi:. The total number of occurrences of those combinations likewise show some significant contrast between the two dialects. Comb.I (ʊ-ʊ) occurs twelve (12) times here as against three in the standard dialect; comb.IV (ɨ-ɨ), fourteen (14) times here as against thirty-two (32) in the standard; and comb.IX (ɪ-ɨ) occurs eleven (11) times here as against twice in the standard dialect. (See table)

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[28] Unlike in the standard dialect, pronunciation of this word in this dialect involves gemination of the stem final consonant -ll- .

TABLE OF THE ALTERNATING-VOWEL COMBINATIONS FOR THE PRONUNCIATION OF THE TEN SELECTED WORDS BY THE FIVE SPEAKERS FROM ZARIA

	WORDS	I ʊ-ʊ	II ʊ-ɨ	III ʊ-ɪ	IV ɨ-ɨ	V ɨ-ɪ	VI ɨ-ʊ	VII ɪ-ɪ	VIII ɪ-ʊ	IX ɪ-ɨ	ENGLISH EQUIVALENTS
1.	b-nd-ga:				(4)					5 (1)	gun
2.	ɸ-t-la:				(4)					5 (1)	lamp/light
3.	ɸ-ɸɸ-ce:	1			1 (2)	2 (1)		(2)		1	wing
4.	d-dd-ɟe:	1	(1)		4 (4)						heel
5.	t-mb-ʔdi:	3 (1)	1		1 (2)	(1)	(1)				regurgitation
6.	s-m-nti:				2 (3)	2 (2)	1				cement
7.	l-ll-ʔbi:	(1)	4		1 (4)						veiling
8.	s-ɽ-ci:	2	1		2 (3)						inlaw [+ male]
9.	r-b-ʔi:	5 (1)	(2)	(1)	(3)						one-quarter
10.	kwʊd-dd-ɸi:		2 (2)		3 (3)						pond
	NUMBER OF OCCURRENCES	12 (3)	8 (5)	0 (1)	14 (32)	4 (4)	1 (1)	0 (2)	0 (0)	11 (2)	

a) The numbers refer to the number of speakers using the particular vowel combination shown at the head of the column for each item

b) Results for the standard dialect are given in parenthesis for comparison

3.3 THE /ʊ/ IN THE {-ʊCa:} MORPHEME

3.3.1 Preceding Consonant [+ lab.]

		A	B	C	D	E	
1.	kwabb-na:	ʊ	ʊ	ʊ	ʊ	ʊ	pennies
2.	kaʔb-ka:	ʊ	ʊ	ʊ	ʊ	ʊ	calabashes of food for a feast
3.	laɸ-za:	ʊ	ʊ	ʊ	ʊ	ʊ	speeches, pronunciations
4.	ɽa:m-ka:	ʊ	ʊ	ʊ	ʊ	ʊ	holes

In contrast with the standard dialect there is no case of the underlying /ʊ/ having alternative realization [i̟]. The surface [ʊ] is maintained in all the cases.

3.3.2 Preceding Consonant [+ cor.]

		A	B	C	D	E	
1.	s'aʊn-ka:	ʊ	ʊ	ʊ	ʊ	ɨ	hills
2.	ha?dar-rr-ka:	-	ʊ-ʊ	ʊ-ʊ	ʊ-ɨ	ʊ-ʊ	accidents
3.	ta:ɽ-ɽɽ-ka:	ɨ-ɨ	ɨ-ɨ	ʊ-ʊ	ɨ-ɨ	ɨ-ɨ	conferences
4.	ti:t-na:	ɨ	ɨ	ʊ	ɨ	ɨ	streets
5.	hars-na:	ʊ	ʊ	ɨ	ʊ	ʊ	languages
6.	da:z-zz-ka:	ʊ-ʊ	ʊ-ʊ	ɨ-ɨ	ʊ-ʊ	ɨ-ɨ	forests
7.	hans'-ka:	ɨ	ɨ	ʊ	ɨ	ɨ	forceps, tongs
8.	kwand-na:	ɨ	ɨ	ɨ	ʊ	ɨ	baskets
9.	ha?d-ra:	ɨ	ɨ	ɨ	ʊ	ɨ	accidents
10.	hu:l-na:	ʊ	ʊ	ʊ	ɨ	ʊ	caps

The vowel [ɨ] makes a lot of alternation with the [ʊ] under these circumstances in this dialect, too.

3.3.3 Preceding Consonant [+ phon. pal.]

		A	B	C	D	E	
1.	wa:ʃ-na:[29]	ʊ	ɪ	-	ɪ	ɪ	washers for nut
2.	hantʃ-na:	ɪ	ʊ	-	ɪ	ɪ	noses
3.	ʔɪnʤ-na:	ʊ	ɪ	ɪ	ɪ	ɪ	engines
4.	k'aʊj-ka:	ʊ	ɪ	ʊ	ʊ	ʊ	villages

As in the standard dialect, [ɪ] predominates here, but there is alternation for each word and for each speaker.

3.4 THE i: REDUCTION

(The words without reduction are given in 2.1.3.1 and will not be repeated here and henceforth.)

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[29] For the first and second word speaker C prefers the form wa:ʃo:ʃi: & hantʊnà: respectively.

3.4.1 Preceding Consonant [+ lab.]

		A	B	C	D	E	
1.	takwo:b-ŋ	ɪ	ɪ	ɪ	ɪ	ɪ	the sword
2.	ʤɪʔb-ŋ	ɪ	ɪ	ɪ	ɪ	ɪ	" perspiration
3.	ʕa:ɸ-ŋ	ɪ	ɪ	ɪ	ɪ	ɪ	" stream
4.	ʕa:m-ŋ	ɪ	ɪ	ɪ	ɪ	ɪ	" hole

Unlike in the standard dialect where, under such circumstances the five speakers mostly use [ɨ] as the reduced vowel, the vowel [ɪ] is maintained by all five speakers of the Zaria dialect.

3.4.2 Preceding Consonant [+ cor.]

		A	B	C	D	E	
1.	ʕa:n-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ	the dry season
2.	la:ba:r-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ	" story
3.	bu:ʕ-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ	" ambition
4.	kant-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ	" shop
5.	si:s-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ	" sixpence
6.	hɪrz-ŋ	ɪ[30]	ɨ	ɨ	ɨ	ɨ	" seeking for God's protection
7.	sans'-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ	" slipperiness
8.	maɪga:d-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ	" guard
9.	kwʊʔd-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ	" money
10.	ʔalka:l-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ	" judge

[30] Speaker A employs [ɪ] but palatalizes the preceding consonant to [ʤ] under this condition. Hence, hɪrʤɪ̀ŋ rather than hɪrzɪ̀ŋ .

Here, too, with one exception, the 'reduced' vowel under these circumstances is realized as [ɨ].

3.4.3 Preceding Consonant [+ phon. dor.]

	A	B	C	D	E	
wi:w-ŋ	ɪ	ɪ	ʊ	ɪ	ɪ	the Indian hemp

This is exactly comparable to the situation with the five selected speakers of the standard dialect.

3.5 THE u: REDUCTION

(For the reduction of u:, as in the reduction of i:, since the words without reduction are given in 2.1.3.2 they will not be repeated here and henceforth.)

3.5.1 Preceding Consonant [+ lab.]

		A	B	C	D	E	
1.	lamb-ŋ	ʊ	ʊ	ʊ	ʊ	ʊ	the garden
2.	jɪmʔb-ŋ	ʊ	ʊ	ʊ	ʊ	ʊ	" clay
3.	sa:m-ŋ	ʊ	ʊ	ʊ	ʊ	ʊ	" wealth

Unlike in the standard dialect where [ɨ] makes alternation with the [ʊ] in three cases, the latter here is maintained by all five speakers.

3.5.2 Preceding Consonant [+ cor.]

		A	B	C	D	E	
1.	kwʊn-ŋ	ʊ	ʊ	ʊ	ɨ	ʊ	the gruel
2.	tantabar-ŋ[31]	ʊ	ʊ	ʊ	ɨ	ɨ	" pigeons
3.	ʃɪɾ-ŋ	ɨ	ɨ	ɨ	ɨ	ʊ	" silence
4.	kara:t-ŋ	ɨ	ɨ	ʊ	ʊ	ɨ	" reading
5.	s-ŋ	ʊ	ʊ	ɨ	ʊ	ʊ	" fishing
6.	bu:z-ŋ	ʊ	ʊ	ɨ	ʊ	ʊ	" sheep-skin
7.	ja:s'-ŋ	ʊ	ʊ	ʊ	ʊ	ʊ	" fingers
8.	gand-ŋ	ɨ	ɨ	ɨ	ʊ	ɨ	" farm
9.	ɾu:ʔd-ŋ	ʊ	ɨ	ɨ	ʊ	ʊ	" confusion
10.	sa:bʊl-ŋ	ʊ	ɨ	ʊ	ʊ	ʊ	" soap

As in the standard dialect, [ɨ] here makes alternation with the [ʊ] under this condition. But, unlike in the standard dialect, pronunciation with the [ʊ] predominates. Out of the fifty utterances it features thirty-one (31) times, as against nineteen (19) for [ɨ]. (The [ʊ] features 15 times, and [ɨ] 35 times in the standard dialect.) The seventh word was pronounced consistently with the [ʊ].

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[31] The first syllable of this word has a final 'n' not 't' in this dialect.

3.5.3 Preceding Consonant [+ phon. pal.]

		A	B	C	D	E	
1.	ʤu:ʤ-ŋ	ʊ	ɪ	ʊ	ʊ	ɪ	the evil spirit
2.	ma:j-ŋ	ɪ	ɪ	ʊ	ʊ	ɪ	" witches

The [ʊ] is maintained by three speakers in the first word, and the alternant [ɪ] by two. Conversely, the alternant [ɪ] attracts three speakers in the second word, and the [ʊ], two speakers. So that the frequency of occurrence between the two vowels is again balanced.

'B'

3.6 IN A LONG UTTERANCE

3.6.1 Labial Preceding The /ɪ/

1. Ya harb- akun

   [ja:hàrb-ʔakwûη]

   He shot at the parrot

2. Jib- Isa zai komo

   [ʤi:b-ʔi:sa:zâɪkwo:mo:ʔ]

   It is the day after tomorrow that Isa will come back

3. An zaɓ- Audu

   [ʔanzà:ʔb-ʔaudù?]

   Audu is elected/chosen

4. Sun karɓ- nasu

   [suηkàɾʔb-na:sù?]

   They received theirs

5. Ta haif- 'ya mace

   [ta:hàɪɸ-ʔja:màʧè?]

   She gave birth to a baby girl

6. Mun taf- gida

   [mʊntàɸ-ɟɪda:]

   We went home

7. Ya girm- Isa

   [ja:ɟɪɪ̀m-ʔi:sa:]

   He is older than Isa

8. An sallam- leburori

   [ʔansàllàm-le:bʊro:ri:]

   Labourers are dismissed

Below is the vowel table according to the pronunciation of the utterances by the five selected speakers of this dialect:

	A		B		C		D		E	
	ɪ	ɨ	ɪ	ɨ	ɪ	ɨ	ɪ	ɨ	ɪ	ɨ
1.	✓		✓			✓	✓		✓	
2.	✓		✓		✓		✓		✓	
3.	✓		✓		✓		✓		✓	
4.	✓		✓			✓	✓		✓	
5.	✓		✓		✓		✓		✓	
6.	✓		✓		✓		✓		✓	
7.	✓		✓		✓		✓		✓	
8.	✓		✓		✓		✓		✓	
NUMBER OF OCCURRENCES	8	0	8	0	6	2	8	0	8	0

In this table, four speakers consistently employ the [ɪ] throughout, while two cases of [ɨ] alternating with the [ɪ] is witnessed in one speaker. In other words, out of the forty utterances, thirty-eight (38) were all with the [ɪ] (95%) and only two (2) with the alternant [ɨ] (5%). So in comparison with what we saw in the standard dialect where the alternant attracts 65%, and the [ɪ] 35%, the difference is very striking.

3.6.2 Coronal Preceding The /ʊ/

1. Musa bai san- ba

   [mu:sa:bàɪsàn-ba?]

   Musa is not known

2. Kamar- babbar ƙasa ce

   [kàmàr-bàbbark'asa:ʧè:]

   Cameroun is a large country

3. Far- muka tafi

   [Φa:ɾ-mʊkàtàΦi?]

   It is F. we have been to

4. An buɗe kot- da wuri

   [ʔambu:ʔdɛ̀kwo:t-dàwʊɾi?]

   The court has opened early

5. Mun gams- da haka

   [mʊŋgàms-dàhakà?]

   We are satisfied with that

6. Yanz- za mu tafi

   [jànz-za:mʊ̀tàɸi?]

   It is now that we are going

7. Saniyar ba za ta tats- ba

   [sa:nɪ̀jârbàza:tàtà:s'-ba?]

   The cow cannot be milked

8. Gwand- a jihar Sakkwato take

   [gwand-?àʤɪhàrsakwkwatɔtacè?]

   G. is in Sokoto State

9. Mun had- kan hanya

   [mʊŋhà?d-kâŋhaŋjà:]

   We met on the way

10. Ul- za a saya

    [?u:l-za:?àsàja:]

    It is woollen thread that will be bought

The vowel table:

	A		B		C		D		E	
	ʊ	ɨ	ʊ	ɨ	ʊ	ɨ	ʊ	ɨ	ʊ	ɨ
1.		✓	✓		✓			✓	✓	
2.	✓		✓		✓		✓			✓
3.		✓	✓		✓		✓		✓	
4.		✓		✓	✓			✓		✓
5.	✓		✓		✓		✓		✓	
6.		✓	✓		✓		✓			✓
7.		✓		✓	✓		✓		✓	
8.	✓		✓		✓		✓		✓	
9.	✓		✓		✓		✓		✓	
10.	✓		✓		✓		✓		✓	
NUMBER OF OCCURRENCES	5	5	8	2	10	0	8	2	7	3

Here, the vowel [ʊ] is constantly maintained by speaker C. In the other cases [ɨ] makes alternation with it as in the standard dialect. It features thirty-eight (38) times (76%) and the alternant [ɨ], twelve (12) times (24%).

3.6.3 Labial Preceding The /ʊ/ With 'Spreading' Following

1. Wannan ab- ya ba da mamaki

   [wannàŋʔàb-ja:ba:dàmà:ma:cî:]

   This thing has given surprise

2. Bab- inda za a samu

   [ba:b-ʔɪndàza:ʔàsa:mù:]

   Nowhere can it be obtained

3. Sun karɓ- ya ce

   [sʊŋkàɾʔb-jatʃê:]

   They were welcome he said

4. Ta taɓ- ya ce

   [ta:tàʔb-jatʃê:]

   She was crazy he said

5. Musulunci ya kaf- ya ce

   [mʊsʊlʊntʃî:ja:kàɸ-jatʃê:]

   Islam is deep-rooted he said

6. Yusuf- ya dawo

   [ju:sʊɸ-ja:da:wo:ʔ]

   Y. is back

7. Mun gam-yau

   [mʊŋgàm-jâʊʔ]

   We met today

8. Nam- ya fi

   [na:m-ja:Φiʔ]

   Ours is better

The vowel table:

	A		B		C		D		E	
	ʊ	ɪ	ʊ	ɪ	ʊ	ɪ	ʊ	ɪ	ʊ	ɪ
1.	✓			✓	✓		✓		✓	
2.	✓		✓		✓		✓		✓	
3.	✓		✓		✓		✓		✓	
4.	✓		✓		✓		✓		✓	
5.	✓		✓		✓		✓		✓	
6.	✓		✓		–	–	✓		–	–
7.	✓		✓		✓		✓		✓	
8.	✓		✓		✓		✓		✓	
NUMBER OF OCCURRENCES	8	0	7	1	7	0	8	0	7	0

Out of thirty-eight (38) utterances the alternant [ɪ] features only once. Four speakers consistently maintain the [ʊ] in their pronunciations. In the standard dialect, we saw, out of thirty-nine (39)

utterances [ɪ] appears just four times under the same circumstances.

3.6.4 Labial/Coronal Preceding The /ɪ/ With 'Rounding' Following

1. Ya harb- Uba

   [ja:hàrb-ʔʊ̀baʔ]

   He shot at Uba

2. An zaɓ- wani

   [ʔanzà:ʔb-waniʔ]

   Someone is elected/chosen

3. Ya taf- wurin

   [ja:tàɸ-wʊɾɪ̂ŋ]

   He went to the place

4. An dam- Uba

   [ʔandà:m-ʔʊ̀baʔ]

   Uba is disturbed

5. Anin- uku ne

   [ʔà̀ni:n-ʔʊkwʊ̀ne:]

   It was 3/10 of a penny

6. Bar- Husaini ya dawo tukuna

[bàɽ-hʊ̀saɪnɪ̀jàda:wo:tʊ̀kwʊ̀na?]

Wait until Husaini comes back

7. Fakit- hudu muke so

[Φa:cɪt-hʊ?dʊmʊcè:sô:]

It is four packets that we want

8. Ya tats- guzuma

[ja:tà:s'-gwʊzʊma:]

He milked an old cow

9. Ladid- uwa ce ga Musa

[là:di:d-?ʊwa:ʧè:gàmu:sa:]

L. is a mother to Musa

10. Bad- Uba zai komo

[bà?d-?ʊ̀bazâɪkwo:mo:?]

It is next year that Uba will return

11. Sun kall- wasu daga ciki

[sʊŋkàll-wasʊdàgàtʃɪci:]

They had a look at some

The vowel table:

	A			B			C			D			E		
	ɪ	ɨ	ʊ	ɪ	ɨ	ʊ	ɪ	ɨ	ʊ	ɪ	ɨ	ʊ	ɪ	ɨ	ʊ
1.	✓			✓				✓		✓			✓		
2.	✓			✓				✓				✓			✓
3.	✓			✓			✓					✓	✓		
4.	✓			✓					✓			✓			✓
5.			✓			✓			✓			✓			✓
6.		✓			✓				✓		✓			✓	
7.		✓				✓		✓				✓		✓	
8.		✓			✓			✓				✓		✓	
9.			✓			✓			✓			✓			✓
10.			✓		✓			✓				✓			✓
11.			✓			✓		✓				✓			✓
NUMBER OF OCCURRENCES	4	3	4	4	3	4	1	6	4	1	1	9	2	3	6

From 1 - 4 (where labial precedes), both [ɨ] & [ʊ] make alternation with the [ɪ] in 2, [ɨ] exclusively does in 1, and [ʊ] exclusively in 3 and 4; [ʊ] alternates with the surface [ɨ] of the underlying /ɪ/ (where coronal precedes) in 6, 7, 8, 10 and 11; in 5 and 9 only [ʊ] features; there are alternants ɪ/ʊ. Generally, all the three vowels occur in the pronunciation of each speaker, unlike in the standard dialect where this applies to three speakers alone.

3.7 CONCLUSION

The same material was used here as for the standard dialect. With regard to the alternation of [ɪ], [ɨ] & [ʊ], the Zaria dialect shows in general, similarity to the standard, but where there are differences these appear striking. The dialect uses the same three phonetic vowels, [ɪ], [ɨ] & [ʊ] in systems of alternation generally similar to the standard. There are three cases of striking differences. The first major case among them is that there are very few examples of [ɨ] alternating with [ɪ] or with [ʊ] in this dialect when a con.[+ lab.] precedes. Of the five selected speakers only speaker C is found to use [ɨ] and in very few utterances in this context (3.6.1 & 3.6.4).

Secondly, in the case of the alternation affecting more than one segment, combinations III (ʊ-ɪ) and VII (ɪ-ɪ) do not occur, as well as combination VIII (ɪ-ʊ) whose non-occurrence is shared with the standard; combinations I (ʊ-ʊ) and IX (ɪ-ɨ) are much more common in the Zaria dialect than in the standard by twelve (12) cases to three (3) and by eleven (11) cases to two (2), respectively; combination IV (ɨ-ɨ) on the other hand, is much less common by fourteen (14) examples to thirty-two (32) in the standard.

Thirdly, the reduced u: in a closed syllable, [ʊ], with a con. [+ cor.] preceding features more than the alternant [ɨ] in this dialect than in the standard where it is the opposite. This may be interpreted as a particular case of a more general application for the standard to exhibit a marked tendency to use the central vowel [ɨ] in widespread examples. The other dialects as well as Zaria are much more sparing in the use of this vowel [ɨ].

CHAPTER FOUR

4.0 THE [ɪ], [ɨ] & [ʊ] ALTERNATION IN THE BAUCHI DIALECT

We made a survey in Chapter Three on the alternation of [ɪ], [ɨ] & [ʊ] in the Zaria dialect, and noticed similarities and differences in comparison with the standard dialect. While differences lie in the contexts where a con.[+ lab.] precedes, and where the alternation affects more than one segment as well as the case of reduced u: in a closed syllable with a con.[+ cor.] preceding, similarities on the other hand, are seen in all other cases. We saw that in the Zaria dialect unlike in the standard, there is very little tendency for an [ʊ] or [ɪ] to have another realization [ɨ] when a labial consonant precedes. In other words, [ɨ] very rarely alternates with either vowel in this dialect under this condition. Now, in this chapter we will focus on the situation in the Bauchi dialect.

'A'

4.1 IN A SINGLE SEGMENT

4.1.1 Preceding Consonant [+ lab.]

		A	B	C	D	E	
1.	b-ci:	ɪ	ɨ	ɪ	ɪ	ɪ	ceremony
2.	b-gwu:	ʊ	ʊ	ʊ	ʊ	ʊ	beating
3.	ta:ʔb-kaʔ	ʊ	ʊ	ʊ	ʊ	ʊ	manage
4.	ɸ-taʔ	ɪ	ɪ	ɪ	ɪ	ɪ	go out
5.	m-lci:	ʊ	ɨ	ɨ	ɪ	ʊ	power

In this dialect as in the standard, [ɨ] appears in this pattern of pronunciation. It features <u>once</u> in the first word and <u>twice</u> in the fifth one; the second and third words are consistently pronounced with [ʊ], and the fourth one consistently with [ɪ]. To be specific, [ɨ] is seen to alternate with [ɪ] in the first word, and both [ɨ] & [ɪ] are seen to do the same with [ʊ] in the last one.

4.1.2 Preceding Consonant [+ cor.]

		A	B	C	D	E	
1.	n-s'e:	ɨ	ɨ	ɨ	ɨ	ɨ	sink down
2.	r-bu:tu:	ʊ	ʊ	ʊ	ɨ	ʊ	writing
3.	ɽ-ga:	ʊ	ɨ	ʊ	ɨ	ʊ	Fulani cattle encampment
4.	t-ɽmi:	ɨ	ɨ	ɨ	ʊ	ʊ	mortar
5.	s-ɸe:to:	ɨ	ɨ	ɨ	ɨ	ɨ	police inspector
6.	z-ɸa:	ʊ	ʊ	ɨ	ɨ	ʊ	sweat
7.	s'-ns'u:	ɨ	ʊ	ʊ	ʊ	ʊ	bird
8.	ʔaʊd-ga:	ɨ	ʊ	ʊ	ʊ	ʊ	cotton
9.	ʔd-mi:	ʊ	ɨ	ʊ	ɪ	ɨ	warmth
10.	ʔda:l-bi:	ɨ	ɨ	ɨ	ɨ	ɨ	student [+ male]

The situation here is the same as in the standard and Zaria dialects. [ɨ] & [ɪ] make alternation with [ʊ] in the ninth word, ʔdʊ̀mi:/ ʔdɨ̀mi:/ʔdɪ̀mi:, while [ɨ] alone is the alternant in other cases where the alternation is seen to occur.

4.1.3 Preceding Consonant [+ phon. pal.]

		A	B	C	D	E	
1.	ʃ-ɽwa:	ɪ	ʊ	ʊ	ɪ	ɪ	kite
2.	ʃ-da?	ɪ	ɪ	ɪ	ɪ	ɪ	six
3.	ʧ-kwo:wa:	ʊ	ɪ	ɪ	ʊ	ʊ	overcrowd
4.	ʧ-ɽe?	ɪ	ɪ	ɪ	ɪ	ɪ	remove
5.	ʤ-wa:[32]	–	–	–	–	ʊ	dizziness
6.	j-ŋwa:	ɪ	ʊ	ɪ	ʊ	ʊ	hunger

In cases where rounding follows, [ʊ] is seen to alternate with the [ɪ] also in this dialect. There is no alternation in 2 and 4 as there is no such phonetic value in the following segment.

4.1.4 Preceding Consonant [+ phon. dor.]

		A	B	C	D	E	
1.	w-ja:	ʊ	ʊ	ʊ	ɪ	ʊ	neck
2.	w-ta:	ʊ	ʊ	ʊ	ʊ	ʊ	fire

As in the standard dialect, one speaker is found to pronounce the first word with [ɪ], which may be possible on account of the following [j].

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[32] The first four speakers do not use this word. They are more familiar with the synonym ʤi̬ɽi:.

4.1.5 Preceding Consonant [+ al. pal.]

		A	B	C	D	E	
1.	c-s'o:	ɪ	ɪ	ʊ	ɪ	ɪ	plaiting of hair
2.	ɸɪc'-hu?	ɪ	ʊ	ʊ	ɪ	ɪ	the science of Islamic law
3.	ɟ-zo?	ɪ	ɪ	ɪ	ɪ	ʊ	the mythical spider of fables
4.	c-ʕa:	ɪ	ɪ	ɪ	ɪ	ɪ	calling

Here also, [ʊ] is seen to make alternation with the [ɪ] in the first three words where 'rounding' exists in the following segment.

4.1.6 Preceding Consonant [+ al. dor.]

		A	B	C	D	E	
1.	?akw-ja:	ʊ	ʊ	ʊ	ɪ	ʊ	goat
2.	huŋkw'-ji?	ʊ	–	–	ʊ	ɪ	place name
3.	gwa:gw-ji?	ʊ	ɪ	ʊ	ɪ	ʊ	gnaw at
4.	kw-sa?	ʊ	ʊ	ʊ	ʊ	ʊ	near

On account of the following [j], [ɪ] alternates with the [ʊ] in the first three words in this dialect, too.

4.2 IN MORE THAN ONE SEGMENT

In this dialect, as in the Zaria dialect, the vowel distribution differs considerably from the standard dialect. In addition to combination VIII (ɪ-ʊ) which is absent in the standard dialect combination VI (ɨ-ʊ) is also absent here. The first two words are consistently pronounced with comb.IX, bɪndɨgà: and ɸìtɨlà: respectively, and the tenth word consistently with comb.I, kwùdʊddʊɸi:. Regarding the total number of occurrences also, combinations I, IV and IX show a wide range of difference compared with the standard. Comb.I occurs eighteen (18) times here as against three (3) in the standard dialect; comb.IV eleven (11) times as against thirty-two (32) in the standard; and comb.IX occurs ten (10) times as against twice in the standard dialect. From this point of view, the Bauchi dialect is more like Zaria than the standard. (See table.)

TABLE OF THE ALTERNATING-VOWEL COMBINATIONS FOR THE PRONUNCIATION OF THE TEN SELECTED WORDS BY THE FIVE SPEAKERS FROM BAUCHI

		I	II	III	IV	V	VI	VII	VIII	IX	
	WORDS	ʊ-ʊ	ʊ-ɨ	ʊ-ɪ	ɨ-ɨ	ɨ-ɪ	ɨ-ʊ	ɪ-ɪ	ɪ-ʊ	ɪ-ɨ	ENGLISH EQUIVALENTS
1.	b-nd-ga:				(4)					5 (1)	gun
2.	ɸ-t-la:				(4)					5 (1)	lamp/light
3.	ɸ-ɸɸ-ce:	2		1	(2)	(1)		2 (2)			wing
4.	d-dd-ɟe:	2	1 (1)		2 (4)						heel
5.	t-mb-ʔdi:	3 (1)			2 (2)	(1)	(1)				regurgitation
6.	s-m-nti:				2 (3)	3 (2)					cement
7.	l-ll-ʔbi:	3 (1)			2 (4)						veiling
8.	s-ɽ-ci:		2 (2)		3 (3)						inlaw [+ male]
9.	r-b-ʔi:	3 (1)	1	1 (1)	(3)						one quarter
10.	kwʊd-dd-ɸi:	5	(2)		(3)						pond
	NUMBER OF OCCURRENCES	18 (3)	4 (5)	2 (1)	11 (32)	3 (4)	0 (1)	2 (2)	0 (0)	10 (2)	

Figures in parenthesis are for the standard dialect

4.3 THE /ʊ/ IN THE {-ʊCa:} MORPHEME

4.3.1 Preceding Consonant [+ lab.]

		A	B	C	D	E	
1.	kwabb-na:	ʊ	ʊ	ʊ	ʊ	ʊ	pennies
2.	ka?b-ka:	ʊ	ʊ	ʊ	ʊ	ʊ	calabashes of food for a feast
3.	laΦ-za:	ʊ	ʊ	ʊ	ʊ	ʊ	speeches, pronunciations
4.	ʕa:m-ka:	ʊ	ʊ	ʊ	ʊ	ʊ	holes

Unlike the standard dialect (and like the Zaria dialect) the surface [ʊ], under these circumstances is generally maintained without any alternation.

4.3.2 Preceding Consonant [+ cor.]

		A	B	C	D	E	
1.	s'aʊn-ka:	ɨ	ʊ	ʊ	ʊ	ʊ	hills
2.	ha?dar-rr-ka:	ʊ-ʊ	ʊ-ʊ	ɨ-ɨ	ʊ-ʊ	ɨ-ɨ	accidents
3.	ta:ɾ-ɾɾ-ka:	ʊ-ʊ	ʊ-ʊ	ʊ-ʊ	ʊ-ʊ	ɨ-ɨ	conferences
4.	ti:t-na:	ʊ	ʊ	ɨ	ʊ	ɨ	streets
5.	hars-na:	ʊ	ʊ	ɨ	ʊ	ʊ	languages
6.	da:z-zz-ka:	ʊ-ʊ	ʊ-ʊ	ʊ-ʊ	ʊ-ʊ	ʊ-ʊ	forests
7.	hans'-ka:	ɨ	ɨ	ɨ	ʊ	ʊ	forceps, tongs
8.	kwand-na:	ɨ	ʊ	ʊ	ʊ	ʊ	baskets
9.	ha?d-ra:	ʊ	ʊ	ʊ	ʊ	ʊ	accidents
10.	hu:l-na:	ʊ	ʊ	ʊ	ʊ	ʊ	caps

There are less cases of [ɨ] alternating with the [ʊ] here than in the standard dialect. Pronunciation with the [ʊ] predominates.

4.3.3 Preceding Consonant [+ phon. pal.]

		A	B	C	D	E	
1.	wa:ʃ-na:	ɪ	ʊ	ʊ	ɪ	ɪ	washers for nut
2.	hantʃ-na:	ɪ	ɪ	ʊ	ɪ	ɪ	noses
3.	ʔɪnʤ-na:	ʊ	ɪ	ɪ	ʊ	ɪ	engines
4.	k'aʊj-ka:	ʊ	ʊ	ɪ	ʊ	ʊ	villages

In this dialect as with both Zaria and the standard, [ɪ] under these circumstances predominantly alternates with the [ʊ].

4.4 THE i: REDUCTION

4.4.1 Preceding Consonant [+ lab.]

		A	B	C	D	E	
1.	takwo:b-ŋ	ɪ	ɪ	ɪ	ɪ	ɪ	the sword
2.	ʤɪʔb-ŋ	ɪ	ɪ	ɪ	ɪ	ɪ	" perspiration
3.	ʕa:ɸ-ŋ	ɪ	ɪ	ɪ	ɪ	ɪ	" stream
4.	ʕa:m-ŋ	ɪ	ɪ	ɪ	ɪ	ɪ	" hole

Unlike in the standard dialect where [i̞] under these circumstances predominantly represents the reduced vowel, and like the Zaria dialect, the [ɪ] is here maintained by every speaker.

4.4.2 Preceding Consonant [+ cor.]

		A	B	C	D	E		
1.	ɾa:n-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ	the	dry season
2.	la:ba:r-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ	"	story
3.	bu:ɾ-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ	"	ambition
4.	kant-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ	"	shop
5.	si:s-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ	"	sixpence
6.	hɪrz-ŋ[33]	-	-	ɨ	-	-	"	seeking for God's protection
7.	sans'-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ	"	slipperiness
8.	maɪga:d-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ	"	guard
9.	kwʊʔd-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ	"	money
10.	ʔalka:l-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ	"	judge

Here in Bauchi, as in the Zaria and standard dialects, the reduced vowel under this condition is regularly realized as [ɨ] without any alternation.

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[33] Four speakers are not familiar with this word in this dialect.

4.4.3 Preceding Consonant [+ phon. dor.]

	A	B	C	D	E	
wi:w-ŋ	ɪ	ʊ	ʊ	ɪ	ɪ	the Indian hemp

[ʊ] here is seen to alternate with the [ɪ] under these circumstances, as in the standard and Zaria dialects.

4.5 THE u: REDUCTION

4.5.1 Preceding Consonant [+ lab.]

		A	B	C	D	E	
1.	lamb-ŋ	ʊ	ʊ	ʊ	ʊ	ʊ	the garden
2.	jɪmʔb-ŋ	ʊ	ʊ	ʊ	ʊ	ʊ	" clay
3.	sa:m-ŋ	ʊ	ʊ	ʊ	ʊ	ʊ	" wealth

Like the Zaria dialect and unlike the standard all five speakers maintain the [ʊ] in the pronunciation of these words.

4.5.2 Preceding Consonant [+ cor.]

		A	B	C	D	E	
1.	kwʊn-ŋ	ʊ	ʊ	ʊ	ʊ	ʊ	the gruel
2.	tattabar-ŋ	ʊ	ʊ	ʊ	ɨ	ʊ	" pigeons
3.	ʃɪʏ-ŋ	ʊ	ʊ	ɨ	ɨ	ʊ	" silence
4.	kara:t-ŋ	ʊ	ʊ	ɨ	ɨ	ʊ	" reading
5.	s-ŋ	ʊ	ʊ	ɨ	ʊ	ʊ	" fishing
6.	bu:z-ŋ	ʊ	ʊ	ʊ	ʊ	ʊ	" sheep-skin
7.	ja:s'-ŋ	ʊ	ʊ	ʊ	ʊ	ʊ	" fingers
8.	gand-ŋ	ʊ	ɨ	ʊ	ɨ	ʊ	" farm
9.	ʏu:ʔd-ŋ	ɨ	ʊ	ʊ	ɨ	ɨ	" confusion
10.	sa:bʊl-ŋ	ʊ	ʊ	ʊ	ʊ	ʊ	" soap

A few cases of [ɨ] alternating with the [ʊ] can be noticed in this dialect. The [ʊ] predominantly features in the pattern, unlike in the standard dialect where the situation under the same condition is the reverse.

4.5.3 Preceding Consonant [+ phon. pal.]

		A	B	C	D	E	
1.	ʤu:ʤ-ŋ	ɪ	ɪ	ʊ	ʊ	ʊ	the evil spirit
2.	ma:j-ŋ	ʊ	ɪ	ʊ	ʊ	ʊ	" witches

Here, as in the standard and Zaria dialects, [ɪ] alternates with the [ʊ]. It does <u>twice</u> in the first word and <u>once</u> in the second.

'B'

4.6 IN A LONG UTTERANCE

4.6.1 Labial Preceding The /ɪ/

1. Ya harb- akun

   [ja:hàrb-ʔàkwûŋ]

   He shot at the parrot

2. Jib- Isa zai komo

   [ʤi:b-ʔi:sa:zâɪkwo:mo:ʔ]

   It is the day after tomorrow that Isa will come back

3. An zaɓ- Audu

   [ʔanzà:ʔb-ʔaʊdù?]

   Audu is elected/chosen

4. Sun karɓ- nasu

   [suŋkàɽʔb-na:sù?]

   They received theirs

5. Ta haif- 'ya mace

   [ta:hàɪɸ-ʔja:màʧè?]

   She gave birth to a baby girl

6. Mun taf- gida

[mʊntàɸ-ɟɪda:]

We went home

7. ya girm- Isa

[ja:ɟɪ̀ɽm-ʔi:sa:]

He is older than Isa

8. An sallam- leburori

[ʔansàllàm-le:bʊro:ri:]

Labourers are dismissed

The vowel table:

	A		B		C		D		E	
	ɪ	ɨ	ɪ	ɨ	ɪ	ɨ	ɪ	ɨ	ɪ	ɨ
1.	✓		✓		✓		✓			✓
2.	✓		✓		✓		✓		✓	
3.	✓		✓		✓		✓		✓	
4.	✓		✓		✓		✓			✓
5.	✓		✓		✓		✓		✓	
6.	✓		✓		✓		✓		✓	
7.	✓		✓		✓		✓		✓	
8.	✓		✓		✓		✓		✓	
NUMBER OF OCCURRENCES	8	0	8	0	8	0	8	0	6	2

The situation here is exactly comparable with that in the Zaria dialect. The [ɪ] is constantly maintained by four speakers, while [ɨ] is seen to make alternation with it twice in one speaker. In other words, 95% of the total pronunciation is with the [ɪ], and the remaining 5% with the alternant [ɨ]. In the standard dialect, we noticed 35% for the [ɪ] and 65% for the alternant, under the same circumstances.

4.6.2 Coronal Preceding The /ʊ/

1. Musa bai san- ba
   [mu:sa:bàɪsàn-ba?]
   Musa is not known

2. Kamar- babbar ƙasa ce
   [kàmàr-bàbbark'asa:tʃè:]
   Cameroun is a large country

3. Far- muka tafi
   [ɸa:ɽ-mʊkàtàɸi?]
   It is F. we have been to

4. An buɗe kot- da wuri
   [ʔambu:ʔdɛ̀kwo:t-dàwʊɽi?]
   The court has opened early

5. Mun gams- da haka

[mʊŋgàms-dàhakà?]

We are satisfied with that

6. Yanz- za mu tafi

[jànz-za:mʊ̀tàɸi?]

It is now that we are going

7. Saniyar ba za ta tats- ba

[sa:nɪ̀jârbàza:tàtà:s'-ba?]

The cow cannot be milked

8. Gwand- a jihar Sakkwato take

[gwand-?àʤɪhàrsakwkwatɔtacè?]

G. is in Sokoto State

9. Mun had- kan hanya

[mʊŋhà?d-kâŋhaŋjà:]

We met on the way

10. Ul- za a saya

[?u:l-za:?àsàja:]

It is woollen thread that will be bought

The vowel table:

	A		B		C		D		E	
	ʊ	ɨ	ʊ	ɨ	ʊ	ɨ	ʊ	ɨ	ʊ	ɨ
1.	✓		✓		✓		✓		✓	
2.	✓		✓		✓		✓		✓	
3.	✓		✓			✓	✓		✓	
4.	✓		✓			✓	✓		✓	
5.	✓		✓		✓		✓		✓	
6.	✓			✓	✓		✓		✓	
7.	✓			✓	✓		✓		✓	
8.	✓		✓		✓		✓		✓	
9.	✓		✓		✓		✓		✓	
10.	✓		✓		✓		✓		✓	
NUMBER OF OCCURRENCES	10	0	8	2	8	2	10	0	10	0

Speakers A, D and E all maintain the [ʊ] consistently. With B and C on the other hand, as in the standard dialect, [ɨ] alternates with the [ʊ] under this condition. The alternation, however, is very little, with the alternant [ɨ] featuring just four (4) times (8%) and the [ʊ] forty-six (46) times (92%).

4.6.3 Labial Preceding The /ʊ/
With 'Spreading' Following

1. Wannan ab- ya ba da mamaki

   [wannàŋʔàb-ja:ba:dàmà:ma:cì:]

   This thing has given surprise

2. Bab- inda za a samu

   [ba:b-ʔɪndàza:ʔàsa:mù:]

   Nowhere can it be obtained

3. Sun karɓ ya ce

   [sʊŋkàɾʔb-jatʃê:]

   They were welcome he said

4. Ta taɓ- ya ce

   [ta:tàʔb-jatʃê:]

   She was crazy he said

5. Musulunci ya kaf- ya ce

   [mʊsʊlʊntʃì:ja:kàɸ-jatʃê:]

   Islam is deep-rooted he said

6. Yusuf- ya dawo

   [ju:sʊɸ-ja:da:wo:ʔ]

   Y. is back

7. Mun gam- yau

   [mʊŋgàm-jâʊʔ]

   We met today

8. Nam- ya fi

   [na:m-ja:Φiʔ]

   Ours is better

The vowel table:

	A		B		C		D		E	
	ʊ	I	ʊ	I	ʊ	I	ʊ	I	ʊ	I
1.	✓		✓		✓		✓		✓	
2.	✓		✓		✓		✓		✓	
3.	✓			✓	✓		✓		✓	
4.	✓		✓		✓		✓		✓	
5.	✓		✓		✓		✓		✓	
6.	✓		✓		✓		✓		✓	
7.	✓		✓		✓			✓	✓	
8.	✓		✓		✓		✓		✓	
NUMBER OF OCCURRENCES	8	0	7	1	8	0	7	1	8	0

As in the standard and Zaria dialects the occurrence of the alternant [ɪ] is very little. It features only twice (5%) as against thirty-eight (38) times (95%) for the [ʊ]. With three speakers the pronunciation is consistent with the [ʊ].

4.6.4 Labial/Coronal Preceding The /ɪ/ With 'Rounding' Following

1. Ya harb- Uba

   [ja:hàrb-ʔùbaʔ]

   He shot at Uba

2. An zaɓ wani

   [ʔanzà:ʔb-waniʔ]

   Someone is elected/chosen

3. Ya taf- wurin

   [ja:tàɸ-wʊɾîŋ]

   He went to the place

4. An dam- Uba

   [ʔandà:m-ʔùbaʔ]

   Uba is disturbed

5. Anin- uku ne

   [ʔànɪ:n-ʔʊkwùne:]

   It was 3/10 of a penny

6. Bar- Husaini ya dawo tukuna

   [bàɾ-hʊ̀saɪnɪ̀jàda:wo:tʊ̀kwʊ̀naʔ]

   Wait until Husaini comes back

7. Fakit- hudu muke so

[ɸa:cɪt-hʊ?dʊmʊcè:sô:]

It is four packets that we want

8. Ya tats- guzuma

[ja:tà:s'-gwʊzʊma:]

He milked an old cow

9. Ladid- ɯwa ce ga Musa

[là:di:d-?ʊwa:tʃè:gàmu:sa:]

L. is a mother to Musa

10. Badʃ- Uba zai komo

[bà?d-?ʊ̀bazâɪkwo:mo:?]

It is next year that Uba will return

11. Sun kall- wasu daga ciki

[sʊŋkàll-wasʊdàgàtʃɪci:]

They had a look at some

The vowel table:

	A			B			C			D			E		
	ɪ	ɨ	ʊ	ɪ	ɨ	ʊ	ɪ	ɨ	ʊ	ɪ	ɨ	ʊ	ɪ	ɨ	ʊ
1.	✓			✓		✓			✓						✓
2.	✓			✓		✓			✓					✓	
3.			✓	✓		✓			✓					✓	
4.	✓			✓		✓			✓						✓
5.			✓	✓				✓		✓					✓
6.		✓		✓			✓			✓				✓	
7.		✓		✓			✓			✓				✓	
8.		✓		✓			✓			✓				✓	
9.			✓			✓			✓			✓			✓
10.		✓		✓			✓			✓					✓
11.			✓	✓			✓			✓					✓
NUMBER OF OCCURRENCES	3	4	4	1	9	1	4	5	2	4	6	1	0	5	6

Here, from 1-4 (where labial precedes), in 1 and 3 [ɨ] & [ʊ] alternate with the [ɪ], [ɨ] exclusively in 2, and [ʊ] exclusively in 4; in the other cases (where coronal precedes), [ʊ] makes alternation with the surface [ɨ] in 5, 10 and 11, pronunciation is consistent with the [ɨ] in 6, 7 and 8, and with [ʊ] in 9. As a whole, while each vowel is reflected in the pronunciation of four speakers, speaker E does not have an [ɪ] in this particular situation. In the standard

dialect, we saw a similar case with two speakers, where the vowel under the same circumstances does not feature.

4.7 CONCLUSION

The areas in which the Bauchi dialect differs from the standard regarding the alternation of these three vowels, are basically the same three in which the Zaria dialect too differs from it: a) a less common tendency for [ɨ] to alternate with [ɪ] or with [ʊ] when a con. [+ lab.] precedes, b) alternation in more than one segment and, c) case of reduced u: in a closed syllable with a con. [+ cor.] preceding. For a) speakers B, C & E are found to employ [ɨ] in a few cases (4.1.1, 4.6.1 & 4.6.4). For b) combination I (ʊ-ʊ) occurs eighteen (18) times here as against three (3) in the standard dialect; comb.IV (ɨ-ɨ) eleven (11) times here and thirty-two (32) in the standard; comb.IX (ɪ-ɨ) occurs ten (10) times here and twice in the standard; likewise not only comb.VIII (ɪ-ʊ) is absent here but also VI (ɨ-ʊ). For c) the [ʊ] under this condition is frequently retained in this dialect unlike in the standard where the alternant [ɨ] features more. In addition, however, the /ʊ/ in the {-ʊCa:} morpheme with coronal preceding exhibits a very similar case. While the alternant [ɨ] features more in the standard dialect, maintenance of the [ʊ] gains predominance here. The alternation pattern in the other cases is the same.

CHAPTER FIVE

5.0 THE [ɪ], [ɨ] & [ʊ] ALTERNATION IN THE DAURA DIALECT

In Chapter Four, we examined the alternation of [ɪ], [ɨ] & [ʊ] in the Bauchi dialect, and discovered that the areas in which it differs from the standard dialect are basically those in which the Zaria dialect too differs from it, i.e. a) a less common tendency for [ɨ] to alternate with an [ɪ] or [ʊ] when preceded by a labial consonant; b) the sort of alternation in more than one segment; and c) the behaviour of reduced u: in a closed syllable where the preceding consonant is a coronal. In addition, however, we noticed in this dialect, another case of contrast in the alternation affecting the /ʊ/ in the {-ʊCa:} morpheme with a coronal preceding. In this chapter we will turn to consider the situation in the Daura dialect.

'A'

5.1 IN A SINGLE SEGMENT

5.1.1 Preceding Consonant [+ lab.]

		A	B	C	D	E	
1.	b-ci:	ɨ	ɪ	ɪ	ɪ	ɪ	ceremony
2.	b-gwo:[34]	ʊ	ʊ	ʊ	ʊ	ʊ	beating
3.	ta:ʔb-kaʔ	ʊ	ʊ	ʊ	ʊ	ʊ	manage
4.	ɸ-taʔ	ɪ	ɪ	ɪ	ɪ	ɪ	go out
5.	m-lci:	ʊ	ʊ	ɨ	ʊ	ɪ	power

This pattern is similar to that of Bauchi and the standard dialects in that [ɨ] is seen to feature. It alternates with [ɪ] once in the first word, while both [ɨ] & [ɪ] do with [ʊ] in the last word. There are no cases of alternation in 2, 3 and 4.

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[34] Unlike in the other dialects, this word has an -o: final vowel in this dialect.

5.1.2 Preceding Consonant [+ cor.]

		A	B	C	D	E	
1.	n-s'e:	ɨ	ɨ	ɨ	ɨ	ɨ	sink down
2.	r-bu:tu:	ʊ	ʊ	ʊ	ɨ	ɨ	writing
3.	ɽ-ga:	ʊ	ɨ	ɨ	ʊ	ɨ	Fulani cattle encampment
4.	t-ɽmi:	ɪ	ʊ	ɨ	ɨ	ɪ	mortar
5.	s-Φe:to:	ɨ	ɨ	ɨ	ɨ	ɨ	police inspector
6.	z-Φa:	ɨ	ʊ	ɨ	ɨ	ɨ	perspiration
7.	s'-ns'u:	ʊ	ʊ	ɨ	ʊ	ɨ	bird
8.	ʔaʊd-ga:	ʊ	ʊ	ɨ	ɨ	ɨ	cotton
9.	ʔd-mi:	ʊ	ɪ	ɨ	ɨ	ɨ	warmth
10.	ʔda:l-bi:	ɨ	ɨ	ɨ	ɨ	ɨ	student [+ male]

There is no item with [ʊ] exclusively, but three with [ɨ] exclusively and, these have a following front vowel. The other two examples with a following front vowel show an alternation of [ɪ], [ɨ] and [ʊ]. In the previous dialects this occurred with the ninth word only.

5.1.3 Preceding Consonant [+ phon. pal.]

		A	B	C	D	E	
1.	ʃ-ɣwa:	ɪ	ʊ	ʊ	ɪ	ʊ	kite
2.	ʃ-dda?[35]	ɪ	ɪ	ɪ	–	ɪ	six
3.	ʧ-kwo:wa:	ʊ	ʊ	ʊ	ʊ	ɪ	overcrowd
4.	ʧ-ɣeʔ	ɪ	ɪ	ɪ	ɪ	ɪ	remove
5.	ʤ-wa:	ʊ	ɪ	ɪ	ʊ	ɪ	dizziness
6.	j-ŋwa:	ʊ	ʊ	ɪ	ʊ	ɪ	hunger

As in the previous dialects the only cases of alternation are where 'rounding' follows.

5.1.4 Preceding Consonant [+ phon. dor.]

		A	B	C	D	E	
1.	w-ja:	ʊ	ʊ	ʊ	ʊ	ʊ	neck
2.	w-ta:	ʊ	ʊ	ʊ	ʊ	ʊ	fire

In the first word, although [j] follows, none of these speakers is found to use [ɪ]. The [ʊ] is consistently maintained. We noticed the same situation with the five speakers from Zaria.

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[35] In this dialect the stem final consonant of this word is geminated. Speaker D has the initial consonant as 'h', i.e. hɪddà?.

5.1.5 Preceding Consonant [+ al. pal.]

		A	B	C	D	E	
1.	c-s'o:	ɪ	ʊ	ʊ	ɪ	ɪ	plaiting of hair
2.	ɸɪc'-hu?	ʊ	ɪ	ʊ	ɪ	ɪ	the science of Islamic law
3.	ɻ-zo?	ɪ	ɪ	ɪ	ʊ	ɪ	the mythical spider of fables
4.	c-ɣa:	ɪ	ɪ	ɪ	ɪ	ɪ	calling

There is no alternation with the [ɪ] in the fourth word as there is no 'rounding' following, unlike in the other cases where there is. This is comparable with the previous dialects.

5.1.6 Preceding Consonant [+ al. dor.]

		A	B	C	D	E	
1.	?akw-ja:	ʊ	ʊ	ʊ	ʊ	ʊ	goat
2.	huŋkw'-ji?	ʊ	ʊ	ʊ	ʊ	ʊ	place name
3.	gwa:gw-ji?	ɪ	ʊ	ɪ	ʊ	ʊ	gnaw at
4.	kw-sa?	ʊ	ʊ	ʊ	ʊ	ʊ	near

There is no case of alternation here in examples 1 and 2. The [ʊ] is consistently maintained despite the following [j] in both. In the third word however, [ɪ] alternates with the [ʊ] as in the previous dialects.

5.2 IN MORE THAN ONE SEGMENT

The vowel distribution in this dialect does not differ much from the standard. Like the standard dialect, all combinations other than VIII (ɪ-ʊ) are reflected. For the total number of occurrences too, it is only combination IX (ɪ-i̱) that shows a considerable difference between the two dialects, by nine cases here against two in the standard. The Daura dialect thus, one can say, is closer to the standard in this particular situation. (See table.)

TABLE OF THE ALTERNATING-VOWEL COMBINATIONS FOR THE PRONUNCIATION OF THE TEN SELECTED WORDS BY THE FIVE SPEAKERS FROM DAURA

		I	II	III	IV	V	VI	VII	VIII	IX	
	WORDS	ʊ–ʊ	ʊ–ɨ	ʊ–ɪ	ɨ–ɨ	ɨ–ɪ	ɨ–ʊ	ɪ–ɪ	ɪ–ʊ	ɪ–ɨ	ENGLISH EQUIVALENTS
					1					4	
1.	b–nd–ga:				(4)					(1)	gun
										5	
2.	ɸ–t–la:				(4)					(1)	lamp/light
		1						4			
3.	ɸ–ɸɸ–ce:				(2)	(1)		(2)			wing
					5						
4.	d–dd–ɟe:		(1)		(4)						heel
		1			3			1			
5.	t–mb–ʔdi:	(1)			(2)	(1)	(1)				regurgitation
					1	3	1				
6.	s–m–nti:				(3)	(2)					cement
		1	1		3						
7.	l–ll–ʔbi:	(1)			(4)						veiling
					4	1					
8.	s–ɽ–ci:		(2)		(3)						inlaw [+ male]
		1		1	3						
9.	r–b–ʔi:	(1)		(1)	(3)						one quarter
		2	1		2						
10.	kwʊd–dd–ɸi:		(2)		(3)						pond
	NUMBER OF OCCURRENCES	6	2	1	22	4	1	5	0	9	
		(3)	(5)	(1)	(32)	(4)	(1)	(2)	(0)	(2)	

Figures in parenthesis are for the standard dialect

5.3 THE /ʊ/ IN THE {-ʊCa:} MORPHEME

5.3.1 Preceding Consonant [+ lab.]

		A	B	C	D	E	
1.	kwabb-na:	ʊ	ʊ	ʊ	ʊ	ʊ	pennies
2.	ka?b-ka:	ʊ	ʊ	ʊ	ʊ	ʊ	calabashes of food for a feast
3.	laΦ-za:	ʊ	ʊ	ɨ	ʊ	ʊ	speeches, pronunciations
4.	ʕa:m-ka:	ʊ	ʊ	ʊ	ʊ	ɨ	holes

Two cases of [ɨ] alternating with the [ʊ] can be seen in 3 and 4. We noticed a similar situation in the standard dialect where the alternation features in 1 and 3.

5.3.2 Preceding Consonant [+ cor.]

		A	B	C	D	E	
1.	s'aʊn-ka:	ʊ	ɨ	ɨ	ɨ	ɨ	hills
2.	ha?dar-rr-ka:	ʊ-ʊ	ɨ-ɨ	ɨ-ɨ	ɨ-ɨ	ɨ-ɨ	accidents
3.	ta:ɽ-ɽɽ-ka:	ɨ-ɨ	ʊ-ʊ	ɨ-ɨ	ʊ-ʊ	ɨ-ɨ	conferences
4.	ti:t-na:	ʊ	ɨ	ɨ	ʊ	ɨ	streets
5.	hars-na:	ʊ	ʊ	ɨ	ɨ	ʊ	languages
6.	da:z-zz-ka:	ʊ-ʊ	ʊ-ʊ	ʊ-ʊ	ʊ-ʊ	ɨ-ɨ	forests
7.	hans'-ka:	ʊ	ʊ	ɨ	ɨ	ʊ	forceps, tongs
8.	kwand-na:	ʊ	ʊ	ʊ	ʊ	ɨ	baskets
9.	ha?d-ra:	ɨ	ʊ	ʊ	ʊ	ɨ	accidents
10.	hu:l-na:	ʊ	ʊ	ɨ	ʊ	ɨ	caps

The alternation of [ɨ] with the [ʊ] here as in the standard as well as Zaria dialect, is considerable. The case in Bauchi we saw, is not as pronounced.

5.3.3 Preceding Consonant [+ phon. pal.]

		A	B	C	D	E	
1.	wa:ʃ-na[36]	–	–	–	ʊ	ɪ	washers for nut
2.	hantʃ-na:	ɪ	ʊ	ɪ	ɪ	ɪ	noses
3.	ʔɪnʤ-na:	ɪ	ɪ	ɪ	ɪ	ʊ	engines
4.	k'aʊj-ka:	ʊ	ʊ	ʊ	ʊ	ɪ	villages

As with the previous dialects, pronunciation with the alternant [ɪ] under this condition predominates here. Maintenance of the [ʊ] is less.

[36] The first three speakers are more used to the alternative form, wa:ʃo:ʃi: .

5.4 THE i: REDUCTION

5.4.1 Preceding Consonant [+ lab.]

		A	B	C	D	E	
1.	takwo:b-ŋ	ɪ	ɪ	ɪ	ɪ	ɪ	the sword
2.	ʤɪʔb-ŋ	-	ɪ	-	ɪ	ɪ	" perspiration
3.	ʏa:Φ-ŋ	ɪ	ɪ	ɪ	ɪ	ɪ	" stream
4.	ʏa:m-ŋ	ɪ	ɪ	ɪ	ɪ	ɪ	" hole

In this pattern, there is no case of any alternation with the [ɪ]. We saw in the standard dialect that [i̠] predominantly represents the reduced vowel, under these circumstances.

5.4.2 Preceding Consonant [+ cor.]

		A	B	C	D	E	
1.	ɽa:n-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ	the dry season
2.	la:ba:r-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ	" story
3.	bu:ɽ-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ	" ambition
4.	kant-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ	" shop
5.	si:s-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ	" sixpence
6.	hɪrz-ŋ[37]	-	-	-	-	-	" seeking for God's protection
7.	sans'-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ	" slipperiness
8.	maɪga:d-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ	" guard
9.	kwʊʔd-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ	" money
10.	ʔalka:l-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ	" judge

As in the previous dialects, the realization here of the reduced vowel is [ɨ] under these circumstances, without any alternation.

5.4.3 Preceding Consonant [+ phon. dor.]

	A	B	C	D	E	
wi:w-ŋ	ɪ	ʊ	ɪ	ɪ	ɪ	the Indian hemp

As in the standard dialect, a case of [ʊ] alternating with the [ɪ] under this condition is evident.

---

[37] All the five speakers are not familiar with this word in this dialect.

5.5 THE u: REDUCTION

5.5.1 Preceding Consonant [+ lab.]

		A	B	C	D	E	
1.	lamb-ŋ	ʊ	ʊ	ʊ	ʊ	ʊ	the garden
2.	jɪm?b-ŋ	ʊ	ʊ	ʊ	ʊ	ʊ	" clay
3.	sa:m-ŋ	ʊ	ʊ	ʊ	ʊ	ʊ	" wealth

While there are a few cases in the standard dialect where [ɨ] alternates with the [ʊ], the latter is consistently maintained by every speaker here. This is, however, comparable with the situation in Zaria and Bauchi.

5.5.2 Preceding Consonant [+ cor.]

		A	B	C	D	E		
1.	kwʊn-ŋ	ɨ	ʊ	ɨ	ʊ	ʊ	the	gruel
2.	tantabar-ŋ[38]	ʊ	ɨ	ɨ	ɨ	ʊ	"	pigeons
3.	ʃɪɣ-ŋ	ɨ	ʊ	ɨ	ʊ	ɨ	"	silence
4.	kara:t-ŋ	ɨ	ɨ	ʊ	ɨ	ɨ	"	reading
5.	s-ŋ	ɨ	ʊ	ʊ	ʊ	ɨ	"	fishing
6.	bu:z-ŋ	ʊ	ʊ	ʊ	ʊ	ʊ	"	sheep-skin
7.	ja:s'-ŋ	ɨ	ʊ	ʊ	ʊ	ʊ	"	fingers
8.	gand-ŋ	ʊ	ʊ	ʊ	ʊ	ɨ	"	farm
9.	ɣu:ʔd-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ	"	confusion
10.	sa:bʊl-ŋ	ɨ	ɨ	ɨ	ʊ	ɨ	"	soap

The distribution of the [ʊ] and the alternant [ɨ] here seems to be even. In the standard dialect we noticed that the occurrence of [ɨ] is more frequent, and in the other two dialects, the [ʊ].

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[38] The first syllable of this word as in the Zaria dialect has a final 'n'.

5.5.3 Preceding Consonant [+ phon. pal.]

		A	B	C	D	E	
1.	dʒɯ:dʒ-ŋ	ɪ	ʊ	ɪ	ʊ	ɪ	the evil spirit
2.	ma:j-ŋ	ɪ	ɪ	ʊ	ɪ	ʊ	" witches

As in the previous dialects, [ɪ] is seen to alternate with the [ʊ] in each word above.

'B'

5.6 IN A LONG UTTERANCE

5.6.1 Labial Preceding The /ɪ/

1. Ya harb- akun

   [ja:hàrb:ʔàkwûŋ]

   He shot at the parrot

2. Jib- Isa zai komo

   [ʤi:b-ʔi:sa:zâɪkwo:mo:]

   It is the day after tomorrow that Isa will come back

3. An zaɓ- Audu

   [ʔanzà:ʔb-ʔaudù?]

   Audu is elected/chosen

4. Sun karɓ- nasu

   [suŋkàɣʔb-na:sù?]

   They received theirs

5. Ta haif- 'ya mace

   [ta:hàɪɸ-ʔja:màʧè?]

   She gave birth to a baby girl

6. Mun taf- gida

   [mʊntàΦ-ɟɪda:]

   We went home

7. Ya girm- Isa

   [ja:ɟɪ̀ɽm-ʔi:sa:]

   He is older than Isa

8. An sallam- leburori

   [ʔansàllàm-le:bʊro:ri:]

   Labourers are dismissed

The vowel table:

	A		B		C		D		E	
	ɪ	ɨ	ɪ	ɨ	ɪ	ɨ	ɪ	ɨ	ɪ	ɨ
1.		✓		✓	✓			✓		✓
2.	✓		✓		✓			✓	✓	
3.		✓		✓	✓			✓		✓
4.		✓		✓	✓			✓		✓
5.	✓		✓		✓		✓		✓	
6.		✓		✓	✓		✓		✓	
7.	✓			✓	✓		✓		✓	
8.	✓		✓		✓		✓		✓	
NUMBER OF OCCURRENCES	4	4	3	5	8	0	4	4	5	3

Here, while speaker C consistently maintains pronunciation with the [ɪ], the others all have a fairly even alternation of [ɪ] and [ɨ]. However, maintenance of the [ɪ] in general predominates by twenty-four (24) cases (60%) to sixteen (40%) for the alternant [ɨ]. This is unlike in the standard dialect where the alternant attracts 65% and the [ɪ] 35%.

5.6.2 Coronal Preceding The /ʊ/

1. Musa bai san- ba
   [mu:sa:bàɪsàn-ba?]
   Musa is not known

2. Kamar- babbar ƙasa ce
   [kàmàr-bàbbark'asa:tʃè:]
   Cameroun is a large country

3. Far- muka tafi
   [ɸa:ɽ-mʊkàtàɸi?]
   It is F. we have been to

4. An buɗe kot- da wuri
   [?ambu:?dɛ̀kwo:t-dàwʊɽi?]
   The court has opened early

5. Mun gams- da haka

[mʊŋgàms-dàhakà?]

We are satisfied with that

6. Yanz- za mu tafi

[jànz-za:mʊ̀tàɸi?]

It is now that we are going

7. Saniyar ba za ta tats- ba

[sa:nɪ̀jârbàza:tàtà:s'-ba?]

The cow cannot be milked

8. Gwand- a jihar Sakkwato take

[gwand-?àʤɪhàrsakwkwatɔtacè?]

G. is in Sokoto State

9. Mun had- kan hanya

[mʊŋhà?d-kâŋhaɲjà:]

We met on the way

10. Ul- za a saya

[?u:l-za:?àsàja:]

It is woollen thread that will be bought

The vowel table:

	A		B		C		D		E	
	ʊ	ɨ	ʊ	ɨ	ʊ	ɨ	ʊ	ɨ	ʊ	ɨ
1.	✓			✓	✓			✓		✓
2.		✓	✓			✓	✓		✓	
3.	✓			✓	✓		✓		✓	
4.		✓	✓		✓		✓		✓	
5.	✓		✓		✓		✓		✓	
6.	✓		✓		✓		✓		✓	
7.		✓	✓		✓			✓	✓	
8.	✓		✓		✓		✓		✓	
9.	✓		✓			✓		✓	✓	
10.	✓		✓		✓		✓		✓	
NUMBER OF OCCURRENCES	7	3	8	2	8	2	7	3	9	1

As in the standard dialect, all the five speakers here have some alternation of [ɨ] with the [ʊ]. The alternant occurs eleven (11) times (22%) as against thirty-nine (78%) for the [ʊ].

5.6.3 Labial Preceding The /ʊ/ With 'Spreading' Following

1. Wannan ab- ya ba da mamaki

   [wannàŋʔàb-ja:ba:dàmà:ma:cì:]

   This thing has given surprise

2. Bab- inda za a samu

   [ba:b-ʔɪndàza:ʔàsa:mù:]

   Nowhere can it be obtained

3. Sun karɓ- ya ce

   [sʊŋkàɾʔb-jatʃê:]

   They were welcome he said

4. Ta taɓ- ya ce

   [ta:tàʔb-jatʃê:]

   She was crazy he said

5. Musulunci ya kaf- ya ce

   [mʊsulʊntʃì:ja:kàɸ-jatʃê:]

   Islam is deep-rooted he said

6. Yusuf- ya dawo

   [ju:sʊɸ-ja:da:wo:ʔ]

   Y. is back

7. Mun gam- yau

[mʊŋgàm-jâʊʔ]

We met today

8. Nam- ya fi

[na:m-ja:ɸiʔ]

Ours is better

The vowel table:

	A		B		C		D		E	
	ʊ	ɪ	ʊ	ɪ	ʊ	ɪ	ʊ	ɪ	ʊ	ɪ
1.	✓		✓		✓		✓		✓	
2.	✓		✓		✓			✓	✓	
3.	✓		✓		✓		✓		✓	
4.	✓		✓		✓		✓		✓	
5.	✓		✓		✓		✓		✓	
6.	✓		✓		✓		✓		✓	
7.	✓			✓	✓		✓		✓	
8.	✓		✓		✓		✓		✓	
NUMBER OF OCCURRENCES	8	0	7	1	8	0	7	1	8	0

In this dialect as in the previous ones, while two speakers have alternation, the others have pronunciation consistently with the [ʊ]. The alternant [ɪ] occurs just twice (5%) and the [ʊ] thirty-eight (38) times (95%).

5.6.4 Labial/Coronal Preceding The /ɪ/ With 'Rounding' Following

1. Ya harb- Uba

   [ja:hàrb-ʔʊ̀baʔ]

   He shot at Uba

2. An zaɓ- wani

   [ʔanzà:ʔb-waniʔ]

   Someone is elected/chosen

3. Ya taf- wurin

   [ja:tàɸ-wʊɽî̞ŋ]

   He went to the place

4. An dam- Uba

   [ʔandà:m-ʔʊ̀baʔ]

   Uba is disturbed

5. Anin- uku ne

   [ʔàni:n-ʔʊkwʊ̀ne:]

   It was 3/10 of a penny

6. Bar- Husaini ya dawo tukuna

   [bàɽ-hʊ̀saɪnɪ̀jàda:wo:tʊ̀kwʊ̀naʔ]

   Wait until Husaini comes back

7. Fakit- hudu muke so

[ɸa:cɪt-hʊ?dʊmʊcè:sô:]

It is four packets that we want

8. Ya tats- guzuma

[ja:tà:s'-gwʊzʊma:]

He milked an old cow

9. Ladid- uwa ce ga Musa

[là:di:d-?ʊwa:ʧè:gàmu:sa:]

L. is a mother to Musa

10. Bad- Uba zai komo

[bà?d-?ʊ̀bazâɪkwo:mo:?]

It is next year that Uba will return

11. Sun kall- wasu daga ciki

[sʊŋkàll-wasʊdàgàʧɪci:]

They had a look at some

The vowel table:

	A			B			C			D			E		
	ɪ	ɨ	ʊ	ɪ	ɨ	ʊ	ɪ	ɨ	ʊ	ɪ	ɨ	ʊ	ɪ	ɨ	ʊ
1.		✓			✓		✓				✓		✓		
2.		✓			✓		✓			✓			✓		
3.	✓				✓				✓		✓		✓		
4.	✓					✓			✓	✓					✓
5.			✓			✓		✓			✓			✓	
6.		✓			✓			✓			✓			✓	
7.		✓			✓			✓			✓			✓	
8.		✓			✓			✓			✓			✓	
9.			✓		✓			✓			✓			✓	
10.		✓				✓			✓		✓			✓	
11.		✓				✓			✓		✓			✓	
NUMBER OF OCCURRENCES	2	7	2	0	7	4	2	5	4	2	9	0	3	7	1

In this dialect, from 1-4 (where labial precedes), [ɨ] alternates with the [ɪ] in 1 and 2, [ʊ] exclusively does in 4, and both [ɨ] & [ʊ] in 3; in the other cases (where coronal precedes), [ʊ] is seen to alternate with the surface [ɨ] in 5, 9, 10 and 11, while pronunciation is consistently maintained with the [ɨ] in 6, 7 and 8. Generally, one speaker does not have an [ɪ], and another one does not have an [ʊ] in this particular pattern. We noticed two speakers in the standard dialect not having an [ɪ].

5.7 CONCLUSION

Compared with the general shape of [ɪ], [ɨ] & [ʊ] alternation in the Zaria and Bauchi dialects relative to the standard, there seems to be some contrast in the Daura dialect. Cases of [ɨ] alternating with [ɪ] or [ʊ] where a labial precedes are here more frequent than in either of the other dialects (see 5.1.1, 5.3.1, 5.6.1 & 5.6.4). Turning to the alternation in more than one segment, the situation in this dialect does not differ much from the standard. In both dialects all combinations other than VIII (ɪ-ʊ) are reflected. Furthermore, even in the total number of occurrences combination IX (ɪ-ɨ) only, tends to show significant contrast by nine cases here to two in the standard. Regarding reduced u: in a closed syllable while a coronal precedes, however, the distribution of the [ʊ] and the alternant [ɨ] is fairly even in this dialect as against the standard, where the alternant is more frequent. So as a whole, it is clear that the Daura dialect is closer to the standard than Zaria and Bauchi are. The alternation pattern in the other cases remains the same as in the other dialects.

CHAPTER SIX

6.0 THE [ɪ], [ɨ] & [ʊ] ALTERNATION IN THE KATSINA DIALECT

In Chapter Five, we looked into the alternation of [ɪ], [ɨ] & [ʊ] in the Daura dialect and found that the dialect in question is closer to the standard than are Zaria and Bauchi. For, cases of [ɨ] alternating with [ɪ] or [ʊ] where a labial precedes are more frequent than in either of these dialects. Furthermore, in the sort of alternation affecting more than one segment in both this dialect and the standard all vowel combinations other than VIII (ɪ-ʊ) are reflected in the pronunciation. We will dwell, in this chapter, on the situation in the Katsina dialect.

However, in this dialect as well as Sokoto, /Φ/ has the realization [hw] before -a (including 'aɪ') and [h] before other vowels:

Before -a

hwaɽi:	as against		Φaɽi:	white one [+ masc.]
hwaɽkwo:	"	"	Φaɽkwo:	beginning
kàti:hwà:	"	"	kàti:Φà:	mattress
hwaɪhwà:	"	"	ΦaɪΦà:	paper, bank note
kaŋhwaɪ?	"	"	kamΦaɪ?	pants

Before -i

hi:li:	as against	ɸi:li:	field
ci:hi:	" "	ci:ɸi:	fish
hi:ʔdà:	" "	ɸi:ʔdà:	flaying

Before -e

he:dà: (Eng.)	as against	ɸe:dà:	pedal
k'aɣhè:	" "	k'aɣɸè:	steel
tàhe?	" "	tàɸe?	be in state of coming

Before -u

hʊlo:tì? (Eng.)	as against	ɸʊlo:tì?	plot of land
kàtì:hu:	" "	kàtì:ɸu:	mattresses
ɣʊ̀hu?	" "	ɣʊ̀ɸu?	be well shut

Before -o

ho:dù?	as against	ɸo:dù?	Ford brand of motor vehicle
kwʊ̀ɣho:ʔ	" "	kwʊ̀ɣɸo:ʔ	military policeman
nʊho:ʔ	" "	nʊɸo:ʔ	walk towards this direction

But, this does not mean that the selected speakers of these dialects all substitute [hw] and [h] for [ɸ] under those specified conditions in their pronunciation of the particular sample utterances. On the contrary, the substitution is manifested in certain cases only, which will be indicated in the footnote.

'A'

6.1 IN A SINGLE SEGMENT

6.1.1 Preceding Consonant [+ lab.]

		A	B	C	D	E	
1.	b-ci:	ɪ	ɪ	ɪ	ɨ	ɪ	ceremony
2.	b-gwu:	ʊ	ʊ	ʊ	ʊ	ʊ	beating
3.	ta:ʔb-kaʔ	ʊ	ʊ	ʊ	ʊ	ʊ	manage
4.	ɸ-taʔ[39]	ɪ	ɪ	–	ɪ	–	go out
5.	m-lci:	ɨ	ɨ	ɨ	ʊ	ɨ	power

While there is no alternation in 2, 3 and 4 here, [ɨ] is seen to alternate with [ɪ] once in the first word and with [ʊ] four times in the last one. As in the standard dialect, [ɪ] does not feature in the pronunciation of this last word.

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[39] For speakers C & E the initial consonant of the word is 'h' (followed by an [ɪ]), hence, hɪ̀taʔ .

6.1.2 Preceding Consonant [+ cor.]

		A	B	C	D	E	
1.	n-s'e:	ɪ	ɨ	ɨ	ɨ	ɨ	sink down
2.	r-bu:tu:	ʊ	ʊ	ʊ	ʊ	ʊ	writing
3.	ɽ-ga:	ɨ	ɨ	ʊ	ʊ	ɨ	Fulani cattle encampment
4.	t-ɽmi:	ɨ	ɨ	ʊ	ʊ	ɨ	mortar
5.	s-Φe:to:	ɨ	ʊ	ɨ	ɨ	ɨ	police inspector
6.	z-Φa:	ʊ	ɨ	ʊ	ɨ	ɨ[40]	perspiration
7.	s'-ns'u:	ʊ	ʊ	ʊ	ʊ	ʊ	bird
8.	ʔaʊd-ga:	ʊ	ɨ	ɨ	ɨ	ʊ	cotton
9.	ʔd-mi:	ɪ	ɪ	ɨ	ʊ	ʊ	warmth
10.	ʔda:l-bi:	ɨ	ɪ	ɨ	ɨ	ɨ	student [+ male]

The second and seventh words are consistently pronounced with [ʊ] by each speaker. There is none exclusively pronounced with [ɨ]. In the ninth word [ɨ] & [ɪ] alternate with the [ʊ] as in the previous dialects. On the other hand, unlike them, [ɨ] & [ɪ] are found to alternate in the first and last words.

---

[40] Speaker E substitutes 'hw' for the stem-final consonant 'Φ', hence, zɨhwà: .

6.1.3 Preceding Consonant [+ phon. pal.]

		A	B	C	D	E	
1.	ʃ-ɽwa:	ɪ	ʊ	ɪ	ʊ	ɪ	kite
2.	ʃ-dda?[41]	ɪ	ɪ	ɪ	ɪ	ɪ	six
3.	ʧ-kwo:wa:	ʊ	ʊ	ɪ	ɪ	ɪ	overcrowd
4.	ʧ-ɽeʔ	ɪ	ɪ	ɪ	ɪ	ɪ	remove
5.	ʤ-wa:	ʊ	ʊ	ʊ	ʊ	ɪ	dizziness
6.	j-ŋwa:	ɪ	ʊ	ɪ	ʊ	ʊ	hunger

Cases of alternation are found exclusively where 'rounding' follows, as in the previous dialects.

6.1.4 Preceding Consonant [+ phon. dor.]

		A	B	C	D	E	
1.	w-ja:	ʊ	ʊ	ʊ	ɪ	ʊ	neck
2.	w-ta:	ʊ	ʊ	ʊ	ʊ	ʊ	fire

As in the standard and Bauchi dialects, case of [ɪ] alternating with the [ʊ] where [j] follows is noticed.

---

[41] As in the Daura dialect, the stem-final consonant is geminated.

6.1.5 Preceding Consonant [+ al. pal.]

		A	B	C	D	E	
1.	c-s'o:	ɪ	ɪ	ɪ	ʊ	ɪ	plaiting of hair
2.	ɸɪc'-hu?	ʊ	ɪ	ʊ	ʊ	ɪ	the science of Islamic law
3.	ɻ-zo?	ɪ	ʊ	ɪ	ɪ	ɪ	the mythical spider of fables
4.	c-ɽa:	ɪ	ɪ	ɪ	ɪ	ɪ	calling

As in the previous dialects, cases of alternation are restricted to the items in which 'rounding' follows.

6.1.6 Preceding Consonant [+ al. dor.]

		A	B	C	D	E	
1.	?akw-ja:	ɪ	ʊ	ʊ	ɪ	ʊ	goat
2.	huŋkw'-ji?	ʊ	ʊ	ʊ	ʊ	ʊ	place name
3.	gwa:gw-ji?	ʊ	ɪ	ʊ	ʊ	ɪ	gnaw at
4.	kw-sa?	ʊ	ʊ	ʊ	ʊ	ʊ	near

In the first three examples where [j] follows, [ɪ] is seen to alternate with the [ʊ] as in the standard as well as in Zaria and Bauchi dialects.

6.2 IN MORE THAN ONE SEGMENT

In this dialect, the vowel distribution exhibits some contrast with that in the standard. While combination VIII (ɪ-ʊ) is the only one absent in the standard, combination VI (i̱-ʊ) in addition, is also absent in this dialect. This is exactly the same as the situation in Bauchi. Similarly, regarding the total number of occurrences, there are ten (10) cases for combination I (ʊ-ʊ) in this dialect as against three (3) in the standard; fourteen (14) for combination IV (i̱-i̱) here against thirty-two (32) in the standard; and, eight (8) for combination IX (ɪ-i̱) here against two (2) in the standard. These three particular combinations, it can be recalled, are also those in which the Zaria and Bauchi dialects show a major contrast with the standard. (See table.)

TABLE OF THE ALTERNATING-VOWEL COMBINATIONS FOR THE PRONUNCIATION OF THE TEN SELECTED WORDS BY THE FIVE SPEAKERS FROM KATSINA

	WORDS	I ʊ-ʊ	II ʊ-ɨ	III ʊ-ɪ	IV ɨ-ɨ	V ɨ-ɪ	VI ɨ-ʊ	VII ɪ-ɪ	VIII ɪ-ʊ	IX ɪ-ɨ	ENGLISH EQUIVALENTS
1.	b-nd-ga				(4) 5					(1)	gun
2.	ɸ-t-la:				(4) 3					(1)	lamp/light
3.	ɸ-ɸɸ-ce:				(2)	(1)		3 (2)			wing
4.	d-dd-ʄe:	1	(1)		4 (4)						heel
5.	t-mb-ʔdi:	1 (1)	1		3 (2)	(1)	(1)				regurgitation
6.	s-m-nti:				1 (3)	4 (2)					cement
7.	l-ll-ʔbi:	3 (1)			2 (4)						veiling
8.	s-ʔ-ci:	2	2 (2)		1 (3)						inlaw [+ male]
9.	r-b-ʔi:	2 (1)		2 (1)	(3)			1			one quarter
10.	kwʊd-dd-ɸi:	1	(2)	1	3 (3)						pond
	NUMBER OF OCCURRENCES	10 (3)	3 (5)	3 (1)	14 (32)	4 (4)	0 (1)	4 (2)	0 (0)	8 (2)	

a) Figures in parenthesis are for the standard dialect

b) Speakers C & E consistently substitute 'h' for 'ɸ' in

2, 3 and 10, and use 'ɪ' as the following vowel in 2 and 3

6.3 THE /ʊ/ IN THE {-ʊCa:} MORPHEME

6.3.1 Preceding Consonant [+ lab.]

		A	B	C	D	E	
1.	kwabb-na:	ʊ	ʊ	ʊ	ɨ	ʊ	pennies
2.	ka?b-ka:	ʊ	ʊ	ʊ	ʊ	ʊ	calabashes of food for a feast
3.	laɸ-za:	ɨ	ʊ	ʊ	ʊ	ʊ	speeches, pronunciations
4.	ɾa:m-ka:	ʊ	ʊ	ʊ	ʊ	ʊ	holes

As in the standard dialect, [ɨ] is seen to alternate with the [ʊ] in 1 and 3.

6.3.2 Preceding Consonant [+ cor.]

		A	B	C	D	E	
1.	s'aʊn-ka:	ʊ	ɨ	ʊ	ɨ	ʊ	hills
2.	ha?dar-rr-ka:	ɨ-ɨ	ɨ-ɨ	ʊ-ʊ	ʊ-ʊ	ʊ-ʊ	accidents
3.	ta:ɽ-ɽɽ-ka:	ɨ-ɨ	ɨ-ɨ	ʊ-ʊ	ʊ-ʊ	ɨ-ɨ	conferences
4.	ti:t-na:	ɨ	ʊ	ʊ	ɨ	ɨ	streets
5.	hars-na:	ʊ	ɨ	ʊ	ʊ	ʊ	languages
6.	da:z-zz-ka:	-	ɨ-ɨ	ʊ-ʊ	ʊ-ʊ	ɨ-ɨ	forests
7.	hans'-ka:	ɨ	ʊ	ʊ	ʊ	ʊ	forceps, tongs
8.	kwand-na:	ʊ	ʊ	ʊ	ʊ	ʊ	baskets
9.	ha?d-ra:	ʊ	ʊ	ʊ	ʊ	ʊ	accidents
10.	hu:l-na:	ɨ	ʊ	ɨ	ʊ	ɨ	caps

Like the Bauchi dialect and unlike the standard, pronunciation of these words with the [ʊ] predominates.

6.3.3 Preceding Consonant [+ phon. pal.]

		A	B	C	D	E	
1.	wa:ʃ-na:	ɪ	ʊ	ɪ	ʊ	ʊ	washers for nut
2.	hantʃ-na:[42]	ɪ	ɪ	ʊ	ʊ	–	noses
3.	ʔɪnʤ-na:	ʊ	ɪ	ʊ	ʊ	ɪ	engines
4.	k'aʊj-ka:	ɪ	ʊ	ʊ	ʊ	ʊ	villages

Here, pronunciation with the [ʊ] is more frequent than the alternant [ɪ] compared with the situation in the previous dialects where it is the reverse.

[42] Speaker E depalatalizes the stem-final consonant and follows it with 'ʊ', hantʊnà:.

6.4 THE i: REDUCTION

6.4.1 Preceding Consonant [+ lab.]

		A	B	C	D	E	
1.	takwo:b-ŋ	ɪ	ɪ	ɪ	ɪ	ɪ	the sword
2.	ʤɪʔb-ŋ	ɪ	ɪ	ɪ	ɪ	ɪ	" perspiration
3.	ʏa:ɸ-ŋ[43]	ɪ	ɪ	-	ɪ	ɪ	" stream
4.	ʏa:m-ŋ	ɪ	ɪ	ɪ	ɪ	ɪ	" hole

Unlike the standard dialect where, under these circumstances, the alternation of [ɨ] with the [ɪ] is very frequent, there is no such alternation here.

---

[43] Speaker C has 'h' as the stem-final consonant.

6.4.2 Preceding Consonant [+ cor.]

		A	B	C	D	E		
1.	ʕa:n-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ	the	dry season
2.	la:ba:r-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ	"	story
3.	bu:ʕ-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ	"	ambition
4.	kant-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ	"	shop
5.	si:s-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ	"	sixpence
6.	hɪrz-ŋ[44]	ɨ	ɨ	ɨ	–	–	"	seeking for God's protection
7.	sans'-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ	"	slipperiness
8.	ma ga:d-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ	"	guard
9.	kwʊʔd-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ	"	money
10.	ʔalka:l-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ	"	judge

The realization of the reduced vowel as [ɨ] under this condition is also reflected here as is the case with the previous dialects.

---

[44] Speakers D & E have 'ɪ', but palatalize the stem-final consonant, hɪrʤìŋ .

6.4.3 Preceding Consonant [+ phon. dor.]

	A	B	C	D	E	
wi:w-ŋ	ʊ	ɪ	ɪ	ɪ	ɪ	the Indian hemp

One speaker is found to pronounce the word with [ʊ] here as in the standard dialect.

6.5 THE u: REDUCTION

6.5.1 Preceding Consonant [+ lab.]

		A	B	C	D	E	
1.	lamb-ŋ	ʊ	ʊ	ʊ	ʊ	ʊ	the garden
2.	jɪmʔb-ŋ	ʊ	ʊ	ʊ	ʊ	ʊ	" clay
3.	sa:m-ŋ	ʊ	ʊ	ʊ	ʊ	ʊ	" wealth

Pronunciation with the [ʊ] is consistently maintained without any alternation here, unlike in the standard dialect where we witnessed a few cases of [ɨ] alternating with it.

6.5.2 Preceding Consonant [+ cor.]

		A	B	C	D	E		
1.	kwʊn-ŋ	ʊ	ɨ	ʊ	ʊ	ʊ	the	gruel
2.	tantabar-ŋ[45]	ɨ	ɨ	ɨ	ʊ	ʊ	"	pigeons
3.	ʃɪʏ-ŋ	ɨ	ʊ	ɨ	ʊ	ɨ	"	silence
4.	kara:t-ŋ	ʊ	ɨ	ʊ	ɨ	ɨ	"	reading
5.	s-ŋ	ʊ	ʊ	ʊ	ʊ	ʊ	"	fishing
6.	bu:z-ŋ	ɨ	ʊ	ʊ	ɨ	ʊ	"	sheep-skin
7.	ja:s'-ŋ	ʊ	ʊ	ʊ	ʊ	ʊ	"	fingers
8.	gand-ŋ	ɨ	ɨ	ɨ	ʊ	ɨ	"	farm
9.	ʏu:ʔd-ŋ	ɨ	ɨ	ɨ	ɨ	ʊ	"	confusion
10.	sa:bʊl-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ	"	soap

As in the Daura dialect, the distribution of the [ʊ] with the alternant [ɨ] is seemingly even. In the standard, we noticed the alternant having a more frequent occurrence.

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[45] 'n' <u>not</u> 't' is the stem-final consonant of this word.

6.5.3 Preceding Consonant [+ phon. pal.]

		A	B	C	D	E	
1.	dʒɪ:dʒ-ŋ	ɪ	ɪ	ɪ	ɪ	ʊ	the evil spirit
2.	ma:j-ŋ	ɪ	ʊ	ʊ	ʊ	ɪ	" witches

The alternation of [ɪ] with the [ʊ] is still reflected here as in the previous dialects.

'B'

6.6 IN A LONG UTTERANCE

6.6.1 Labial Preceding The /ɪ/

1. Ya harb- akun

   [ja:hàrb-ʔàkwûŋ]

   He shot at the parrot

2. Jib- Isa zai komo

   [ʤi:b-ʔi:sa:zâɪkwo:mo:ʔ]

   It is the day after tomorrow that Isa will come back

3. An zaɓ- Audu

   [ʔanzà:ʔb-ʔaudùʔ]

   Audu is elected/chosen

4. Sun karɓ- nasu

   [sʊŋkàɽʔb-na:sùʔ]

   They received theirs

5. Ta haif- 'ya mace

   [ta:hàɪɸ-ʔja:màtʃèʔ]

   She gave birth to a baby girl

6. Mun taf- gida

[mʊntàɸ-ɟɪda:]

We went home

7. Ya girm- Isa

[ja:ɟɪ̀ɽm-ʔi:sa:]

He is older than Isa

8. An sallam- leburori

[ʔansàllàm-le:buro:ri:]

Labourers are dismissed

The vowel table:

	A		B		C[46]		D		E	
	ɪ	i̱	ɪ	i̱	ɪ	i̱	ɪ	i̱	ɪ	i̱
1.	✓			✓	✓			✓	✓	
2.	✓		✓		✓			✓	✓	
3.	✓			✓	✓			✓	✓	
4.	✓		✓		✓			✓	✓	
5.	✓		✓		–	–	✓		✓	
6.	✓		✓		–	–	✓		✓	
7.	✓		✓		✓		✓		✓	
8.	✓		✓		✓		✓		✓	
NUMBER OF OCCURRENCES	8	0	6	2	6	0	4	4	8	0

Speakers A, C & E consistently maintain pronunciation with the [ɪ], while D has an even distribution between this vowel and the alternant [i̱]. The [ɪ] generally predominates by thirty-two (32) cases (84.2%) to six (15.8%) for the alternant [i̱]. In the standard dialect we noticed the alternant being more frequent, attracting 65%, and the [ɪ], 35%.

---

[46] This speaker has 'h' as stem-final consonant (followed by the [ɪ]) in 5 and 6.

6.6.2 Coronal Preceding The /ʊ/

1. Musa bai san- ba

   [mu:sa:bàɪsàn-ba?]

   Musa is not known

2. Kamar- babbar ƙasa ce

   [kàmàr-bàbbark'asa:ʧè:]

   Cameroun is a large country

3. Far- muka tafi

   [ɸa:ɾ-mʊkàtàɸi?]

   It is F. we have been to

4. An buɗe kot- da wuri

   [ʔambu:ʔdɛ̀kwo:t-dàwʊɾi?]

   The court has opened early

5. Mun gams- da haka

   [mʊŋgàms-dàhakà?]

   We are satisfied with that

6. Yanz- za mu tafi

   [jànz-za:mʊ̀tàɸi?]

   It is now that we are going

7. Saniyar ba za ta tats- ba

[sa:nìjârbàza:tàtà:s'-ba?]

The cow cannot be milked

8. Gwand- a jihar Sakkwato take

[gwand-?àʤɪhàrsakwkwatɔtacè?]

G. is in Sokoto State

9. Mun had- kan hanya

[mʊŋhà?d-kâŋhaŋjà:]

We met on the way

10. Ul- za a saya

[?u:l-za:?àsàja:]

It is woollen thread that will be bought

The vowel table:

	A		B		C		D		E	
	ʊ	ɨ	ʊ	ɨ	ʊ	ɨ	ʊ	ɨ	ʊ	ɨ
1.	✓		✓		✓		✓			✓
2.	✓		✓			✓		✓	✓	
3.	✓		✓		✓		✓		✓	
4.	✓			✓	✓			✓	✓	
5.	✓		✓		✓		✓		✓	
6.	✓			✓	✓		✓		✓	
7.	✓		✓		✓		✓		✓	
8.	✓		✓		✓		✓		✓	
9.	✓		✓		✓		✓		✓	
10.	✓		✓		✓		✓		✓	
NUMBER OF OCCURRENCES	10	0	8	2	9	1	8	2	9	1

Here, speaker A consistently maintains pronunciation with the [ʊ], while the rest have a few alternations. The alternant [ɨ] in general has six occurrences (12%) and the [ʊ] forty-four (88%). In the standard dialect as we saw, the alternant attracts 38%, whereas about 60% represents the occurrence of the [ʊ].

6.6.3 Labial Preceding The /ʊ/
With 'Spreading' Following

1. Wannan ab- ya ba da mamaki

   [wannàŋʔàb-ja:ba:dàmà:ma:cì:]

   This thing has given surprise

2. Bab- inda za a samu

   [ba:b-ʔɪndàza:ʔàsa:mù:]

   Nowhere can it be obtained

3. Sun karɓ- ya ce

   [sʊŋkàɽʔb-jatʃê:]

   They were welcome he said

4. Ta taɓ- ya ce

   [ta:tàʔb-jatʃê:]

   She was crazy he said

5. Musulunci ya kaf- ya ce

   [mʊsulʊntʃì:ja:kàɸ-jatʃê:]

   Islam is deep-rooted he said

6. Yusuf- ya dawo

   [ju:sʊɸ-ja:da:wo:ʔ]

   Y. is back

7. Mun gam- yau

   [mʊŋgàm-jâʊʔ]

   We met today

8. Nam- ya fi

   [na:m-ja:ɸiʔ]

   Ours is better

The vowel table:

	A		B		C		D		E	
	Ʊ	I	Ʊ	I	Ʊ	I	Ʊ	I	Ʊ	I
1.	✓		✓		✓			✓	✓	
2.	✓		✓		✓		✓		✓	
3.		✓	✓			✓	✓		✓	
4.		✓	✓		✓		✓		✓	
5.	✓		✓		✓		✓		✓	
6.	✓		✓		✓		✓		✓	
7.	✓		✓		✓			✓	✓	
8.	✓		✓		✓		✓		✓	
NUMBER OF OCCURRENCES	6	2	8	0	7	1	6	2	8	0

Here, while pronunciation with the [ʊ] is consistently maintained by speakers B & E, the rest have a few alternations. The alternant [ɪ] features five times (12.5%) against the [ʊ] that has thirty-five (35) occurrences (87.5%). In the previous dialects we saw two speakers having similar alternation and three having a consistent pronunciation with the [ʊ].

6.6.4 Labial/Coronal Preceding The /ɪ/ With 'Rounding' Following

1. Ya harb- Uba

   [ja:hàrb-ʔʊ̀baʔ]

   He shot at Uba

2. An zaɓ- wani

   [ʔanzà:ʔb-waniʔ]

   Someone is elected/chosen

3. Ya taf- wurin

   [ja:tàɸ-wʊɽî̀ŋ]

   He went to the place

4. An dam- Uba

   [ʔandà:m-ʔʊ̀baʔ]

   Uba is disturbed

5. Anin- uku ne

[ʔàni:n-ʔʊkwʊ̀ne:]

It was 3/10 of a penny

6. Bar- Husaini ya dawo tukuna

[bàɾ-hʊ̀saɪnɪ̀jàda:wo:tʊ̀kwʊ̀naʔ]

Wait until Husaini comes back

7. Fakit- hudu muke so

[ɸa:cɪt-hʊʔdʊmʊcè:sô:]

It is four packets that we want

8. Ya tats- guzuma

[ja:tà:s'-gwʊzʊma:]

He milked an old cow

9. Ladid- uwa ce ga Musa

[là:di:d-ʔʊwa:tʃè:gàmu:sa:]

L. is a mother to Musa

10. Bad- Uba zai komo

[bàʔd-ʔʊ̀bazâɪkwo:mo:ʔ]

It is next year that Uba will return

11. Sun kall- wasu daga ciki

[sʊŋkàll-wasʊdàgàtʃɪci:]

They had a look at some

The vowel table:

	A			B			C			D			E		
	ɪ	ɨ	ʊ	ɪ	ɨ	ʊ	ɪ	ɨ	ʊ	ɪ	ɨ	ʊ	ɪ	ɨ	ʊ
1.	✓			✓		✓					✓	✓			
2.		✓			✓	✓					✓	✓			
3.		✓		✓		✓					✓	✓			
4.		✓			✓			✓			✓	✓			
5.		✓		✓			✓				✓		✓		
6.		✓		✓			✓			✓			✓		
7.		✓		✓			✓				✓		✓		
8.			✓		✓		✓			✓					✓
9.			✓		✓			✓		✓					✓
10.		✓				✓		✓			✓		✓		
11.		✓				✓		✓			✓		✓		
NUMBER OF OCCURRENCES	1	5	5	1	6	4	3	5	3	0	3	8	4	5	2

Here, from 1 - 4 (where labial precedes) speaker D consistently uses alternant [ʊ] while E maintains the [ɪ]; [ɨ] alternates with [ɪ] & [ʊ] in 1 and 3, and [ʊ] does with the [ɪ] exclusively in 2 and 4. On the other hand, in the other cases (where coronal precedes), [ʊ] is found to alternate with the surface [ɨ] in 5, 7, 8, 9, 10 and 11, while in 6, pronunciation is consistent with this surface [ɨ]. So that as a whole, [ɪ] does not feature in the pronunciation of one speaker in this particular situation. In the standard dialect we witnessed two similar cases.

6.7 CONCLUSION

The [ɪ], [i̟] & [ʊ] alternation in the Katsina dialect exhibits some major contrast with the standard, and a considerable degree of comparison with the other three dialects. Like Zaria, Bauchi and, to a lesser extent, Daura, there is a less common tendency for [i̟] to alternate with an [ɪ] or [ʊ] when a labial precedes (cf. 6.1.1, 6.3.1, 6.6.1 & 6.6.4). In the sort of alternation in more than one segment, like the Bauchi dialect, combinations VI (i̟-ʊ) and VIII (ɪ-ʊ) are absent here; combination I (ʊ-ʊ) occurs ten (10) times here against three (3) in the standard, combination IV (i̟-i̟) fourteen (14) times against thirty-two (32) in the standard, and combination IX (ɪ-i̟) occurs eight (8) times here against two (2) in the standard. With reduced u: in a closed syllable while a coronal precedes, realization both as [ʊ] and [i̟] is even as was the case in the Daura dialect. Similarly, as in the Bauchi dialect, the realization of the /ʊ/ in the {-ʊCa:} morpheme as [ʊ] when a coronal precedes predominates over [i̟]. Therefore, one can deduce that the Katsina dialect is by far less like the standard in this direction. The alternation pattern in the other cases, however, is the same.

CHAPTER SEVEN

7.0 THE [ɪ], [ɨ] & [ʊ] ALTERNATION IN THE SOKOTO DIALECT

We examined in Chapter Six the alternation of [ɪ], [ɨ] & [ʊ] in the Katsina dialect, and consequently realized that it is by far less like the standard than the other dialects. First, there is a less common tendency for [ɨ] to alternate with an [ɪ] or [ʊ] when a labial precedes, a situation similar to the other three dialects. Secondly, in the sort of alternation affecting more than one segment, not only combination VIII (ɪ-ʊ) is absent as in the standard, but also VI (ɨ-ʊ), a case similar to Bauchi. Thirdly, as in the Daura dialect, reduced u: in a closed syllable with a coronal preceding has an even realization between [ʊ] and [ɨ]. And lastly, the realization of the /ʊ/ in the {-ʊCa:} morpheme as [ʊ] when a coronal precedes, has predominance over [ɨ], again, a case similar to Bauchi. Now, we will finally focus in this chapter on the situation in the Sokoto dialect.

This dialect, nevertheless, apart from the realization of /Φ/ as [hw] before -a, and as [h] before other vowels, a feature it shares with Katsina, differs from the others (including Katsina) in a number of ways among which are the following:

1. Absence of the trilled [r]
2. Intensive use of gemination
3. Different form of 'Near Demonstrative'
4. Large vocabulary not shared with the other dialects

1. The Trilled [r]

This consonant does not exist in this dialect. On the contrary, there is just the flapped [ɾ]. The latter, however, does not always replace the trilled [r], this depending on the phonetic context. In word-initial and intervocalic environments the 'flapped' always replaces the 'trilled', as exemplified below:

Word-Initial

ɾi:bà: (Ar.)	as against	ri:bà:	profit
ɾo:bà: (Eng.)	" "	ro:bà:	rubber
ɾe:zà: (Eng.)	" "	re:zà:	razor-blade
ɾahamà: (Ar.)	" "	rahamà:	mercy

Intervocalic

taɾà?	as against	tarà?	nine
kàɾà:tu: (Ar.)	" "	kàrà:tu:	reading
ʤaɾɾàbaʔ (Ar.)	" "	ʤarràbaʔ	test

Syllable-Final (Word-Medial)

In this environment, [ɽ] and [l] are found to replace [r]. Nevertheless, the former two are not in free variation. In other words, the choice between the two just depends on the item:

haɽkà: (Ar.)	as against		harkà:	business
taɽkwò:	"	"	tarkwò:	trap
bʊɽcì:(Eng.)	"	"	bʊrcì:	brake
ʃaɽhì: (Ar.)	"	"	ʃarhì:	comment
ʔàbàɽba: (Yor.)	"	"	ʔàbàrba:	pineapple
gàlma:	"	"	gàrma:	large hoe
halʃè:	"	"	harʃè:	tongue
salga:	"	"	sarga:	cesspit
dalmà:	"	"	darmà:	lead (metal)

Word-Final (Utterance-Final)

Here, [t], [s] & [ɽ] make the replacement. However, unlike in the previous case, the condition for the replacement is predictable: a) [t] replaces the referential feminine suffix -r (including the final 'r' in the word for 'five'); b) [s] replaces the final 'r' in the so-called causative verb; and, c) [ɽ] replaces the final 'r' in ideophone, exclamation, proper name and some loan words, as below:

a)

ɾì̗:gât	as against	ɾì̗:gâr	the gown
kw'aɾjât	" "	kw'aɾjâr	" calabash
bu:tàt	" "	bu:tàr	" kettle
bìjat	" "	bìjar	five

b)

ʃɪgas	as against	ʃɪgar	cause to enter
majas	" "	majar	take back
zʊbas	" "	zʊbar	throw away

c)

ʃaɾ	as against	ʃar	ideophone emphasizing greenness
tiɾ	" "	tir	exclamation of annoyance or exasperation
tʊkwʊ̀ɾ	" "	tʊkwʊ̀r	proper name for male
mʊ̂ɾ (Ar.)	" "	mʊ̂r	myrrh

Word-Final (Within a Phrase)

In this environment assimilation applies:

ɾi̗:gabbɛllò?	as against	ɾi̗:garbɛllò?	Bello's gown
gwo:nazzi:bù?	" "	gwo:narzi:bù?	Zibu's farm
mà:tattaŋkwò?	" "	mà:tartaŋkwò?	Tanko's wife
kàbi:làkwkwù?	" "	kàbi:làrkwù?	your (Pl.) tribe
bu:tàssù?	" "	bu:tàrsù?	their kettle

2. Gemination

While gemination in a lexical unit is found in all dialects (as in hannu:, 'hand'; kwûnne:, 'ear'; kàlli, 'look at'; ʃakkà:, 'doubt'; hammà:, 'yawning'), it is more pronounced here, where in addition, the process affects a longer utterance, chiefly a clause:

Within a Lexical Unit

In certain lexical units, C_1VC_2 \$ $C_2V...$ syllable sequence features in this dialect as against $C_1V:$ \$ $C_2V...$ in the others, as follows:

hù̗lla:	as against	hù̗:la:	cap
kàssuwa:	" "	kà:suwa:	market

gwò:nàkkaɪ	as against	gwò:nàkaɪ	farms
hàdìssaɪ	" "	hàdì:saɪ	Moslem traditions
wàcìllaɪ	" "	wàcì:laɪ	representatives

Within a Clause

The clause under consideration is the one that is formed in the 'Relative Past Tense' with the pre-verbal pronoun na (1st pers.), ka (2nd masc.), ja (3rd masc.) or, ta (3rd fem.), the syllable sequence featuring being the same as the one above:

dànidda:wo:?[47]	as against	dànada:wo:?	when I returned
dàkabbɪja:	" "	dàkabɪja:	when/which you paid
dàjazzo:?	" "	dàjazo:?	when he came/who came
dàtaggamà:	" "	dàtagamà:	when/which she finished

3. The Demonstrative

While the same form of 'far' demonstrative (both long and short) is used in the Sokoto and other dialects, the corresponding 'near' form (both long and short) slightly differs in the two categories of dialects:

---

[47] Note the realization of /a/ as [ɨ] after the [n] in the Sokoto form.

Far Long

In both, wantʃàŋ [+ masc.], watʃtʃàŋ [+ fem.] and wa?dàntʃâŋ [+ pl.], meaning 'that one' are used:

wantʃàndo:cì:	that horse
watʃtʃàŋgwo:?dìja:	" mare
wa?dàntʃândawa:ci:	those horses

Far Short

For this form, -ntʃàŋ [+ masc.], -rtʃàŋ/-tʃtʃàŋ [+ fem.] and -ntʃàŋ [+ pl.] suffixes are used in both:

do:cìntʃâŋ	that horse
gwo:?dìjartʃàŋ/gwo:?dìjatʃtʃàŋ	" mare
dawa:cɪntʃàŋ	those horses

Near Long

In this dialect while wâŋgaː [+ masc.], wâggaː [+ fem.] and wa?dàŋgaː [+ pl.], meaning 'this one' are used, wannàŋ [+ masc./fem.] and wa?dànnâŋ [+ pl.] are employed in the other dialects:

wâŋgado:cì:	as against this horse	wannàndo:cì:
wâggagwo:ʔdìja:	as against this mare	wannàŋgwo:ʔdìja:
waʔdàŋgadawa:ci:	as against these horses	waʔdànnândawa:ci:

Near Short

The suffixes -ŋga [+ masc.], -gga [+ fem.] and -ŋga [+ pl.] are used in this dialect, while -nnaŋ [+ masc.], -rnaŋ/-nnaŋ [+ fem.] and -nnaŋ [+ pl.] are correspondingly used in the other dialects:

do:cìŋgaʔ	as against this horse	do:cìnnâŋ
gwo:ʔdìjâggaʔ	as against this mare	gwo:ʔdìjarnàŋ/gwo:ʔdìjannàŋ
dawa:cîŋgaʔ	as against these horses	dawa:cɪnnàŋ

4. Vocabulary

There are a considerable number of words in this dialect that are not common or not found at all in the other dialects. Below are a few of them:

tàɽmàni:	as against		tʃìnna:kà:	black ant
ɽè:di?	"	"	nɨk'à?	grind
kâŋwuɽi:	"	"	Φa:dà?	palace
?dwa:?dà?	"	"	wa:sà?	sharpen
hab?dì:	"	"	tò:ka:	ash
lò:lo:	"	"	kwùmbuɽi:	swelling
lalu:s'a?	"	"	ʃɪlà:	young pigeon
maba:katʃi:	"	"	masaci:	large calabash
c'a:jà:	"	"	kw'ârkw'atà:	louse
hàŋwa:wà:	"	"	hàwaɪnìja:	chameleon

The purpose of bringing these points is to draw attention to their impact on the pronunciation of the majority of the sample utterances by the selected speakers of this dialect. So that in this chapter there are no examples of vowel alternation with the trilled r- preceding, while cases of gemination as well as certain uncommon lexical units are largely reflected. Earlier, in the introductory part of Chapter Six, we already said where the realization of /Φ/ as [hw] before -a and as [h] before other vowels is manifested, it will be indicated in the footnote.

'A'

7.1 IN A SINGLE SEGMENT

7.1.1 Preceding Consonant [+ lab.]

		A	B	C	D	E	
1.	b-ci:	ʊ	ʊ	ʊ	ʊ	ʊ	ceremony
2.	b-gwu:	ʊ	ʊ	ʊ	ʊ	ʊ	beating
3.	ta:ʔb-ka	ʊ	ʊ	ʊ	ʊ	ʊ	manage
4.	ɸ-taʔ[48]	–	–	ɪ	ɪ	–	go out
5.	m-lci:	ʊ	ɪ	ʊ	ʊ	ʊ	power

In this pattern, [ɨ] does not feature at all. The first three words are consistently pronounced with [ʊ], and the fourth one with [ɪ]. In the final word, on the other hand, [ɪ] is seen to alternate with [ʊ] once. This is unlike the standard dialect where we witnessed [ɨ] alternating in all except the second word.

---

[48] Speakers A, B & E all have 'h' (followed by an 'ɪ') as the word-initial consonant.

7.1.2 Preceding Consonant [+ cor.]

		A	B	C	D	E	
1.	n-s'e:	ɨ	ʊ	ʊ	ɨ	ʊ	sink down
2.	r-bu:tu:[49]	–	–	–	–	–	writing
3.	ɽ-gga:	ʊ	ʊ	ɨ	ʊ	ʊ	Fulani cattle encampment
4.	t-ɽmi:	ɨ	ʊ	ʊ	ʊ	ʊ	mortar
5.	s-Φe:to:	ɨ	ɨ	ɨ	ɨ	–	police inspector
6.	z-Φa:[50]	ɨ	ʊ	ʊ	ʊ	ɨ	perspiration
7.	s'-ns'u:	ʊ	ʊ	ɨ	ʊ	ʊ	bird
8.	ʔaʊd-ga:	ʊ	ʊ	ʊ	ʊ	ɨ	cotton
9.	ʔd-mi:	ʊ	ʊ	ɨ	ʊ	ɪ	warmth
10.	ʔda:l-bi:	ɨ	ɨ	ɨ	ɨ	ɨ	student [+ male]

The vowels [ɨ] & [ɪ] are found to alternate with the [ʊ] in example 9, a case similar to all the previous dialects. Pronunciation is consistently maintained with [ɨ] by each speaker in 10, and there is no example consistently pronounced with [ʊ].

---

[49] The trilled 'r' precedes

[50] Speakers B, C & D substitute 'hw' for the stem final consonant, zuhwà:.

7.1.3 Preceding Consonant [+ phon. pal.]

		A	B	C	D	E	
1.	ʃ-ɽwa:	ɪ	ɪ	ɪ	ʊ	ɪ	kite
2.	ʃ-dda?	ɪ	ɪ	ɪ	ɪ	ɪ	six
3.	ʧ-kwo:wa:	ɪ	ɪ	ɪ	ɪ	ɪ	overcrowd
4.	ʧ-ɽe?	ɪ	ɪ	ɪ	ɪ	ɪ	remove
5.	ʤ-wa:	ɪ	ʊ	ɪ	ɪ	ʊ	dizziness
6.	j-ŋwa:	ʊ	ɪ	ɪ	ʊ	ɪ	hunger

The confinement of alternation to words in which 'rounding' follows is again manifested here as in all the previous dialects.

7.1.4 Preceding Consonant [+ phon. dor.]

		A	B	C	D	E	
1.	w-ja:	ʊ	ʊ	ʊ	ʊ	ʊ	neck
2.	w-ta:	ʊ	ʊ	ʊ	ʊ	ʊ	fire

Pronunciation with the [ʊ] is consistent in the first word, the following [j] notwithstanding, a case comparable to Zaria and Daura.

7.1.5 Preceding Consonant [+ al. pal.]

		A	B	C	D	E	
1.	c-s'o:	ɪ	ɪ	ɪ	ɪ	ʊ	plaiting of hair
2.	ɸɪc'-hu?	ɪ	ɪ	ʊ	ɪ	ɪ	the science of Islamic law
3.	ɟ-zo?	ɪ	ɪ	ɪ	ʊ	ɪ	the mythical spider of fables
4.	c-ʈa:	ɪ	ɪ	ɪ	ɪ	ɪ	calling

Cases of alternation as in all the previous dialects appear in the words in which a feature value of 'rounding' exists in the following segment.

7.1.6 Preceding Consonant [+ al. dor.]

		A	B	C	D	E	
1.	?akw-ja:	ʊ	ʊ	ʊ	ʊ	ʊ	goat
2.	hʊŋkw'-ji?	ʊ	-	ʊ	-	ʊ	place name
3.	gwa:gw-ji	ɪ	ɪ	ʊ	ʊ	ʊ	gnaw at
4.	kw-sa?	ʊ	ʊ	ʊ	ʊ	ʊ	near

While the third word exhibits cases of alternation on account of the [j], the corresponding first two do not. We noticed a similar situation in Daura and Katsina.

7.2 IN MORE THAN ONE SEGMENT

In the thirty-three (33) responses recorded in this dialect, the vowel distribution manifests significant cases of comparison as well as contrast with the standard. For the former, all combinations other than VIII (ɪ-ʊ) are reflected; combinations II (ʊ-i̟), V (i̟-ɪ), VI (i̟-ʊ) and VII (ɪ-ɪ) all have equal number of occurrences in the two dialects. On the other hand, where they differ considerably lies on combination I (ʊ-ʊ) for which there are nine (9) occurrences here against three (3) in the standard, combination IV (i̟-i̟) three (3) occurrences against thirty-two (32) in the standard, and combination IX (ɪ-i̟) seven (7) occurrences here against two (2) in the standard. Zaria, Bauchi and Katsina too, differ considerably from the standard dialect in respect of these combinations. (See table.)

TABLE OF THE ALTERNATING-VOWEL COMBINATIONS FOR THE PRONUNCIATION OF THE TEN SELECTED WORDS BY THE FIVE SPEAKERS FROM SOKOTO

		I	II	III	IV	V	VI	VII	VIII	IX	
	WORDS	ʊ-ʊ	ʊ-ɨ	ʊ-ɪ	ɨ-ɨ	ɨ-ɪ	ɨ-ʊ	ɪ-ɪ	ɪ-ʊ	ɪ-ɨ	ENGLISH EQUIVALENTS
1.	b-nd-ga:				(4)					5 (1)	gun
2.	ɸ-t-la:				(4)					2 (1)	lamp/light
3.	ɸ-ɸɸ-ce:				(2)	(1)		2 (2)			wing
4.	d-dd-ɟe:	3	(1)		2 (4)						heel
5.	t-mb-ʔdi:	1 (1)			(2)	(1)	(1)				regurgitation
6.	s-m-nti:				1 (3)	4 (2)					cement
7.	l-ll-ʔbi:	4 (1)			(4)		1				veiling
8.	s-ʈ-ci:		5 (2)		(3)						inlaw [+ male]
9.	r-b-ʔi:	-	-	-	-	-	-	-	-	-	one quarter
10.	kwʊd-dd-ɸi:	1		2							pond
	NUMBER OF OCCURRENCES	9 (3)	5 (5)	2 (1)	3 (32)	4 (4)	1 (1)	2 (2)	0 (0)	7 (2)	

a) Figures in parenthesis are for the standard dialect
b) Speakers A, B & E consistently substitute 'h' for 'ɸ' in 2 and 3
c) Speakers B, C, D & E are not familiar with the fifth word. Instead they use 'bʊ̀lbʊ̀li:'
d) In example 9 the initial segment has the trilled 'r' preceding
e) Speakers B & C are not familiar with the last word. Instead they use 'tabcì:'

7.3 THE /ʊ/ IN THE {-ʊCa:} MORPHEME

7.3.1 Preceding Consonant [+ lab.]

		A	B	C	D	E	
1.	kwabb-na:	ʊ	ʊ	ʊ	ʊ	ʊ	pennies
2.	ka?b-kka:	ʊ	ʊ	ʊ	ʊ	ʊ	calabashes of food for a feast
3.	laɸ-zza:	ʊ	ʊ	ʊ	ʊ	ʊ	speeches, pronunciations
4.	ʔa:m-kka:	ʊ	ʊ	ʊ	ʊ	ʊ	holes

Unlike in the standard, there are no cases of [ɨ] alternating with the [ʊ]. Pronunciation with the latter is consistently maintained by each speaker.

7.3.2 Preceding Consonant [+ cor.]

		A	B	C	D	E	
1.	s'aʊn-kka:	ʊ	ʊ	ɨ	ʊ	ɨ	hills
2.	ha?dar-rr-ka:[51]	-	-	-	-	-	accidents
3.	ta:ɽ-ɽɽ-kka:	ʊ-ʊ	ʊ-ʊ	ɨ-ʊ	ɨ-ɨ	ʊ-ʊ	conferences
4.	ti:t-na:	ɨ	ʊ	ʊ	ɨ	ʊ	streets
5.	haɽs-na:	ʊ	ʊ	ɨ	ʊ	ʊ	languages
6.	da:z-zz-kka:	ɨ-ʊ	ɨ-ʊ	ʊ-ʊ	ʊ-ʊ	ɨ-ʊ	forests
7.	hans'-kka:	ʊ	ʊ	ʊ	ɨ	ʊ	forceps, tongs
8.	kwand-na:	ɨ	ʊ	ʊ	ʊ	ɨ	baskets
9.	ha?d-ɽɽa:	ʊ	ɨ	ʊ	ʊ	ʊ	accidents
10.	hʊll-na:	ɨ	ɨ	ɨ	ʊ	ʊ	caps

Predominance of the occurrence of the [ʊ] over [ɨ] is again manifested here.

---

[51] The trilled 'r' precedes.

7.3.3 Preceding Consonant [+ phon. pal.]

		A	B	C	D	E	
1.	wa:ʃ-na:[52]	–	–	ʊ	–	–	washers for nut
2.	hantʃ-na:[53]	–	ʊ	–	ɪ	ʊ	noses
3.	ʔɪnʤ-na:	ɪ	ʊ	ʊ	ʊ	ɪ	engines
4.	k'aʊj-kka:	ʊ	ʊ	ʊ	ʊ	ɪ	villages

The alternant [ɪ] here has fewer occurrences than the [ʊ]. This is unlike in the previous dialects where the situation is the opposite.

---

[52] Speakers A, B, D & E are not familiar with this form, but rather, wa:ʃo:ʃi:.

[53] Speakers A & C depalatalize the stem-final consonant and follow it with 'ʊ', hantʊnà:.

7.4 THE i: REDUCTION

7.4.1 Preceding Consonant [+ lab.]

		A	B	C	D	E
1.	takwo:b-ŋ	ɪ	ɪ	ɪ	ɪ	ɪ
2.	ʤɪʔb-ŋ	ɪ	ɪ	ɪ	ɪ	ɪ
3.	ɾa:Φ-ŋ[54]	ɪ	–	ɪ	–	–
4.	ɾa:m-ŋ[55]	–	–	–	–	–

There are no cases of [ɨ] alternating with the [ɪ] in this dialect under this condition. In the standard, we noticed such alternation having a very frequent occurrence.

---

[54] Speakers B, D & E have 'h' (followed by 'ɪ') as the stem-final consonant.

[55] The word in this dialect has 'e:' as the unreduced vowel and 'ɛ' as the reduced correlate, ɾa:mẽ: and ɾa:mɛ̃ŋ respectively.

7.4.2 Preceding Consonant [+ cor.]

		A	B	C	D	E		
1.	ɽa:n-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ	the	dry season
2.	la:ba:r-ŋ[56]	-	-	-	-	-	"	story
3.	bu:ɽ-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ	"	ambition
4.	kant-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ	"	shop
5.	si:s-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ	"	sixpence
6.	hɪɽz-ŋ[57]	ɨ	ɨ	ɨ	-	-	"	seeking for God's protection
7.	sans'-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ	"	slipperiness
8.	maɪga:d-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ	"	guard
9.	kwʊʔd-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ	"	money
10.	ʔalka:l-ŋ	ɨ	ɨ	ɨ	ɨ	ɨ	"	judge

The reduced vowel under these circumstances is again realized as [ɨ] here, as in all the previous dialects.

---

[56] The trilled 'r' precedes.

[57] Speakers D & E have the stem-final consonant palatalized and followed by an 'ɪ'.

7.4.3 Preceding Consonant [+ phon. dor.]

	A	B	C	D	E	
wi:w-ŋ	ɪ	ɪ	ɪ	ɪ	ʊ	the Indian hemp

As in the standard dialect, a single case of [ʊ] alternating with the [ɪ] is depicted here.

7.5 THE u: REDUCTION

7.5.1 Preceding Consonant [+ lab.]

		A	B	C	D	E	
1.	lamb-ŋ	ʊ	ʊ	ʊ	ʊ	ʊ	the garden
2.	jɪmʔb-ŋ	ʊ	ʊ	ʊ	ʊ	ʊ	" clay
3.	sa:m-ŋ	ʊ	ʊ	ʊ	ʊ	ʊ	" wealth

While the standard dialect manifests a few cases of [ɨ] alternating with the [ʊ], there is no such manifestation here.

7.5.2 Preceding Consonant [+ cor.]

		A	B	C	D	E		
1.	kwʊn-ŋ	ɨ	ɨ	ʊ	ʊ	ʊ	the	gruel
2.	tantabar-ŋ[58]	–	–	–	–	–	"	pigeons
3.	ʃɪɾ-ŋ	ʊ	ʊ	ɨ	ʊ	ʊ	"	silence
4.	kaɾa:t-ŋ	ʊ	ʊ	ɨ	ʊ	ɨ	"	reading
5.	s-ŋ	ʊ	ʊ	ʊ	ʊ	ʊ	"	fishing
6.	bu:z-ŋ	ʊ	ʊ	ʊ	ɨ	ʊ	"	sheep-skin
7.	ja:s'-ŋ	ʊ	ɨ	ʊ	ʊ	ʊ	"	fingers
8.	gand-ŋ	ʊ	ɨ	ʊ	ɨ	ʊ	"	farm
9.	ɾu:ʔd-ŋ	ʊ	ʊ	ɨ	ʊ	ɨ	"	confusion
10.	sa:bʊl-ŋ	ʊ	ʊ	ʊ	ɨ	ɨ	"	soap

Pronunciation with the [ʊ] here predominates over that with the alternant [ɨ], a precisely similar situation with Zaria and Bauchi. In Daura and Katsina we noticed even occurrences between the two vowels, while the alternant features more than the [ʊ] in the standard.

---

[58] The trilled 'r' precedes.

7.5.3 Preceding Consonant [+ phon. pal.]

		A	B	C	D	E	
1.	ʤu:ʤ-ŋ	ʊ	ʊ	ʊ	ɪ	ʊ	the evil spirit
2.	ma:j-ŋ	ʊ	ʊ	ʊ	ʊ	ʊ	" witches

This pattern shows a single case of [ɪ] alternating with the [ʊ] and only in the first word, unlike in the previous dialects where the alternation is manifested in both items.

'B'

7.6 IN A LONG UTTERANCE

7.6.1 Labial Preceding The /ɪ/

1. Ya harb- akun

   [ja:hàɽb-ʔàkwôŋ]

   He shot at the parrot

2. Jib- Isa zai komo

   [ʤi:b-ʔi:sa:zâɪkwo:mo:]

   It is the day after tomorrow that Isa will come back

3. An zaɓ- Audu

   [ʔanzà:ʔb-ʔaʊdù?]

   Audu is elected/chosen

4. Sun karɓ- nasu

   [sʊŋkàɽʔb-na:sù?]

   They received theirs

5. Ta haif- 'ya mace

   [ta:hàɪɸ-ʔja:màʧʧe?]

   She gave birth to a baby girl

6. Mun taf- gida

[mʊntàɸ-ɟɪda:]

We went home

7. Ya girm- Isa

[ja:ɟɪ̀ɽm-ʔi:sa:]

He is older than Isa

8. An sallam- leburori

[ʔansàllàm-le:bʊɽo:ɽi:]

Labourers are dismissed

The vowel table:

	A		B[59]		C		D[59]		E	
	ɪ	ɨ	ɪ	ɨ	ɪ	ɨ	ɪ	ɨ	ɪ	ɨ
1.	✓		✓		✓		✓		✓	
2.	✓		✓		✓		✓		✓	
3.	✓		✓		✓		✓		✓	
4.	✓		✓		✓		✓		✓	
5.	✓		–	–	✓		–	–	✓	
6.	✓		–	–	✓		–	–	✓	
7.	✓		✓		✓		✓		✓	
8.	✓		✓		✓		✓		✓	
NUMBER OF OCCURRENCES	8	0	6	0	8	0	6	0	8	0

None of the five speakers in this dialect is found to use [ɨ] here. Pronunciation is quite consistent with the [ɪ]. This is a sharp line of contrast with the previous dialects where we found cases of the two vowels alternating in varying degrees.

---

[59] Speakers B & D have as stem-final consonant in 5 and 6, 'h' followed by the 'ɪ'.

7.6.2 Coronal Preceding The /ʊ/

1. Musa bai san- ba

   [mu:sa:bàɪsàn-ba?]

   Musa is not known

2. Kamar- babbar ƙasa ce

   [kàmàr-bàbbark'asa:ʧè:]

   Cameroun is a large country

3. Far- muka tafi

   [ɸa:ɽ-mʊkàtàɸi?]

   It is F. we have been to

4. An buɗe kot- da wuri

   [?ambu:?dɛ̀kwo:t-dàwʊɽi?]

   The court has opened early

5. Mun gamsh- da haka

   [mʊŋgàmʃ-dàhakà?]

   We are satisfied with that

6. Yanz- za mu tafi

   [jànz-za:mʊ̀tàɸi?]

   It is now that we are going

7. Saniyar ba za ta tats- ba

[sa:nìjâbbaza:tàtà:s'-ba?]

The cow cannot be milked

8. Gwand- a jihar Sakkwato take

[gwand-?àʤɪhàssakwkwatɔtacè?]

G. is in Sokoto State

9. Mun had- kan hanya

[mʊŋhà?d-kâŋhaŋjà:]

We met on the way

10. Ul- za a saya

[?u:l-za:?àsàja:]

It is woollen thread that will be bought

The vowel table:

	A		B		C		D		E	
	ʊ	ɨ	ʊ	ɨ	ʊ	ɨ	ʊ	ɨ	ʊ	ɨ
1.	✓		✓		✓		✓		✓	
2.	–	–	–	–	–	–	–	–	–	–
3.	✓		✓		✓		✓		✓	
4.	✓			✓	✓		✓		✓	
5.	✓			✓	✓			✓	✓	
6.	✓		✓		✓			✓	✓	
7.	✓		✓		✓		✓		✓	
8.	✓		✓		✓		✓		✓	
9.	✓		✓			✓	✓		✓	
10.	✓		✓		✓		✓		✓	
NUMBER OF OCCURRENCES	9	0	7	2	8	1	7	2	9	0

With speakers A & E pronunciation is quite consistent with the [ʊ], while a few cases of alternation are noticed with the others. There is no response at all in the second example, the preceding consonant being the trilled 'r'. Generally, the [ʊ] has forty (40) occurrences (80%), and the [ɨ] alternant just five, (10%). Compared with the situation in the standard, the contrast is considerable, the [ʊ] attracting 60% there and the alternant 38%.

7.6.3 Labial Preceding The /ʊ/ With 'Spreading' Following

1. Wannan ab- ya ba da mamaki

   [wannàŋʔàb-ja:ba:dàmà:ma:cì:]

   This thing has given surprise

2. Bab- inda za a samu

   [ba:b-ʔɪndàza:ʔàsa:mù:]

   Nowhere can it be obtained

3. Sun karɓ- ya ce

   [sʊŋkàɽʔb-jatʃtʃê:]

   They were welcome he said

4. Ta taɓ- ya ce

   [ta:tàʔb-jatʃtʃê:]

   She was crazy he said

5. Musulunci ya kaf- ya ce

   [mʊsʊlʊntʃì:ja:kàɸ-jatʃtʃê:]

   Islam is deep-rooted he said

6. Yusuf- ya dawo

   [ju:sʊɸ-ja:da:wo:ʔ]

   Y. is back

7. Mun gam- yau

   [mʊŋgam-jâʊʔ]

   We met today

8. Nam- ya fi

   [na:m-ja:Φiʔ]

   Ours is better

The vowel table:

	A		B[60]		C		D[60]		E[60]	
	ʊ	I	ʊ	I	ʊ	I	ʊ	I	ʊ	I
1.	√		√		√		√		√	
2.	√		√		√		√		√	
3.	√		√		√		√		√	
4.	√		√		√		√		√	
5.	√		–	–	√		–	–	–	–
6.	√		–	–	√		–	–	–	–
7.	√		√			√	√		√	
8.	√		√		√		√			√
NUMBER OF OCCURRENCES	8	0	6	0	7	1	6	0	5	1

[60] Speakers B, D & E have 'h' as stem-final consonant followed by the 'ʊ' in 5 and 6.

While speakers A, B & D have pronunciation consistently with the [ʊ], each of the other two has an alternation with [ɪ]. The occurrence of the [ʊ] represents 94.1% against 5.9% for the alternant. In the Bauchi and Daura dialects it can be recalled, we witnessed a similar case.

7.6.4 Labial/Coronal Preceding The /ɪ/ With 'Rounding' Following

1. Ya harb- Uba

   [ja:hàɽb-ʔʊ̀baʔ]

   He shot at Uba

2. An zaɓ- wani

   [ʔanzà:ʔb-waniʔ]

   Someone is elected/chosen

3. Ya taf- wurin

   [ja:tàɸ-wʊɽɪ̂ŋ]

   He went to the place

4. An dam- Uba

   [ʔandà:m-ʔʊ̀baʔ]

   Uba is disturbed

5. Anin- uku ne

[ʔàni:n-ʔʊkwʊ̀ne:]

It was 3/10 of a penny

6. Bar- Husaini ya dawo tukuna

[bàɾ-hʊ̀saɪnɪ̀jàda:wo:tʊ̀kwʊ̀naʔ]

Wait until Husaini comes back

7. Fakit- huɗu muke so

[ɸa:cɪt-hʊʔdʊmʊcè:sô:]

It is four packets that we want

8. Ya tats- guzuma

[ja:tà:s'-gwʊzʊma:]

He milked an old cow

9. Ladid- uwa ce ga Musa

[là:di:d-ʔʊwa:tʃè:gàmu:sa:]

L. is a mother to Musa

10. Bad- Uba zai komo

[bàʔd-ʔʊ̀bazâɪkwo:mo:ʔ]

It is next year that Uba will return

11. Sun kall- wasu daga ciki

[sʊŋkàll-wassʊdàgàtʃɪci:]

They had a look at some

The vowel table:

	A			B[61]			C			D			E[61]		
	ɪ	ɨ	ʊ	ɪ	ɨ	ʊ	ɪ	ɨ	ʊ	ɪ	ɨ	ʊ	ɪ	ɨ	ʊ
1.	✓			✓			✓			✓			✓		
2.	✓			✓			✓			✓			✓		
3.	✓			–			✓			✓			–		
4.	✓			✓			✓			✓			✓		
5.		✓			✓			✓			✓			✓	
6.		✓			✓			✓			✓			✓	
7.		✓			✓			✓			✓			✓	
8.		✓			✓			✓			✓			✓	
9.		✓				✓		✓			✓				✓
10.		✓			✓			✓			✓			✓	
11.		✓				✓			✓		✓				✓
NUMBER OF OCCURRENCES	4	7	0	3	4	3	4	6	1	4	7	0	3	5	2

Here, unlike in the previous dialects, from 1 - 4 (where labial precedes) all speakers maintain pronunciation with the [ɪ] without any alternation. In the other cases (where coronal precedes) however, speakers B, C & E have [ʊ] alternating with the surface [ɨ]. Speakers A & D do not have pronunciation with [ʊ] at all in this particular pattern. We witnessed in Daura one speaker not having this vowel, too.

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[61] Speakers B & E have 'h' as stem-final consonant followed by the 'ɪ' in example 3.

7.7 CONCLUSION

A typical characteristic of the Sokoto dialect regarding the alternation of [ɪ], [ɨ] & [ʊ] is the 'lack' of the tendency for [ɨ] to alternate with either vowel where a labial precedes. In the other dialects we witnessed such alternation occurring in varying degrees, with the highest in the standard and the lowest in Zaria. However, in the sort of alternation in more than one segment, even though thirty-three responses (not fifty) were recorded in this dialect, the figure still shows some similarities and contrast with the standard. All combinations other than VIII (ɪ-ʊ) occur here as in the standard; combinations II (ʊ-ɨ), V (ɨ-ɪ), VI (ɨ-ʊ) & VII (ɪ-ɪ) all have equal number of occurrences in the two dialects; but like Zaria, Bauchi and Katsina, this dialect differs considerably from the standard in combinations I (ʊ-ʊ), IV (ɨ-ɨ) & IX (ɪ-ɨ). Besides, the /ʊ/ in the {-ʊCa:} morpheme with a preceding coronal has predominant realization [ʊ] over [ɨ] in this dialect, a case similar to Bauchi and Katsina. And, finally for reduced u: in a closed syllable with a preceding coronal too, realization [ʊ] again, predominates over [ɨ], a case similar to Zaria and Bauchi. So, weighing all these together, it is evident that the Sokoto dialect is again very different from the standard.

CHAPTER EIGHT

8.0 ESTABLISHING THE UNDERLYING FORMS IN THE WORDS WHERE LABIAL AND/OR CORONAL PRECEDE(S)

In section 2.3 (Chapter Two), it can be recalled, we made an attempt to find the motivation for the alternation and non-alternation of [ɪ], [ɨ] & [ʊ] in the standard dialect. That attempt also enabled us to establish the underlying forms in some of the words termed 'simple'. For instance, the non-alternation of the [ʊ] in ʔalkawʊrà:, 'promises' we said is attributed to two factors, viz. the feature value [+ back] of the preceding consonant on the one hand, coupled with the feature value [+ round] in the morphologically-fixed back vowel -ʊ- which goes right through the whole syllable. And, we extended this to cover similar cases with reduced u: in a closed syllable, such as bʊ̀hʊ̂ŋ, 'the sack', and with the simple word, such as wʊta:, 'fire'. Consequently we concluded that the [ʊ] in the latter case comes from an underlying /ʊ/.

Similarly, regarding the alternation of [ɪ] & [ʊ] in the simple word where the preceding consonant is [+ phon. pal.], such as ʃɪɽwà:/ ʃʊɽwà:, 'kite' we saw that the process is motivated by the feature value [+ round] in the following segment, and we thus concluded the underlying vowel to be /ɪ/; or where the preceding consonant is [+ phon. dor.], such as wʊjà:/wɪjà:, 'neck', we realized that the underlying vowel is /ʊ/ and that the realization [ɪ] is brought about by the following [j].

Now, having examined the ɪ/ɨ/ʊ alternation in the other dialects, we will turn in this chapter to seek the underlying form in the simple word where a labial and/or coronal precede(s). However, the two categories of simple word (the one where the alternation affects just one segment, and the one where it goes beyond) will be treated separately to safeguard against confusion:

8.1 Those Involving Alternation In One Segment

b-ci:, meaning 'ceremony'

We noticed in our investigation that this word has three possible pronunciations with [ɪ], [ɨ] or [ʊ]. In other words, all the three vowels are found to alternate. Now, which among them could possibly be the underlying form? The vowel [ɨ] is certainly not, as it never has such phonological status in the language (see 2.4). If we posit [ɪ] on the other hand, there wouldn't seem to be a plausible explanation to offer for the realization [ʊ]. One might argue that the feature value [+ lab.] in the preceding consonant is the motivation. But against this, the said consonant is [- round], an important phonetic feature that should not be overlooked. In fact, it is more realistic to consider [ʊ] where one can be able to attribute the realization [ɪ] to the final 'i:'. Again, this is possibly supported by the non-alternating plural form, bukwu:kwuwà:. So that /ʊ/ is the underlying form for this word.

b-gwù:, 'beating'

In all these dialects the pronunciation of this word remains consistent with [ʊ]. Neither [ɨ] nor [ɪ] alternates with it. Generally speaking, such consistent pronunciation is maintained by the feature value [+ round] in the following segment. This is buttressed

up by the alternative pronunciation sometimes noticed in the verbal form bùʄe:/bɨ̀ʄe:/bɪ̀ʄe:, or bùʄɪɰ/bɨ̀ʄɪɰ/bɪ̀ʄɪɰ, as in ja:bùʄe:ʃì?/ ja:bɨ̀ʄe:ʃì?/ja:bɪ̀ʄe:ʃì?, 'he beat him', or ja:bùʄɪʔaʊdù?/ja:bɨ̀ʄɪʔaʊdù?/ ja:bɪ̀ʄɪʔaʊdù?, 'he beat Audu', where the following segment has an 'e' or 'i'; or the one noticed in the -a ending corresponding form, bùga:/ bɨ̀ga:, ja:bùga:/ja:bɨ̀ga:, 'he beat'. Therefore, it goes without saying the [ʊ] in bugwù: comes from an underlying /ʊ/.

ta:ʔb-kaʔ ,'manage'

Among the two alternating vowels [ʊ] & [ɨ] in the pronunciation of this word, /ʊ/ by implication is the underlying form.

Φ-taʔ, 'go out'

The alternation revolves round [ɪ] & [ɨ] here, in which case the underlying form is /ɪ/.

m-lcì:, 'power'

Like the first word, the pronunciation of this involves any of the three vowels. However, the word itself comes from the Arabic 'mulk', with an 'i:' added to the final consonant. So that /ʊ/ is the underlying form. The realization [ɪ] is obviously motivated by the said added 'i:'.

n-s'è:, 'sink down'

The three vowels also are found to alternate here. However, the fact that the word ends in an 'e:' means that one can associate the realization [ɪ] with it. The underlying form is therefore /ʊ/.

r-bù:tu:, 'writing'

The pronunciation of this word involves either of the vowels [ʊ] & [ɨ]. Hence, /ʊ/ is the underlying form.

ɽ-ga:, 'Fulani cattle encampment'

The situation here is precisely the same as the one immediately above.

t-ɽmi:, 'mortar'

The pronunciation of this word with any of the three vowels is manifested. We can easily posit /ʊ/ to be the underlying form, and the realization [ɪ] to be motivated by the 'i:' in the following segment.

s-ɸe:tò:, 'police inspector'

The alternating vowels for this word are [ʊ] & [ɨ]. The word by implication comes from the English 'inspector' [inspɛktə], where the initial in- is dropped, a vowel inserted between the consonant cluster sp-, the half-open [ɛ] lengthened to a half-close [e:] and the following [k] dropped. However, by comparison with other examples, /ʊ/ should be posited as the underlying form. This may be accounted for by the 'dark' quality of the English cluster sp-, rather than 'clear', as in 'speak' [spi:k], together with the half-open quality of the following vowel [ɛ]. When the latter is lengthened in the Hausa pronunciation, it has to take a half-close quality [e:], but the preceding inserted vowel retains a 'dark' or rounded quality [ʊ], or centralized [ɨ], rather than a clear front quality [ɪ]. This is supported by the pronunciation of the nick-name sɨ̀ɸi:cì ŋ/sɪ̀ɸi:cì ŋ, of the famous Hausa poet 'Mudi', where [ʊ] does not occur.

z-ɸà:, 'perspiration'

For this word [ʊ] & [ɨ] are seen to alternate, suggesting /ʊ/ to be the underlying form.

s'-ns'u:, 'bird'

(Same as above)

ʔaʊd-ga:, 'cotton'

(Same as above)

ʔd-mi:, 'warmth'

Pronounceable with any of the three vowels, the underlying form for this word is /ʊ/, the realization [ɪ] being motivated by the final 'i:' (see 2.3.2.4).

ʔda:l-bi:, 'student [+ male]'

Like ɸɪ̀taʔ/ɸɪ̀taʔ already discussed, the alternating vowels for this word are [ɪ] & [i̇]. The word, however, is from the Arabic 'ṭa:lib', where 'ʔd' is substituted for the initial consonant and an 'i:' added to the final one. Therefore it is evident that /ɪ/ is the underlying form.

8.2 Those Involving Alternation In More Than One Segment

b-nd-gà:, 'gun'

Combinations IV (i-i) & IX (ɪ-i) are found to alternate for the pronunciation of this word. The word, however, comes from the Arabic 'bunduqijja:' through Kanuri[62]. In the latter language it is pronounced as 'bindiɟe:', where the final 'e:' is replaced by 'a:' in Hausa. It follows that /ɪ/ is the underlying vowel in both segments.

ɸ-t-là:, 'light'

Like the first word, there are combinations IV & IX in alternation for this. Similarly, the word is from the Arabic 'fati:la:', 'wick', where the 'f' is replaced by 'ɸ', the following 'a' by 'ɪ', the 'i:' following 't' shortened and centralized, and the meaning extended. So that /a/ and /i:/ are respectively the underlying forms for the vowels in the first and second segments. As for the realization [ɪ] for the one in the first segment, this could well be attributed to the following [ɪ] notwithstanding the centralization.

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[62] I must acknowledge Mohammed El-Shazli, a colleague working on Arabic loan words in Hausa, for providing this information over the telephone, 21/7/82.

ɸ-ɸɸ-cè:, 'wing'

Six possible combinations are found to alternate here: I (ʊ-ʊ), III (ʊ-ɪ), IV (i̱-i̱), V (i̱-ɪ), VII (ɪ-ɪ) & IX (ɪ-i̱). It is reasonable to posit the underlying form for the vowel in both segments as /ʊ/, and the realization [ɪ] as being motivated by the 'e:' in the final segment. It should, however, be noticed that while the feature [+ spread] in this latter vowel affects the realization in the first segment in combination IX (ɪ-i̱), it has no apparent impact on the realization in the second segment. In other words, the said 'spreading' here jumps across the second segment to affect the first one.

d-dd-ɟè:, 'heel'

Combinations I (ʊ-ʊ), II (ʊ-i̱) & IV (i̱-i̱) are seen to alternate. Like the word immediately above, it is plausible to regard /ʊ/ as the underlying form for the vowel in both segments. Nevertheless, pronunciation of any of the segments with an [ɪ] is not manifested in the responses of the selected speakers in spite of the 'e:' in the final segment, a case otherwise possible with others, including the writer.

t-mb-ʔdi:, 'regurgitation'

Like the word for 'wing', up to six combinations count as the alternants for this word. They are: I (ʊ-ʊ), II (ʊ-i̱), IV (i̱-i̱),

V (ɨ–ɪ), VI (ɨ–ʊ) & VII (ɪ–ɪ). Again, the underlying form for the vowel in both segments is /ʊ/, while the realization [ɪ] is brought about by the 'i:' in the final segment.

s-m-ntì:, 'cement'

The alternating vowel combinations for this centre round IV (ɨ–ɨ), V (ɨ–ɪ) & VI (ɨ–ʊ). However, the word comes from the English 'cement' [siment], with substitution of 'ɪ' for the 'ɛ' and addition of an 'i:' to the final consonant. So that we can say /i/ and /ɛ/ are respectively the underlying forms for the vowels in the first and second segments. The realization [ʊ] nevertheless, doesn't seem to be accountable for, in so far as the preceding 'm' in the second segment is [- round]. Alternatively, we can disregard these vowels, posit /ʊ/ for both segments and associate the realization [ɪ] with the final 'i:'.

l-ll-ʔbi:, 'veiling'

For this word, combinations I (ʊ–ʊ), II (ʊ–ɨ), IV (ɨ–ɨ) & VI (ɨ–ʊ) are found to alternate. The underlying form for the vowel in both segments can well be regarded as /ʊ/. Realization [ɪ] is not reflected in the pronunciation of those selected speakers, which, on account of the final 'i:' is otherwise possible with others, including the writer.

s-ʈ-ci:, 'inlaw [+ male]'

The alternant combinations here are: I (ʊ-ʊ), II (ʊ-i̇), IV (i̇-i̇) & V (i̇-ɪ). The underlying form for the vowel in both segments is undoubtedly /ʊ/, and pronunciation with [ɪ] motivated by the final 'i:'.

r-b-ʔi:, 'one quarter'

The alternants for this are combinations I (ʊ-ʊ), II (ʊ-i̇), III (ʊ-ɪ), IV (i̇-i̇) & VII (ɪ-ɪ). However, as described in 2.3.2.1, the word comes from the Arabic 'rubʕ', with vowel epenthesis 'ʊ' (a copy of the one in the preceding segment), substitution of 'ʔ' for the 'ʕ' and addition of an 'i:' finally. So the underlying form for the vowel in both segments is /ʊ/, while pronunciation with [ɪ] is motivated by the final 'i:'.

kwʊ̀d-dd-Φi:, 'pond'

Combinations I (ʊ-ʊ), II (ʊ-i̇), III (ʊ→ɪ) & IV (i̇-i̇) are seen to play the role as alternants for the pronunciation of this. Like all other similar cases, /ʊ/ is the underlying form for the vowel in both segments, while the realization [ɪ] is associated with the final 'i:'.

8.3 CONCLUSION

As the feature value [+ round] in the following segment in the word for 'kite', ʃɪɽwà:/ʃʊɽwà:, or the feature value [+ spread] in similar segment in the word for 'neck', wʊjà:/wɪjà: helps us to posit /ɪ/ and /ʊ/ respectively as the underlying forms in those words (cf. 2.3.2.1), such feature value equally helps us to establish the underlying form where the preceding consonant is a labial or coronal. This is especially where the alternation involves all the three vowels [ɪ], [i̟] & [ʊ]. In a situation of this sort, namely where either consonant precedes and the vowel in turn is followed by a segment within which there is an 'i' or 'e', i.e. [+ spread], one can eliminate [i̟] straight away, relate the realization [ɪ] to the said spreading and posit /ʊ/ as the underlying form.

CHAPTER NINE

9.0 EXAMINING THE -ɪj- & -ʊw- SEQUENCES

We devoted Chapter Eight to establishing the underlying forms in the words where labial and/or coronal precede(s). In the word for 'ceremony', for instance, where the pronunciation of the first segment is possible with any of the three vowels, bʊ̀ci:/bɨ̀ci:/bɪ̀ci:, we posited /ʊ/ as the underlying form and associated the realization [ɪ] with the feature value [+ spread] in the following segment; /ɪ/ in the case of the alternating [ɪ] & [ɨ] in ɸɪ̀ta?/ɸɨ̀ta?, 'go out'; or /ʊ/ in both segments of the word for 'wing', ɸʊɸɸʊcɛ̀: where, again, we related the realization [ɪ] to the following [+ spread]; /ɪ/ in both segments of bɪndiga̰:, 'gun', the word which we said came from the Kanuri 'bindiɟe:' and, which in turn, originated from the Arabic 'bunduqijja:'. In this chapter we will examine the -ɪj- and -ʊw- sequences relative to the alternation under consideration.

Generally speaking, each of the two sequences -ɪj- & -ʊw- can be classified into morphological and phonological sub-categories. We will now focus on each sequence separately along these lines and see how the vowel behaves:

9.1 The -ɪj- Sequence

9.1.1 Morphological

An example of the -ɪj- morphological sequence is the one in the -ɪja: suffix marking femininity in various categories of words, such as noun and adjective, including 'participial' and 'ideophonic':

Feminine	Masculine	Meaning
be:bɪja:	be:be:	deaf-mute
ʃar?be:?bìja:	ʃar?be:?bè:	tall/long and huge
dàΦaΦΦɪja:	dàΦaΦΦe:	cooked one
ʈà:mammɪja:	ʈà:mamme:	emaciated one
sànannɪja:	sànanne:	famous
bàtu:rìja:	bàtu:rè:	European
bà?aʈìja:	bà?aʈè:	one who comes from extreme north
kàwa:lìja:	kàwa:lì:	pimp
mò:s'as's'ɪja:	mò:s'as's'e:	mad
ʃu:?dìja:	ʃu:?dì:	blue one
bàhauʃìja:	bàhauʃè:	a Hausa
?àmìntatʧʧɪja:	?àmìntatʧʧe:	faithful
matʃi:dʒìja:	matʃì:dʒi:	snake
bànihìja:[63]	bànihè:	a Nupe

[63] Pronunciation in West Hausa as against bànɨΦìja:/bànɨΦè: in East Hausa.

Feminine	Masculine	Meaning
wà:jajjɪja:	wà:jajje:	wise
wàŋkaccɪja:	wàŋkacce:	washed one
gwò:gaɟɟɪja:	gwò:gaɟɟe:	ironed one
ti:c'e:c'ìja:	ti:c'e:c'è:	huge

However, note that there are no examples with the coronals t-, d-, s- and z-; or the glottal stop ?-; or the dorsals w-, kw-, kw'- and gw- preceding. With regard to the coronals what blocks the chances is obviously the palatalization rule. For, they all tend to be palatalized under such circumstances. Take the following feminine forms of the 'participial adjective' where the reduplicated consonants [+ pal.] come from underlying /t, d, s & z/ respectively:

màtatʧʧɪja:	dead one
gwòdaʤʤɪja:	fugitive
bù:saʃʃɪja:	dry one
bàzaʤʤɪja:	spread one

For the glottal stop ?, this as stem-final consonant of a word hardly goes with the suffix -ɪja:. On the contrary, it is more associated with the -o:Ci: plural suffix (where the C is identical with the stem-final consonant), as in sana:?- + -o:?i: > sana:?o:?i:, 'occupations', sa?- + -o:?i: > sa?o:?i:, 'contemporary age mates'.

Turning to the dorsals, phonemic /w/ as stem-final consonant followed by a suffix -i: is normally affected by the palatalization rule, as in the following plural form:

ba:ji:	<	ba:wà:	slaves
tʃìjà:ji:	<	tʃìja:wà:	grasses
ʔbàɽà:ji:	<	ʔbàɽa:wò:	thieves

So naturally it would be hard to find the morphological sequence -w + -ɪja: in Hausa. For the other three dorsals kw, kw' and gw also, as allophones conditioned by a following back vowel the question of them going with -ɪja: does not arise. In other words, an underlying /ɪ/ never follows allophonic dorsal.

Now, the fundamental question is, can [ɨ] and/or [ʊ] alternate with the [ɪ] in this particular -ɪj- sequence? Broadly speaking the answer is 'no'. In none of the eighteen examples cited for instance, would one ever hear pronunciation with [ɨ] or [ʊ] in place of the [ɪ]. This is in fact attributed to two factors: a) the morphology has firmly fixed the sequence as ɪ + j (+ a:) and, b) both [ɪ] and [j] have a close phonetic affinity, the articulation of each involving the 'front of the tongue' and the 'hard palate'. So taking these together there is a 'mutual expectancy' of [ɪ] with [j], and this would not permit [ɨ] or [ʊ] to alternate with the [ɪ].

9.1.2 Phonological

The -ɪj- sequence in this sub-category can be seen in a variety of nouns, including loans, as follows:

bɪ̀jar	five
la:ɸɪjà: (Ar.)	health
mɪjà:	soup
hàni:nɪjà:	neighing
rɪ̀ja? (Ar.)	acting only to create impression
dà:ɣɪja:	laughter
lɪ̀ja:ɸà: (Ar.)	entertainment
tɪ̀ja:tà: (Eng.)	medical operation[64]
sɪ̀ja:sà: (Ar.)	politics
zɪ̀ja:rà: (Ar.)	visit
dɪjjà: (Ar.)	blood money
s'ɨns'ɪja:	broom
hà?dɪjà:	swallow
kà:ʃɪjà: (Eng.)	cashier
ʧɪ̀ja:wà:	grass
ɣi:ʤɪ̀ja:	well
?ɪjà:ka:	limit
na:hɪjà: (Ar.)	district
cɪja:ʃi:	kind of small ant
ʄɪjà:	beer
c'ɪ̀ja:sɪ̀: (Ar.)	analogy

[64] From 'theatre', where the operation is performed.

Note that there are no examples with preceding ?b-, j-, w-, kw-, kw'- or gw-. Example with preceding ?b- and j- under this particular category of sequence actually proves hard to lay hands on. Similarly, for the other four, as already explained in 9.1.1 one would never expect to find an underlying /ɪ/ following any of them.

Turning to the question whether [ɨ] and/or [ʊ] can alternate with the [ɪ] in this sequence, what applies to morphological sequences also applies here. That is, the alternation is impossible in view of the said close affinity between [ɪ] and [j].

9.2 The -ʊw- Sequence

9.2.1 Morphological

The morphologically-fixed -ʊw- sequence can be identified in three categories of words: a) the weak verbal noun of the -u ending intransitive verb or, say, the sixth grade of verb, such as ʃà:ɽʊwa:, 'sweepability', dà:mʊwa:, 'distress', the verb being ʃà:ɽu and dà:mu respectively; b) the feminine noun or adjective marked by the suffix -ʊwa:, such as bà:kw'ʊwa:, 'guest', do:gwʊwa:, 'tall', the masculine form being bà:kw'o: and do:gwo: respectively; c) the noun plural marked by the suffix -ʊwa: with reduplication or sometimes gemination of the stem-final consonant, such as zaɽu:ɽʊwà:, 'threads', zannʊwà:, 'wrappers', the corresponding singular being zàɽe: and zanè: respectively. Now, take example of these with the set of individual preceding consonants:

ɽàbʊwa:	parting with
ga:ʔbʊ̀wa:	fool [+ fem.]
k'aɸa:ɸʊwà:	legs
sà:mʊwa:	availability
bàkanʊ̀wa:	Kano Hausa woman
gàrʊwa:	something that can be rolled
ʔdaɽu:ɽʊwà:	hundreds
ʔbàllʊwa:	breakability
batu:tʊwà:	conversations
ɽàsʊwa:	death

ʔazu:zʊwà:	classrooms
s'ʊns'ʊwa:	bird [+ fem.]
sà:dʊwa:	getting in touch
kàʔdʊwa:	shock
s'o:hʊwa:	old one [+ fem.]
ɾà:jʊwa:	life
sà:wʊwa:	something that can be worn
hakwu:kwʊwà:	grasses
ʃà:kw'ʊwa:	intimacy
gwʊɾgwʊ̀wa:	cripple [+ fem.]

Nevertheless, there are no examples with preceding ʔ-, ʃ-, ʧ-, ʤ-, c-, c'- and ɟ-. The glottal stop [ʔ] as stem-final consonant as we said before, is more associated with the plural suffix -o:Ci:. It can hardly be found with this particular -ʊw- sequence. For the other six too, the fact that they are all [+ pal.] one would not possibly expect an underlying /ʊ/ to follow them.

Now, coming to the question of alternation, how possible is [ɨ] and/or [ɪ] to alternate with the [ʊ] in this sequence? Generally speaking, from the twenty examples cited above, alternation applies in only one case, namely the word for 'life' where the preceding consonant is j-. Even here the process is restricted to [ɪ] alone. In other words, [ɪ] to the exclusion of [ɨ] alternates with the [ʊ] under these circumstances. Pronunciation as ɾà:jɪwa: is hence possible. In fact, this is attributed to the feature value [+ pal.] inherent in the preceding consonant.

9.2.2 Phonological

This sub-category of -ʊw- sequence can be exemplified with different sorts of nouns, including certain loans and verbs:

bʊ̀wa:jà?	be impossible
?aΦʊwà: (Ar.)	pardoning
mʊ̀wa:Φak'à: (Ar.)	luck
ga:nʊwa:	city wall
ka:rʊ̀wà?	prostitute
ɾʊwa:	water
kà:lu:lʊwà:	groin
tʊwo:	the food 'tuwo'
kà:sʊwa:	market
k'azʊwa:	scabies
s'ʊwà:	the hiss of a snake
?adʊwà:	desert-date
?dʊwà:wu:	buttocks
?ʊwa:	mother
hʊwà:tʃe:	have power from God to possess or control
gà:ɾkwʊwa:	shield
ʃakw'ʊwà:	hiccough
?ʊ̀ŋgwʊwa:	ward in a town

Here, example with preceding ?b-, j- and w- proves hard to find. Besides, from the point of view of alternation, neither [ɪ] nor [i̵]

alternates with the [ʊ] in this sequence. In none of the eighteen examples provided would this possibly occur. As [ɪ] and [j] have mutual expectancy in phonetic context, so have [ʊ] and [w].

9.3 CONCLUSION

In view of the close phonetic affinity between [ɪ] and [j] one would not possibly expect [i̯] and/or [ʊ] to alternate with the [ɪ] regardless of the sequence being a morphological or phonological one. This also applies to that affinity between [ʊ] and [w]. Nevertheless, an exception here is manifested in a morphological sequence with preceding j-, where [ɪ] is found to alternate with the [ʊ] on account of the palatality inherent in the consonant (cf. ɽà:jʊwa:/ɽà:jɪwa:). Generally, in a phonetic context there is mutual expectancy of [ɪ] with [j] and [ʊ] with [w].

CHAPTER TEN

CONCLUDING REMARKS

We set out in this study basically to: a) try to identify the particular phonetic contexts within which the alternation of [ɪ], [i̱] & [ʊ] takes place in an utterance and where it does not, b) try, where possible, to establish the underlying forms from amongst the three vowels, and c) to identify, where possible, the underlying causes for the alternation or non-alternation.

With regard to a), identification of the phonetic contexts for the alternation and non-alternation, the first thing to state is that since Hausa does not permit vowel-initial utterances, this alternation occurs only medially in a word or sentence, in one or more successive segments. It contrasts with other vowel alternations that are restricted to word alone, occurring in both medial and final positions (cf. 2.0).

Similarly, one should consider the phonetic nature of the preceding consonant on the one hand, and the feature value of the following segment on the other. For the first part, of the twenty-seven 'phonemic' and 'allophonic' consonants which may be followed by a close vowel, back or front, [ʔ] and [h] tend not to permit any alternation, e.g. ʔʊ̀ba:, 'father', ʔɪdò:, 'eye', hʊ̀kwu:mà:, 'authority', hɪ̀ka:jà:, 'narrative' (see 2.1.1.1.5), bʊhʊnà:, 'sacks' (2.1.2.5), nawʔɪ̀ŋ, 'the type', ru:hɪ̀ŋ, 'the soul' (2.1.3.1.5), bʊ̀hʊ̂ŋ, 'the sack', pronunciation is quite consistent with the particular vowel therein without alternation. For the second part, a particular feature value

of the following segment in some cases, helps in promoting the alternation or non-alternation. In ʃɪɽwà:, 'kite', or the sentence mʊŋgàmʊjâʊʔ, 'we met today', for instance, the feature [+ round] in the former or [+ spread] in the latter contributes to the alternation of [ʊ] with the [ɪ], ʃʊɽwà: or, [ɪ] with the [ʊ], mʊŋgàmɪjâʊʔ. In ʃɪdàʔ, 'six' or wʊta:, 'fire' on the other hand, there is no alternation at all as there are no such feature values following. However, in ɸìtaʔ, 'go out' or zʊɸà:, 'perspiration' for example, where [ɨ] alternates in both cases, ɸɨ̀taʔ and zɨɸà:, such alternation is in no way associated with the feature value [- round, -spread] in so far as the alternant occurs also where a rounded or spread segment follows, s'ʊns'u:/s'ɨns'u:, 'bird', bʊ̀ci:/bɨ̀ci:/bì ci:, 'ceremony'.

In general, four different forms of alternations are associated with [ɪ], [ɨ] & [ʊ], occurring under various circumstances. These are, alternation of the whole three, ɪ/ɨ/ʊ as in bʊ̀ci:/bɨ̀ci:/bì ci: above, ʔdʊ̀mi:/ʔdɨ̀mi:/ʔdì mi:, 'warmth'; that of ɪ/ɨ as in ɸìtaʔ/ɸɨ̀taʔ, 'go out'; that of ʊ/ɨ as in ta:ʔbʊ̀ka/ta:ʔbɨ̀ka, 'manage', kàrà:tʊ̂ŋ/kàrà:tɨ̂ŋ, 'the reading'; and that of ɪ/ʊ as in ʧì kwo:wà:/ʧʊ̀kwo:wà:, 'overcrowd'. While alternation with [ɨ] is limited to the situation where the preceding consonant is a labial or coronal, with [ɪ] and [ʊ] on the other hand, it goes beyond.

From the point of view of b), establishing the underlying forms from amongst the three vowels, [ɨ] is eliminated from consideration since it is never found to play a phonemic role in the language (see 2.4). Thus, the choice is between [ɪ] and [ʊ]. In fact, the underlying form is sometimes /ɪ/ and sometimes /ʊ/ depending on the utterance. For instance, where the whole three are found to alternate, the

following segment most likely has the feature value [+ spread] with which the realization [ɪ] is associable and /ʊ/ consequently realizable as the underlying form, as in bʊ̀ci:/bì̬ci:/bɪ̀ci:, 'ceremony', dʊddʊɟɛ̀:/ diddi̬ɟɛ̀:/diddɪɟɛ̀:, 'heel'. Similarly, where [ɪ] and [ʊ] alternate to the exclusion of [i̬], the underlying form can be /ɪ/ as in cɪs'ɔ̀:/ cʊs'ɔ̀:, 'plaiting of hair', or /ʊ/ as in ʔàkwʊjà:/ʔàkwɪjà:, 'goat'. In the plural morpheme {-ʊCa:} /ʊ/ is the underlying form, /ɪ/ in the case of reduced i:, and /ʊ/ of reduced u: within a closed syllable. In case of short -i accompanied by glottal prosody in pause which, when used utterance-medially before a pause the glottal element disappears, /ɪ/ is considered to be the underlying form. This also applies to short -u under the same circumstances where /ʊ/ is regarded as the underlying form.

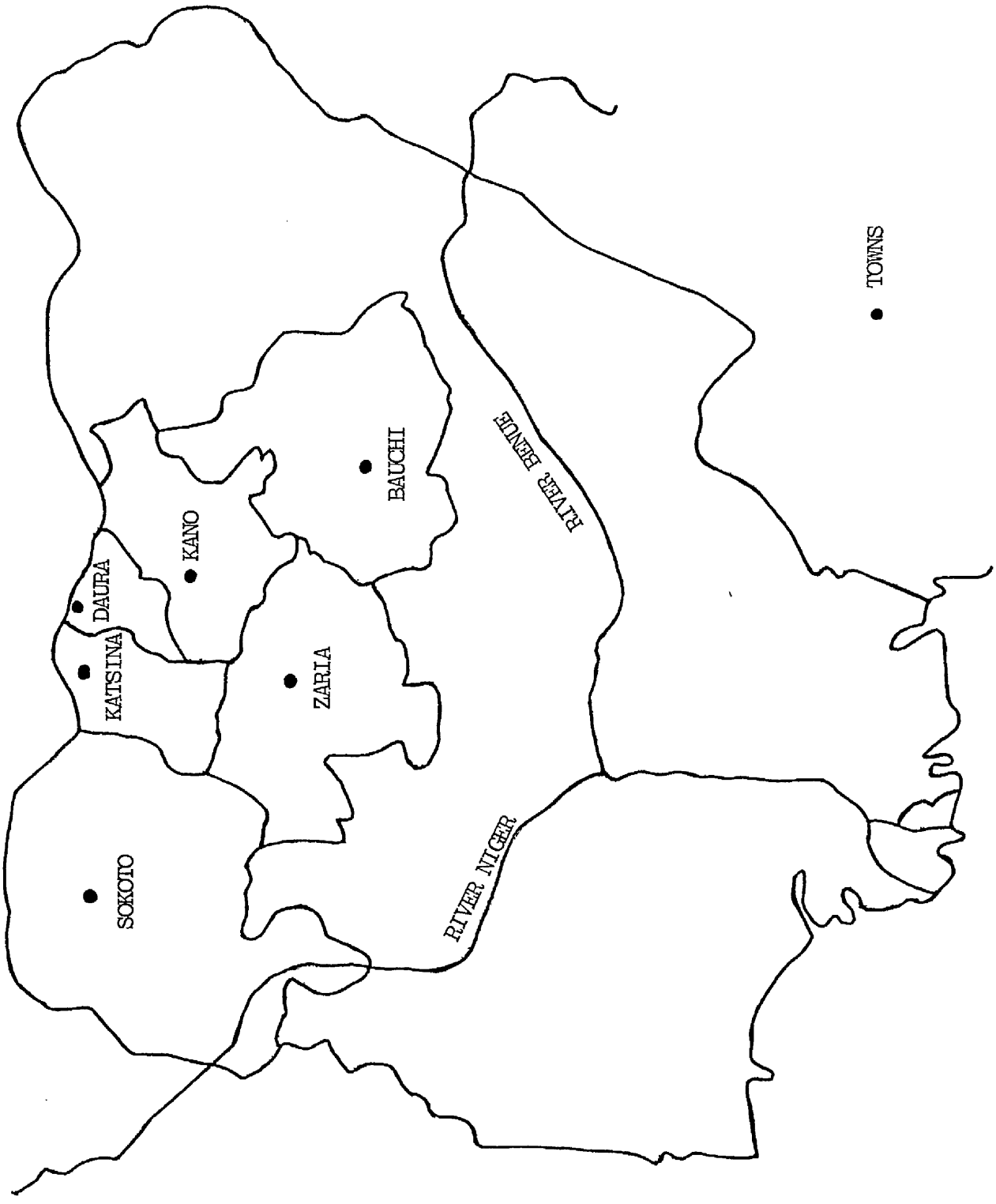
Turning to c), identification of the underlying causes for the alternation or non-alternation, this is again largely a question of the phonetic quality of the preceding consonant and that of the following segment. If we take the non-alternation first, we saw that with preceding glottals ʔ- and h-, which are [+ back], alternation is not possible, as in ʔɪdɔ̀:, 'eye', bʊhʊnà:, 'sacks', whose pronunciation is always with [ɪ] and [ʊ] respectively. Here, since when a back consonant precedes a front vowel which [ɪ] is, it tends to be palatalized, and when it is a back vowel which [ʊ] is, it gets labialized (see 2.3.1) the palatal element in the affected segment in ʔɪdɔ̀: or the labial element in the affected segment in bʊhʊnà: shared by both consonant and vowel, could prevent alternation. In ʔɪdɔ̀: despite the 'rounding' in the following segment alternation is not manifested at all.

For the alternation on the other hand, while the distribution of [ɨ] is predictable, it does not seem possible to account for why it occurs at all. But the alternations involving the other two are explicable by the phonetic environment: [ɪ] alternates with [ʊ] at times on account of the feature value of the following segment, and at times on account of that of the preceding consonant itself, as in wʊjà:/wɪjà:, 'neck', and ʔɪnʤɪnà:/ʔɪnʤɪnà:, 'engines', respectively. Conversely, [ʊ] alternates with [ɪ] in a similar way, as in cɪs'ò:/ cʊs'ò:, 'plaiting of hair', and ɽà:jʊwa:/ɽà:jɪwa:, 'life'.

Besides, we generally examined these forms of alternations in the standard as well as in the other five dialects, Zaria, Bauchi, Daura, Katsina and Sokoto. The standard dialect, we noticed, tends to have the vowel [ɨ] more than the others, most especially where the preceding consonant is a labial. In this latter situation while Zaria, Bauchi, Daura and Katsina show some little tendency, Sokoto on the other hand does not have the tendency at all. Similarly, in the sort of alternation in more than one segment with labial and/or coronal preceding, combination IV (ɨ-ɨ) is found to be the commonest in all dialects other than Sokoto. However, with all the six dialects including Sokoto, combination VIII (ɪ-ʊ) never occurs. In addition, reduced i: in a closed syllable preceded by a coronal has the realization [ɨ] in all the dialects. So that [ɨ] under these circumstances is an allophone of /ɪ/. This also applies to the situation where the same kind of consonant precedes and the vowel (which is [ɨ] exclusively) regardless of the kind of syllable, is followed by a segment which has neither 'rounding' nor 'spreading', e.g. nɨk'à, 'grind', ɽɨnà, 'dye' (see 1.2.3). Elsewhere it is a variant.

On the whole, since [ɨ] is not a phoneme in Hausa, the present system in the standard orthography whereby no symbol for this vowel is represented should, to my mind, continue to operate. Although the particular phonetic contexts for its occurrence seem to be predictable, and although the orthography itself is based on the standard dialect where such occurrence is most frequent, still there is a danger in introducing an additional symbol. The confusion which is feared by the 'Working Party On Hausa Orthography' in this connection, would automatically result. It will take ages to familiarize the people with the new symbol. Furthermore, this would mean introducing a similar symbol as well into the 'Ajami', i.e. the other form of writing in Arabic script. Hence, such introduction would have practical difficulties and would be theoretically undesirable.

APPENDIX A



MAP OF NIGERIA SHOWING THE SIX PRINCIPAL HAUSA DIALECT AREAS

APPENDIX B

SYMBOLS & ABBREVIATIONS

>	gives...
<	derived from...
~	alternates with...
$	syllable boundary
*	utterance whose pronunciation is not so
[ ]	phonetic bracket
[+ ···] / [- ···]	feature value bracket
/ /	phonemic slashes
{ }	morphophonemic braces
Ar.	Arabic
Eng.	English
Yor.	Yoruba

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