

Aspects of Phonological Variations in Kana

Samuel Fubara Joshua

Abstract

Variation is a concept that is associated with dialects of a language. Such variations are discussed from phonological and morphological perspectives. This study is an overview of aspects of phonological variations in four dialects of Kana- Babbe, Beeri, Opuoko (in Nyō-kana) and the Kē-kana variety (the literary dialect of Kana). Kana is one of the Ogonoid languages in the Delta-Cross of the Benue-Congo language family spoken by well over 400,000 people. The work set out to identify the types of phonological variations in the dialects under study, explain the factors conditioning the variation if any and also identify the phonological processes observable from the variations. Data for the work was elicited from selected words from the Ibadan 400 word list and tested against the intuitive knowledge of speakers of the dialects. The isolated study vowel and consonant variations with their sub-types and established that all the variations in the dialects studied are unconditioned and that the variations also lean along the geographical divisions of Khana.

KEYWORDS: dialects, language, sound change, variation vowels, consonant.

Introduction

Virtually all aspects of language are prone to changes over time. Some of these changes are more obvious and systematic than others.

As languages are used over time, variation and change are very noticeable in the phonology of a language (Murray 2011).

In phonology, variation is either conditioned or unconditioned. When variation occurs among phonetically similar segments, and such difference can be accounted for with recourse to the phonetic context or environment in which the sound segments are found, we say such variation is conditioned. When sound segments occur in conditioned variation or are mutually exclusive what comes to mind is that such sounds are allophones of the same phoneme in complementary distribution. A very notable example is the plural morpheme in English in which

-s occurs after voiceless consonants that are not sibilants

-z occurs after voiced consonants that are not sibilants

-iz occurs after sibilant sounds

Thus, -s, -z and -iz are allophones of /z/ in complementary distribution.

Unconditioned variation (sound change) which is the thrust of this work as we shall later see is a concept within the confines of historical linguistics. In unconditioned sound changes, there are no restrictions on the environment where the change can occur.

As speakers of a particular language grow and expand their territories, they come in contact with other languages and some other factors may also cause the speakers of the different dialects of that language to use the language in some slightly different ways. Thus, as time elapses, these dialects increasingly diverge and may later become distinct but related languages.

Kana, an Ogonoid language in the Delta-Cross of the Benue-Congo family, is mainly spoken by over 400,000 people in Khana and Tai local government areas of Rivers State according to the 2006 National Population Census. The major dialects of Kana (the language is referred to as Kana, while the people or local government area is known as Khana) are Babbe, Bangha, Bo'ue (Beeri), Kaani, Kě-kana, Nyõ-kana (Opuoko), Tai and Yeghe.

The 2006 national population census stated that Khana local government alone has an area of over 560 square kilometers. This implies that the various dialects of Kana are scattered over a large spread of land mass with many communities many of which speak these varieties.

It is also interesting to state that Khana people are politically and geographically split into three districts or provinces- Babbe, Kē-kana, and Nyō-kana.

This work examines some phonological variations in four selected dialects of Kana- Babbe, Beeri, Opuoko (in Nyō-kana) and the Kē-kana variety (the literary dialect of Kana).

Consonants and Vowels in Kana

We shall briefly outline the consonants, vowels and tone levels in Kana.

	bilabial	Labio-dental	alveolar	Alveo-palatal	palatal	velar	Labial velar	Labialized velar	glottal
Plosive	p b		t d			k g	kp gb	k ^w g ^w	ʔ
Affricate				ɖʒ					
Fricative	B	f	s z			ɣ			(h)
approximant			r		J		w		
Lateral			l						
Nasals	m		n		ɲ	ŋ		ŋ ^w	

Fig 1: phonetic consonant chart of Kana

There are seven oral and five nasal vowels in Kana. These segments are all phonemic. Below is a chart for the oral and nasal vowels.

i ī	u ũ
e	o
ε ē	ɔ ɔ̃
a ā	

Fig 2: Phonemic vowels chart

Kana has three tone levels

- a. High [´]
- b. Mid []
- c. Low [`]

The mid-tone is usually unmarked because it is the predominant tone in Kana.

Aim and Objectives of the Study

This study aims to investigate aspects of phonological variations in four dialects of Kana. However, the specific objectives are to:

- i. find out the types of variations that occur in the dialects of Kana.
- ii. determine the consistency or otherwise of the variation patterning
- iii. explain the factors conditioning the variation if any
- iv. identify the phonological process(es) observable from the variations
- v. suggest the likely underlying form of the sounds where applicable.

Methodology/ Sources of Data

Selected words from the Ibadan 400 wordlist administered to language consultants who are also competent native speakers from the four dialects of Babbe, Beer, Opuoko (in Nyō-kana) and Kē-kana

was the primary data for this work. The researcher then tested the elicited data against the intuitive knowledge of other speakers of the dialects.

Review of Literature

This section reviews concepts related to the work and works done by other authors.

Language and Dialect

Defining the terms 'language' and 'dialect' presents problems for linguists. One criterion used to define a language is mutual intelligibility. According to this, people who can understand each other speak the same language, whereas those who do not speak different languages. But the distinction between a language and a dialect is not purely a linguistic one as certain sociolinguistic, cultural and political factors are also important (Stevens 1972). Little wonder Jenewari (p.c) insists that language should be described as a phenomenon that depends on the speakers' conceptualization.

Language Variation

Language change or variation in language can be along diachronic (or historical) and synchronic (at a particular period) dimensions (Syal & Jindal 2013).

Synchronic variations are further subdivided into varieties due to language contact, varieties of dialect and varieties of register.

Dialect

According to Trask (1997:68), a dialect is 'a particular variety of a language spoken by the people in some geographical area (a regional dialect) or in a particular social group (a social dialect or sociolect).'

For Yul-Ifode (2001), dialects are language varieties which initially and basically represent divergent geographical origins. She further explained that a dialect of a particular language could generally be understood by speakers of the dialects of the same language, stressing that dialects of same language, geographical or social, are normally mutually intelligible; speakers of the different dialects of a language can each speak their dialect and be understood

by speakers of the other varieties. This is what dialectal variation entails.

Sound Change

Sound changes mostly begin as obscure alterations in the sound pattern of a language in particular phonetic environments (Murray 2011).

Various types of sound change occur in languages. Some of them are conditioned by phonetic contexts, while others are context-free or unconditioned.

Conditioned and Unconditioned Sound Change

Conditioned sound changes are context-sensitive. Thus, we have the conditioned segment and the conditioning segment or context. Such change occurs only in particular phonetic environments. Certain factors condition such changes. The plural morpheme example given at the outset of this work aptly captures the conditioned sound change.

Unconditioned sound changes are changes that are context-free. According to Yul-Ifode (2001), such changes only affect the **phonetic value** of the sound in a uniform manner irrespective of the environment in which it occurs. Unconditional changes are often spontaneous. She further stated that unconditioned sound changes for vowels most times involve the position of the tongue categorized as lip-rounding, lowering, fronting, backing or centralization. For consonants, she averred that unconditioned sound changes occur in their manner and point of articulation particularly in the areas of weakening and strengthening which represents a movement along the stricture scale. To corroborate this fact, she demonstrated unconditional changes in the development of Proto-Yoruboid-Itsekiri-Igala sounds identifying cases of both consonant weakening and strengthening.

Empirical Review

A lot has been done in Kana. The concentration has been more on the syntax of the language and the few works on the phonology of Kana. More so, works on the phonology of Kana are often centred on a particular dialect of the language and not a dialectal

survey of the language.

Ikoro (1996) examined the phonological aspect of the grammar of Kana with particular emphasis on his dialect Babbe. He identified 29 phonetic and 23 phonemic consonants in Kana. Seven (7) oral and five (5) nasal vowels were also identified in his work. He further described and discussed other features such as vocalic contrasts, liaison, glide formation, nasality, nasal harmony, nasal spreading, nasal stability, etc., as some aspects of the phonology of Kana.

For the suprasegmentals, some tonal phenomena such as mid-tone dissimilation, tone spreading, floating tone grounding, tonal metathesis, metatony among others were well accounted for in the language.

Ikoro's treatment of the phonology of Kana was restricted to the Babbe dialect thus, quite silent on dialectal variations. Work closer to this paper is that of Alerechi (2007) although this was carried out in a different language - Ikwere.

Alerechi (2007) surveyed twenty-four dialects of Ikwere with particular interest on how these dialects vary phonologically. She identified such phonological features as vowels, consonants, and tones as factors responsible for differentiating the dialects of Ikwere. The variations she observed had a huge leaning on geographical divisions. Thus, based on vowel variation, the dialects of Ikwere were divided into North and South. Within this north-south dichotomy, there were also variations based on alternants between close vowels [i-] and [u-], labial plosives and labial fricatives [p] and [f] and [b] and [v] respectively.

There were still other groupings such as east-west, west-central and east-central dichotomies.

Worthy to mention was the phonological processes that accounted for such variation in the language. She identified the following processes for vowel variations: vowel merging, vowel lowering, raising of back vowels, nasalization, and denasalization. For the consonants, the following processes were highlighted: loss of suction of labial implosives, affrication, spirantization of voiceless alveolar plosive [t], weakening, voicing, labialization of voiced velar plosive and also secondary split.

Finally, the researcher observed that the northern dialects of Ikwere

are conservative while the southern dialects are innovative and thus recommended that the innovative form be considered in the development of a standard dialect for the language.

Variations in Kana

The following variations were observed in the dialects of Kana.

Vowel Variation

Three types of vowel variation were identified in the dialects of Kana. They are word-initial vowel variation, word-medial vowel variation, and vowel-consonant variation.

Word-initial Vowel Variation

[I], [e] and [a] are the vowels that alternate word-initially in the four dialects of Kana. Where Kẽ-kana uses [e], Opuoko uses [i], while Beeri and Babbe use [a]. This is the predominant type of variation in the dialects of Kana. The variation patterning is consistent and unconditional. The following examples in Table 1, illustrate this type of variation.

Table 1: Word-initial vowel variation

	Kẽ-kana	Beeri	Opuoko	Babbe	Gloss
1	[élág]	[álág]	[ílág]	[álág]	‘jaw’
2	[ékpá-bu]	[ákpá-bu]	[íkpá-bu]	[ákpá-bu]	‘belly’
3	[ékpó]	[ákpó]	[íkpó]	[ákpó]	‘bone’
4	[ésu:]	[ásu:]	[ísu:]	[ásu:]	‘periwinkle’
5	[kà:-ébùe]	[kàrà-àbùe]	[kàrà-ìbùe]	[kà-àbùe]	‘plantain’
6	[èbùe]	[àbùe-bàni]	[ìbùe]	[àbùe]	‘banana’
	[èbie]	[àbie]	[ìbie]	[àbie]	‘grass’
8	[èpájă]	[ápájă]	[ípájă]	[ápájă]	‘leaf’
9	[ekpoté]	[akpoté]	[ikpoté]	[akpoté]	‘stick’

10	[èkpā]	[àkpā]	[ikpā]	[àkpā]	‘arrow’
11	[ézi]	[ázi]	[izi]	[ázi]	‘thread’
12	[ègù]	[àgù]	[igù]	[àgù]	‘mountain’
13	[ésā:]	[ásā:]	[isā:]	[ásā:]	‘sand’
14	[ésá]	[ásá]	[isá]	[ásá]	‘lie(s)’
15	[édám-pé:]	[ádám-pé:]	[ídám-pé:]	[ádám-pé:]	‘he-goat’
16	[édó:-kɔ:]	[ádó:-kɔ:]	[ídó:-kɔ:]	[ádó:-kɔ:]	‘cock’
17	[éwě]	[áwě]	[iwě]	[áwě]	‘mosquito’

The data above shows that [I], [e] and [a] vary unconditionally. It can then be concluded that the word-initial vowel variation in Kana dialects is interpreted as front vowel variation based on the height of the tongue.

The likely original form is [I]. This form was chosen because regarding vowel strength, it is the strongest (see Ladefoged 2003). So [i] is then weakened to [e] and then to [a]. Weakening whether for consonants or vowels is the most prominent process that accounts for variation in the dialects of Kana as other examples of variation will corroborate. This means that the tongue height is dialectally lowered, i.e., from [i] to [e] and then [a].

Word-medial Vowel Variation

This type of vowel variation is also unconditional. They are not very common in the language. The three examples identified were the only ones that were found in the data collected.

Table 2: Word-medial-Vowel Variation

	Kē-kana	Beeri	Opuoko	Babbe	Gloss
1	[dum]	[dum]	[d m]	[dum]	‘back’
2	[zima]	[zima]	[zúma]	[zima]	‘knife’
3	[zib]	[zib]	[zùb]	[zib]	‘beat person’

The data above shows that the vowel [ɔ] and [u] in Opuoko alternate with [u] and [i] respectively in the other three dialects. Example (1) shows a case of vowel fronting and the likely original form is the back rounded vowel [u] following our weakening process and supported by the principle of distribution. Examples (2 & 3) show variation in the case of vowel rounding and the likely original form is the unrounded vowel [ɪ]. This choice was made based on the principle of distribution as both [i] and [u] are strong vowels regarding the scale of vowel strength.

Consonant–Vowel Variation

This type of variation is also not a common type in the dialects of Kana. Only two different examples show this kind of variation from the data elicited.

Table 3: consonant-vowel variation

	Kē-kana	Beeri	Opuoko	Babbe	Gloss
1	[ede]	[nde]	[ge:re:]	[ide]	‘cocoyam’
2	[m:n]	[m:n]	[ɔ:n :]	[ɔ:n :]	‘night’

In table 3 example 2 above, we find the vowel [ɔ] alternating with the syllabic nasal [m]. Again, this type of variation is unconditional. For example 1, apart from Opuoko form, the forms of the other three dialects are identical as an alternation of [e], [n] and [i] is found. These three forms vary unconditionally.

It is worthy to attempt an explanation for the Opuoko form for (1) apart from simply concluding that it is a case of lexical variation. A closer look at the data will help us proffer some possible explanation for the form- [ge:re:] and posit that the variant is not a total deviation from what we find in the other dialects. What we have is a combination of some phonological processes at work even though the variation is unconditional. We must also note that all the forms for the four dialects have two syllables if we parse them.

The following is the proffered explanation:

- a. insertion of a word-initial consonant- [g] to the syllable of the structure of the word

- b. the medial vowel [e] is a form identical with the initial vowel in Kẽ-kana,
- c. the only difference is that it has been lengthened in Opuoko;
- d. The [r] sound that alternates with [d] in the other dialects is phonetically similar to [d]. This is because they are both alveolar sounds regarding their place of articulation. So in this light, the voiced alveolar plosive-[d] in the three other dialects spirantizes to the alveolar liquid-[r] in Opuoko.
- e. The final vowel [e] is the same in all the dialects. The only difference is that it becomes lengthened in Opuoko.

Consonant Variation

[s] in Kẽ-kana alternates with [t] in the three other dialects only in the word 'periwinkle' from the data gathered. [j] in Kẽ-kana and Opuoko varies with [s] in the Beeri and Babbe.

Table 4: consonant variation

	Kẽ-kana	Beeri	Opuoko	Babbe	Gloss
1	[ésu:]	[átu:]	[ítu:]	[átu:]	'periwinkle'
2	[éju:-na:]	[ásu:-na:]	[íju:-na:]	[ásu:-na:]	'bullet'

The instances of variation shown in table four are also not common. From the data, these are the only examples to illustrate this type of consonant variation. The patterning also shows that the alternation is in medial position. [s] ~ [t] exemplifies a case of consonant weakening (spirantization) when we choose [t] as the original form. [s] and [t] are phonetically similar sounds as they share the same place of articulation- alveolar and they are grouped with a cover term - obstruents.

Since spirantization is the prominent phonological process accounting for variation in the dialects of Kana, this paper avers that in example (2) above, the likely original form is [s] and it then spirantizes to [j] in Kẽ-kana and Opuoko. [s] and [j] can also be said to be phonetically similar sounds regarding their cavity features. Thus, they are both [+coronal]. The processes observable from such dialectal variation do not in any way suggest that the variation is conditioned.

Lexical Variation

This type of variation is very prominent in the dialects of Kana. Table 5 below shows a handful of instances of lexical variation

Table 5: Lexical variation

	Kě-kana	Beeri	Opuoko	Babbe	Gloss
1	[níě]	[níě]	[po:]	[níě]	'heart'
2	[bu]	[bu]	[id]	[bu]	'stomach'
3	[kuí:]	[l g]	[ku-ika]	[l g]	'fat'
4	[tiki η]	[àkòrò]	[ìkòrò]	[kòrò]	'okra'
5	[ŋ ^{wi} :-tigi]	[túúm]	[túúm]	[túúm]	'pestle'
6	[kpó]	[kui]	[kpó]	[kui]	'basket (general)'
7	[jìrà-de:]	[jìrà-de:]	[ki:ke]	[jìrà-de:]	'dawn'
8	[ŋ ^{wi} :-tikiri]	[isāi]	[isā]	[isā]	'small'

The data above shows that Beeri and Babbe account for very minute significant lexical variation. Kě-kana and Opuoko show significant differences as the data indicates.

Conclusion

This paper identified vowel, consonant and lexical variation in the dialects of Kana under study. Vowel variation was split into three-initial, medial and consonant-vowel variation.

From the discussion thus far, some consistency in the patterning of initial and medial vowel variation is observed. Consistency in patterning in this light means that the sound changes only affect the phonetic value of the alternants (the initial vowels change) in a uniform manner irrespective of the surrounding sounds in the dialects of Kana.

Our analysis affords us the basis to assert that all forms of variation

discussed in this paper are **unconditioned-** environment/ phonetic context is inconsequential. However, the dialectal variations observable from the language show the prominence of consonant or vowel weakening. Other minor processes like rounding, lowering and fronting were also identified.

A closer look at the data in its entirety shows that Opuoko varies more when compared with the other dialects. It has more of the variations. This stems from the fact that Opuoko is in another district of Kana. As mentioned earlier, Kana is politically and geographically split into three: Kē-kana, Babbe, and Nyō-kana. Kē-kana and Beeri and are varieties spoken in the Kē-kana district, Babbe is spoken in the Babbe district and Babbe is a district very close to Kē-kana. However, Opuoko is spoken in Nyō-kana; a district farther away from Kē-kana and Babbe but closer to Wiisoe (Worife) a small village where Kana is also spoken in Oruk Anam local government area of Akwa-Ibom State.

References

- Alerechi, R.I.C. (2007). *A Dialect survey of Ikwere: Phonological perspectives*. Unpublished Ph.D thesis. University of Port Harcourt.
- Ikoru, S. M. (1996). *The Kana language*. Leiden: Research School CNWS Publications.
- Ladefoged, P.(2003). *Phonetic data analysis: An introduction to field work and instrumental techniques*. Malden: Blackwell Publishing.
- Murray, R.W. (2011). Historical linguistics: The study of language change. In: O'Grady, W., Archibald, J. & Katamba, F. (eds.) *Contemporary linguistics*. Essex: Pearson Educational Limited.
- Stevens, P. (1972). *British and American English*. London: Collier Macmillan Publishers.

- Syal, P. & Jindal, D.V. (2013). *An Introduction to linguistics: Language, grammar and semantics*. (2nd edition). Delhi: PHI Learning Private Limited.
- Trask, R.L. (1997). *A student's dictionary of language and linguistics*. London: Arnold.
- Yul-Ifode, S. (2001). *An introduction to language in history and society*. Port Harcourt: University of Port Harcourt Press.