

Harrison Adeníyì

Lagos State University, Lagos, Nigeria

Tone and Nominalization in Edo

Abstract. Tone and nominalization interact in Edo, a minority language spoken by about 2½ million people in the mid-western part of Nigeria. For this study data were collected and analyzed using the theory of autosegmental morphology, a geometric approach to the analysis of language that states that the phonetic representation be composed of a set several simultaneous sequences of these segments, to study this interaction. The research shows three patterns of nominalization in Edo based on the tones they bear. The first involves the creation of an all-low tone patterns from diverse input; the second involves tone polarization also from diverse inputs; the third shows there is no tonal changes after collocation. The study reveals that Edo is distinctive because of the unique roles that tones play in the nominal constructions. The study therefore contradicts earlier claims by Omozuwa (1997) that only vowel ò can occur as a nominal prefix in verb phrases and that the tonal outputs of the nominalization are always low. The study also demonstrates that after collocating nominalizing prefixes with certain verb phrases, their tonal outputs can either be LLL (L) or LHL (H). That apart from the low tone prefix /ò / other vowels can also be used to nominalize the verb phrase.

Key words: Edo, autosegmental, nominalization, phonotonemic, nominal prefix, tone

1.0 Introduction

Nominalization in Edo is characterized by complex morphotonemic alternation. These tonal reflexes are syntax driven. The tonal patterns noticeable in the nominalization in the language are triploid/threefold. The first involves the creation of an all-low tone pattern from diverse input; the second involves tone polarization also from diverse inputs; in the third case, there are no tonal changes after collocation. Syntactic reasons account for these diverse outputs. First, the prefixal nominalization that causes an all-low tone involves non-gerundive nominals, while those that create polarization produce gerundive nominals. It must, however, be noted that both polarization and the creation of an all-low tone pattern take place with nominalization after vowel elision. After collocation, what we have is either an all-low tone pattern or a LHL (H) tonal pattern.

Although earlier studies on Edo and related languages, (Elugbe 1973, Amayo 1976 and Omozuwa (1997) for Edo; Elimelech (1976) for Etsako, Donwa (1982) for Isoko; Egbokhare (1990) for Emai; Urua (1990) for Ibibio and Aziza (1997) for Urhobo), have all discussed the roles of tones in Noun-phrase construction in various dimensions, available records show that this is the first of such attempt to examine the roles of tones in nominalization. This work controverts earlier claims by Omozuwa (1997) and Aziza (1997) concerning the peculiarity of the tonal patterns of the non-gerundives in Edo and Urhobo respectively.

2.0 Theoretical Framework

We employ Autosegmental theory in this work. The version is fully discussed in the works of Goldsmith (1976a;b; 1979; 1990). Clements (1977), Clements and Ford (1979), Clements and Goldsmith (1984), Halle and Vergnaud (1982), Pulleyblank (1986), Hulst and Smith (1982),

McCarthy (1979; 1981), McCarthy and Prince (1990). It is also expounded in Akinlabí (1984), Sagey (1986), Egbokhare (1990), Urua (1990), Aziza (1997) and Adéniyí (2003).

What is presented in this work is, however an abridged version of autosegmental phonology, which draws abundantly from the works mentioned above. We adopt a non-linear approach within the autosegmental paradigm.

The theory of autosegmental phonology came as a result of the inadequacies of the earlier theory propounded by Chomsky and Halle (1968) in their book, *The Sound Patterns of English (SPE)*. They are of the view that phonetic representation is linear. They describe utterances as ‘bundles of unordered features arranged in an ordered sequences’. However, it was discovered, ‘Ever since there have been segments in phonology, there have been phenomena that evaded segmental classification, and so there have been suprasegmental’ (Goldsmith 1976b: 05). It is this fundamental shortcoming of *SPE* that gave birth to autosegmental phonology. This theory attempts to provide adequate understanding of phonetic representation. The theory was proposed by Goldsmith (1976a), who asserts,

Autosegmental phonology constitutes a particular claim, then, about the geometry of phonetic representations; it suggests that the phonetic representation be composed of a set of several simultaneous sequences of these segments, with certain elementary constraints on how the various levels of sequences can be interrelated.

Goldsmith contradicts Chomsky and Halle (1968) with the following proposals.

- i. Phonetic representation is multilinear or multitiered (Goldsmith 1976a):
- ii. Tiers are linked;
- iii. Feature specifications have an internal hierarchical structure (Striade 1982; Clements 1985; Sagey 1986).
- iv. Some tiers may be morphemes (McCarthy 1979; 1981; Sagey 1986)

The standard generative phonology model was unable to account for some phonological phenomena in natural languages. A fundamental problem of *SPE* is that it sees segments as atomic elements which are linearly ordered with segments, some of which bear suprasegmental properties, for example, tones, arranged in a neat sequence. But the relationship between the segmental and suprasegmental levels is not given serious consideration in this theory.

There are two levels of representation given by *SPE*, the underlying and the surface. There is a rule that converts the underlying representation to surface representation. These rules are capable of adding or deleting features. But the kernel of autosegmental phonology is that the underlying and surface forms consist of parallel strings of segments arranged in two or more tiers, which Goldsmith (1976a) further affirms to be,

parallel sequences of segments, none of which ‘depend’ or ‘ride on’ the others. Each is independent in its own right, hence the name autosegmental level.

Despite the fact that the tiers are independent, they still need to be connected to each other for one to obtain a well-formed phonological representation. This is done with the aid of association conventions, which we shall discuss later.

Apart from the inadequacies of the standard generative phonology discussed above, it cannot account for other phenomena in tonology, which autosegmental phonology is able to fully resolve. These are representation of contour tones, tonal preservation, melody levels, the issue of floating tones, and the bi-directional spreading in language.

3.0 Nominalization and Tone in Edo

Nominalization is a process of deriving nominals from a combination of other lexical categories or phrasal entities. In Edo, a noun is formed from a combination of a prefix and a verb phrase or from the combination of a prefix and other lexical categories. Nominalizations can be separated

in two categories, gerundive and non-gerundive. Gerundive nominals are formed by the affixation of a discontinuous morpheme $\grave{u}...mw\grave{e}$ to a verb stem. In most cases, the tonal pattern on them is LHL (H), while gerundive nominals are formed by the affixation of prefixes to verbs or verb phrases. The tones on them are peculiar; they all have low tone i.e. LLL (L). In Edo, nominalization as a word formation process is very productive. Nouns are formed from other lexical categories, including nouns themselves. These nouns are formed through the concatenation of other lexical items. The structure of Edo nominalisation that we will examine in this work can be represented as:

1. Noun prefix + vb + (vb) + Nn + Nn → nominalization.

The above representation says that nouns can be formed with the concatenation of a nominalising prefix (which can be any of the following six oral vowels \grave{i} ; \grave{u} ; \grave{o} ; \grave{e} ; \grave{a}); a verb; optionally another verb; a noun; and, optionally, another noun. Let us consider these examples:

2. i) \grave{o} # $d\grave{o}l\grave{o}$ # $\grave{e}vb\grave{o}$ → $\grave{o}d\grave{o}l\grave{e}vb\grave{o}$
 Nom.prefix 'to reconcile' 'people/kind' 'social conformist'
- ii) \acute{i} # $gh\acute{e}$ # $\grave{e}gb\acute{e}$ → $\acute{i}gh\grave{e}gb\grave{e}$
 Nom.prefix 'to support' 'body' 'self support; security'
- iii) \grave{o} # $s\acute{o}$ # $\acute{a}r\acute{a}b\grave{a}$ → $\grave{o}s\grave{o}\acute{a}r\acute{a}b\grave{a}$
 Nom.prefix 'to tap' 'rubber' 'rubber tapper'

Omozuwa (1997) and Aziza (1997) noted the peculiarity of the tonal pattern of the non-gerundive nominals in Edo and Urhobo respectively. Omozuwa (1997:116) said that “all instances of CV # VCV (CV) collocation or indeed all verb phrases in Edo could be nominalized by means of a low tone prefix \grave{o} . Thus, irrespective of the tones on the verb phrase, the nominalised forms are realized with a low melody on successive syllable”. Some of his examples include the following:

3. i \grave{o} # $l\grave{e}$ # $\acute{i}z\grave{e}$ → $\grave{o}liz\grave{e}$
 'nom. prefix' 'cook' 'rice' 'boiling rice'

- ii. ò # tò # òxá → òtòxà
 nom. prefix 'tell' 'story' 'a story teller'
- iii. ò # kpá # ẹkpè tí → òkpàẹkpè tí
 nom. prefix 'make' 'box' 'maker of boxes'

Omozuwa (1997:116) in his statement above made two assertions. First, that it is only the vowel ọ that can occur as a nominal prefix. Second, that the tonal outputs of the nominalisation are always low tones. From the available data at our disposal, we will not agree with this. This is because after collocating nominalising prefixes with certain verb phrases, their tonal outputs are not always low. Hence, the sub-categories of gerundive and non-gerundive. Also, it is not only the low tone prefix ọ that can be used to nominalise the verb phrase. In fact, six of the oral vowels in the language can be used. Let us consider these examples:

4. i) ò # fùá → òfùá
 Nom.prefix 'to perish' 'destruction; annihilation'
- ii) ò # khìé → òkhìé
 Nom.prefix 'to mourn' 'mourner'
- iii) è # tàlò → ètálò
 Nom.prefix 'to talk' 'the act of talking'
- iv) è # yámà → 'iyámà
 Nom.prefix 'to put a mark' 'an identification mark'

The above examples from our data controvert Omozuwa (1997) claims that tonal outputs of the nominalization are always low tone. It is also seen that other vowels in the language can also participate in the nominalization process.

Aziza (1997:217) also noted the influence of a nominalizing prefix on a verb phrase in Urhobo (an Edoid language) when she said that most nominals, which signal the agentive, are derived from verb + noun sequences and bear only low tones. The process of nominalization includes alternating the original tones borne by the nouns so that all the vowels in the nominals are realized on low tones. Some of her examples include:

5. i) jòrè + íghó → ọ̀jòrìghò
 ‘hold’ ‘money’ ‘treasurer’
- ii) tà + òtá → òtòtà
 ‘say’ ‘word’ ‘spokesman’
- iii) rẹ̀rẹ̀ + ó!tá → ọ̀rẹ̀ròtà
 ‘watch’ ‘ground’ ‘security guard’

Aziza recognizes only two nominalizing prefixes, /ò/ and /ẹ̀/, which we assume are driven by vowel harmony.

4.0 Types of Verb Stems in Edo Nominalization

However, we shall look at the various types of stems that are utilised in this nominalization process. Based on their morphological behaviours, Edo verb stems can be categorized into five main groups. These are simple verb stems; splitting verb stems; verb + noun stems; verb + verb + noun stems; and verb + noun + noun stems. Any of these stems can be collocated with the vowel prefixes to give us the various nominals that we have in the language. We will give samples of these stems with their various vowel prefixes.

4.1 Simple Verb Stems

A simple verb stem may be either monosyllabic or bisyllabic. It is monosyllabic when it is CV and bisyllabic if it is either CVV or CVCV. Examples of monosyllabic simple verb stems are stated below:

6. i) è # kpá → èkpá
 nom.prefix ‘vomit’ ‘vomiting’
- ii) ì # vẹ̀ → ìvẹ̀
 nom.prefix ‘price’ ‘a price’
- iii) ù # wú → ùwú
 nom.prefix ‘die’ ‘death’

Examples of bisyllabic simple verb stem with CVV pattern are stated below:

- iv) à # rùé → àrùé
 nom.prefix ‘circumcise’ ‘circumcision’

Despite the prevalence of noun prefixes in Edo and in many Edoid languages, it might be misleading to conclude that all initial vowels of nouns in Edo are prefixes. Welmers (1973:184); Elimelech (1978); Donwa (1982) and Elugbe (1989) have all observed that these initial vowels could be vestigial prefixes of a decadent noun class system. As Omoruyi (1990:108) rightly said that the phonological forms of verbs and nouns overlap in several instances. However, they are semantically unrelated; therefore, the latter cannot be said to derive from the former. Some examples below attest to the above claim:

- | | | | | | |
|-----|------|------|---------------|-------|---------|
| 18. | i) | khuò | ‘be slippery’ | òkhuò | ‘woman’ |
| | ii) | hù | ‘grow fast’ | òhù | ‘anger’ |
| | iii) | gà | ‘serve’ | ágá | ‘chair’ |
| | iv) | mòmò | ‘borrow’ | ómòmò | ‘baby’ |

It must be noted that sequences of two identical vowels are usually reduced to one in the derivation of verbal nouns, e.g.,

- | | | | | | |
|-----|------|-------|-----------|--------|------------|
| 19. | i) | kùú | ‘to play’ | ikù | ‘play’ |
| | ii) | yánán | ‘to vow’ | èyánán | ‘vow’ |
| | iii) | ghòó | ‘hawk’ | Ìghó | ‘hawking’ |
| | iv) | tèńẹn | ‘relate’ | tèńẹn | ‘relation’ |

Also, in few cases in the language, vowel alternations occur in the verb stems when verbal nouns are derived from them, e.g.,

- | | | | | | |
|-----|------|------|-------------|------|-------------|
| 20. | i) | vbiè | ‘to sleep’ | òvbé | ‘sleep (n)’ |
| | ii) | diè | ‘be senior’ | òdiọ | ‘senior’ |
| | iii) | bò | ‘divine’ | òbó | ‘diviner’ |
| | iv) | viè | ‘to cry’ | èvé | ‘cry (n)’ |

6.0 Types of Nominalisation in Edo

Basically, we identify three types of nominalization in Edo. We identify them from the point of view of different tonal patterns that they bear. These are gerundive nominalization with tone polarization, the non-gerundive nominalization with an all-low tone pattern, and those that bear no tonal changes.

6.1 Nominalization with All Low Tone Patterns

In this section, we will examine the structures with low tone patterns. As mentioned above, six oral vowels that take part in this process are: ì; ù; ọ; ò; è, à. The following examples illustrate each of the vowel prefixes in Edo combining with stems involving diverse tonal patterns

6.1.1 Structures with prefix ì

21. i) ì # wó # akón → iwàkòn
 nom prefix 'strong' 'tooth' (strong of teeth) 'avarice; greed'
- ii) ì # bọ # òwá → ibọwà
 nom prefix 'build' 'house' house-building'
- iii) ì # hèn hèn # ùnú → ihèn hèn nù
 nom prefix 'level up' 'mouth' (leveling of mouth) 'a consensus'
- iv) ì # ré # òkò # òdẹ → ìryòkòdẹ
 nom prefix 'eat' 'a parcel' 'way' (eating a parcel on the way) 'misappropriation of funds'

6.1.2 Structures with ù

22. i) ù # gbé # ádiyẹ → ùgbàdiyẹ
 nom prefix 'kill' 'chicken' (that which kills chicken) 'a disease fatal to chickens'
- ii) ù # gbé # ùdyánnn → ùgbìdyan
 nom prefix 'kill' 'tsetsefly' 'fly-whisk'
- iii) ù # mú # ọxọxọ → ùmwọxọxọ
 nom prefix 'catch' 'chicken' 'tiger cat'
- iv) ù # ghèé # èdé → ùghèdẹ
 nom prefix 'look at' 'day' 'sun-glasses'

6.1.3 Compound structures with prefix ò

23.	i)	ò #	gbé #	èhèn →	ògbèhèn
		nom. prefix	'pick'	'fish'	'fisherman'
	ii)	ò #	gbén #	èbé →	ògbèbè
		nom. prefix	'write'	'book'	'clerk'
	iii)	ò #	má #	àxé →	òmàxè
		nom. prefix	'mould'	'clay pot'	'potter'
	iv)	ò #	gwî #	ézòn →	ògwèzòn
		nom. prefix	'quarrel'	'case'	'litigant' (i.e., who argues a case)

6.1.4 Structures with prefix ò

24.	i)	ò #	ghàghá #	→	òghàghà
		nom prefix	'brag; show off'		'brag; boast'; 'swaggering'
	ii)	ò #	èghèé	→	òghè
		nom prefix	'fornicate'		'prostitution; adultery'
	iii)	ò #	bàlò	→	òbàlò
		nom prefix	'be painful'		'pain; misery'
	iv.	ò #	sonòn	→	òsonòn
		nom prefix	'irritate'		'irritating sight'

6.2 Nominalization with LHL (H) Patterns

Under this section we will examine nominals with alternating tones i.e. LHL (H). In this case, the tones are polarized. These are also sub-divided into two. The first type is called gerundive nominals (cf. Elugbe 1989; Egbokhare 1990) while the second type of nominals is those that state actions or abstract nouns. In the case of the latter, four vowels (i, ò, à, ò) take part in these types of constructions, while in the former; it is only vowel ù that takes part in the constructions.

The following examples illustrate each of the vowel prefixes in Edo combining with stems involving diverse tonal patterns:

6.2.1 Structures with prefix ì

25.	i)	ì #	yàyi	→	ìyáyì
		nom prefix	'believe'		'belief'

ii)	ì	#	tótàá	→	ìtótà
	nom prefix		‘sit’		‘sitting’
iii)	ì	#	zòzó	→	ìzózò
	nom prefix		‘wander’		‘wandering’
iv)	ì	#	yámà	→	ìyámà
	nom prefix		‘put a mark’		‘an identification mark’

6.2.2 Structure with prefix ù

26. i)	ù	#	dè	#	fí	#	àgbòn	→	ùdéfýàgbòn
	nom prefix		‘fall’		‘to throw’		‘world’		(one who drops into the world) an orphan, one without relations’
ii)	ù	#	hìá	#	mwèn			→	ùhámwèn
	nom prefix		‘struggle’		‘being’				‘struggling’ (with problems or difficulties)
iii)	ù	#	bón	#	mwèn			→	ùbónmwèn
	nom prefix		‘predict’		‘being’				‘the act of predicting through the oracle’
iv.)	ù	#	ghán		mwèn			→	ùghamwèn
	nom prefix		‘behave haughtily’		‘being’				‘arrogance; haughtiness’

6.2.3 Structures with prefix ò

27. i)	ò	#	fùrré	→	òfùrè
	nom prefix		‘be calm’		(coolness; calmness) ‘tranquility’
ii)	ò	#	xòò	→	òxòò
	nom prefix		‘evil’		‘malicious act’; ‘evil deed’

6.2.4 Structures with prefix à

28. i)	à	#	hòó	#	bẹ̀kún	→	àhóbẹ̀kún
	nom prefix		‘look’		‘unsuccessful’		‘state of being lost’
ii)	à	#	gbé	#	ètè	→	àgbètè
	nom prefix		‘bring about’		‘sore, ulcer’		‘afflicted with bodily ulcers’
iii)	à	#	fyàngbé	→	àfyàngbè		
	nom prefix		‘bless’		‘blessing’		
iv)	à	#	gbé	#	ákpán	→	àgbákpán
	nom prefix		‘cause’		‘bald head’		‘a bald person’

6.3 Nominalization without any Tonal Change

In this case, we discover that there is neither tonal polarization nor the creation of all-low tones.

What we notice is that all the elements that constitute the nominal still retain the tones they bear after collocation. Some of these examples are:

- | | | | | | | |
|-----|------|------------|---|--------------|---|-------------------------------|
| 29. | i) | ò | # | fùá | → | òfùá |
| | | nom prefix | | ‘perish’ | | ‘destruction’; ‘annihilation’ |
| | ii) | ò | # | xìé | → | òxìé |
| | | nom prefix | | ‘mourn’ | | ‘mourner’ |
| | iii) | ò | # | xòò | → | òxòò |
| | | nom prefix | | ‘evil’ | | ‘evil’ |
| | iv. | ò | # | ròó | → | òròó |
| | | nom prefix | | ‘transgress’ | | ‘sin’; ‘wrongdoing’ |

In the analyses of these three different tonal patterns above, first, we discover that, when the nominalizing prefixes (which can be any of the six oral vowels) are collocated with the verb and noun stems, all the tones on the verb stems are realized as low tones. Thus, irrespective of the tones on the verb and noun stems before collocation, the outputs are always low tones. The first analysis, which one may be tempted to use is the low tone spreading rule arising from the low tone of the nominalizing prefixes. In this case, we will postulate low spreading to potentially indefinite H tones in the construction. But as good as this analysis is overtly, we may not be able to justify it because such a rule will be too powerful if we consider the fact that we have never had a situation where L tones have such a dominating behaviour in Edo or in any other Edoid languages. Another option is to postulate a rule that will replace all the high tones with low tones after vowel elision. If this is done, the outcome of all the collocations will then create all low nominals.

Finally, we can postulate a grammatical floating low tone, which has been referred to as ‘tomorph’ by Elugbe (1985). This low tone will then link to other tones in the construction after

vowel elision. The output will also give us all low tone nominals. We must say that any of the last two analyses can be adopted to give us the fact of the tone in Edo. We will, however, adopt the latter option by postulating a grammatical floating low tone, because of its simplicity. Semantically, it is seen that most of the examples in this category (non-gerunds) signal agentive nouns. We must remark that these types of all low tones are not peculiar to Edo. Aziza (1997) notes, 'most nominals which signal agentive meaning are derived from verb + noun sequences and they bear only low tones'. Although, Aziza (1997) did not tell us how she derived these all low tone patterns. However, this is not the case with Emai as seen from Egbokhare's (1990) examples. There are no particular patterns on the tones of the verb phrase. Some of his examples include:

30.	i)	à	#	sì	→	àsí
				'inhale/pull'		'snuff'
	ii)	è	#	fè	→	èfè
				'be rich'		'riches'
	iii)	é	#	kpà	→	ékpà
				'to vomit'		'vomit'
	iv)	ó	#	hòó	→	óhòó
				'be dizzy'		'dizziness'
	v)	ò	#	fò #	→	òfòré
				'cold'	'arrive'	'dampness'

It is seen from the Emai examples that the creation of all-low tones as we have in Edo and Urhobo do not apply to Emai. It does not also seem that the non-gerunds in Emai follow a particular tone pattern as enunciated by Egbokhare (1990).

The second pattern is that in which after collocating the nominalizing prefix with the verb and noun stems what we have is LHL (H) tonal pattern. These, as mentioned earlier, are either gerundive or those nominals that state actions or abstract nouns. The former, according to Elugbe (1989) and Egbokhare (1990) are called gerundive nominalization, i.e., Gerundivisation, which

turns verbs into gerunds. It is marked by the polarization of tones on the syllable peaks in Edo. They are formed by the affixation of the discontinuous morpheme *ù...mwè* to a verb stem. What we observed here is that the initial tone of the verb takes a tone that is polar opposite to the tone on the vowel prefix /ù/. Therefore, we will postulate a polarization rule for the tones in this category. We support Elugbe (1984:86). He examines six Edoid languages; these are Degema, Uvbie, Isoko, Edo, Yekhee and Emhalhe. He concludes that ‘the full morpheme was **u-*’ ...-*amhi* in Proto Edoid’. Some of his examples will include:

31. i) gò → ùgómwè
 ‘shout’ ‘shouting’
- ii) gbè → ùgbémwè
 ‘beat’ ‘beating’
- iii) fù → ùfúm̀wè
 ‘be calm’ ‘be calm; calmness’
- iv) mè → ùmém̀wè
 ‘hiss’ ‘hissing’

From the examples given above, it is seen that the tone of the verb stems take the tone that is polar opposite the tone of the nominal prefix *ù*. Elugbe (1984:87) raises the possibility of functionally separating the prefix from the suffix. According to him “since PE is assumed to have employed only prefixes to mark noun classes, the possibility that the class marking U-prefix was originally different from the suffix *-amhi* cannot be discarded. Thus, while *-amhi* was used after the verb stem to deverbalise it, U was prefixed to the stems to mark it for a particular class”. We agree with Elugbe (1984) in functionally separating the prefix and suffix. There are numerous examples where U- is prefixed to verb stems and in such cases, this prefix identifies the result of the action or process of doing. Thus, the gerundiveness is the result of the suffixation of *-amhi*. The addition of U- follows the process of deverbalization, which requires that the resultant noun be allocated to a class. Egbokhare (1990)’s account of Emai is closer to

what Elugbe reports and which is confirmed by this study. In its case, it is marked by the affixation of a discontinuous morpheme /u'... ǔĩ/ as well as a high tone on the third syllable of a gerundive nominal. Some of his examples include:

32.	i)	/à/	'run'	[úlà mí]	'running'
	ii)	/ò/	'drinking water'	[úò mǐ]	'drinking'
	iii)	/è/	'eat'	[úè mǐ]	'eating'
	iv)	/fí/	'throw'	[úfí mǐ]	'throwing'

From our observation, it is seen that the tonal patterns of the gerundive nominals in Emai are similar to the tonal patterns in Edo.

Our analyses of the second types of constructions suggest that the analysis of state action or abstract nouns will be somewhat similar to that of gerundive nominals. We will equally postulate a polarization rule. We will assume that it is the nominalising prefixes that trigger off this polarization.

Before rounding up this section, we note from the available data that it may not be possible to subject the same inputs to the two changes. That is, the same nominalizing prefix and verb stem may not produce nominals that will have all low tones and LHL (H) tonal patterns.

7.0 Conclusion

An attempt is made in this paper to look at the roles of tones in nominalization in Edo. It was discovered that tones play significant roles in the grammar of the language, as equally attested to in Adéníyì (2003). The demarcation of different types of nominalization in Edo was based clearly on the different tones they bear. While a type of nominalization with all-low tones was classified as non-gerundive, another with polarization was classified as gerundive. This paper also made attempt to debunk earlier claims made by Omozuwa (1997). With the available data at our disposal, we were able to controvert earlier claims in Omozuwa that it is only the vowel ò

that can occur as a nominal prefix. We have seen clearly from this paper that six oral vowels in the language can be used as nominalizing prefixes. The earlier argument that the final outputs of the nominalization are always low cannot also hold. It was demonstrated that the tonal output of the nominalization could either be all low or LHL (H) tones.

In all, we have been able to account for the different tonal behaviours in Edo in a principled way. Hitherto, this has posed a challenge to linguists. This paper has therefore, attempts a contribution to the ongoing debate in this regard.

References

- Adényì, H.R (2000) *Ìlò-Èdè àti Èdá-Èdè Yorùbá: Apá Kííní*. Lagos. Harade and Associates.
- _____ (2003) *Tone and the noun phrase in Edo*. Ìbàdàn. University of Ìbàdàn. Unpublished Dissertation.
- Akinlabí, A.M. (1984). *Tonal underspecification and Yoruba tones*. Ìbàdàn. University of Ìbàdàn, Unpublished Doctoral Thesis.
- Amayo, A. (1976). *A generative phonology of Edo (Bini)*. Ìbàdàn. University of Ìbàdàn. Unpublished Doctoral Thesis.
- Aronoff, M. (1997) *Contemporary linguistics: An introduction (third edition)*. New York: St Martin's Press
- Aziza, R. O (1997). *Urhobo tone system*. Ìbàdàn. University of Ìbàdàn. Unpublished Doctoral Thesis.
- Chomsky, N. and Halle, M. (1986). *The sound patterns of English*. New York. Harper and Rouge.
- Clements, G.N. (1979). 'The description of terraced level tone languages' *Language* 55.
- Clements, G.N. and Goldsmith, J (1984) *Autosegmental studies in Bantu tone*. Dordrecht. Fortis Publication.
- Donwa, S. (1982). The sound system of Isoko. Ìbàdàn. PhD Thesis. Department of Linguistics, University of Ìbàdàn.
- Egbokhare, F.O (1990). A phonology of Emai. Ìbàdàn. PhD Thesis. Department of Linguistics, University of Ìbàdàn.
- Elimelech, B. (1976). *A tonal grammar of Etsako*. UCLA Working papers in phonetics. Los Angeles.
- Elugbe, B.O (1973). *Comparative Edoid phonology*. Ìbàdàn. University of Ìbàdàn. Unpublished Doctoral Thesis.
- Elugbe, B.O (1984). Morphology of the gerunds in Degema and its reconstruction Proto-Edo. *Studies in African Linguistics*. Vol.15. No. 1:77-89.
- Elugbe, B.O (1985) Edo (Bini) in the pollyglota Africana. *African Languages*.2: 145 - 51.
- Elugbe, B.O. (1989). *Comparative Edoid: Phonology and lexicon*. Port-Harcourt. Delta Series, No.6. University of Port-Harcourt Press.

- Goldsmith, J. (1976a). *Autosegmental phonology*. Massachusetts. M IT Unpublished Thesis.
- _____ (1976b). An overview of autosegmental phonology. *Linguistic Analysis*.2.
- _____ (1979). The aims of autosegmental phonology. D. Dinnsen (ed). *Current approaches to phonological theory*. Bloomington.
- _____ (1990). *Autosegmental and metrical phonology*. Oxford. Basil. (1995). *The handbook of phonological theory*. (eds.) Goldsmith, J.A. Cambridge: Blackwell Publishers.
- Halle, M and Jean-Roger Vergnard (1982). On the framework of autosegmental phonology. In Harry Vander Hulst and N. Smith. (ed.). *The Structure of phonological representations. (Part11)*, (1982). Dordreaht, Holland: Foris Publication.
- Hulst, Vander and N. Smith (1982). An Overview of autosegmental and metrical phonology. In Harry Vander Hulst and N. Smith. *The Structure of Phonological Representations. (Part11)*, (1982). Dordreaht, Holland: Foris Publication.
- McCarthy, (1979). Formal problems in Semitic phonology and morphology. Ph.D Dissertation, MIT (distributed by Indiana University Linguistic Club).
- _____ (1981). A prosodic theory of non-concatenative morphology. *Linguistic Inquiry, Vol.12*.
- Omogbe, E.M. (1996). Cognate verbs and cognate nouns in Edo in *Ejolis: Ekpoma Journal Languages and Literary Studies. Vol.8*.
- _____ (2000). Strategies for nominalization in Edo. In *Research in African Languages and Linguistics. Vol. 2*
- Omoruyi, T. (1986). "Pluralization strategies in Edo" in *Journal of West-African Languages. XVI, 2*.
- Omozuwa, V. (1997) "Vowel elision and tone in Edo CV+VCV (CV) constructions" in *Journal of Asian and African Studies*, No. 53. Institute for the Study of Languages and Cultures of Asia and Africa, University of Foreign Studies, Tokyo.
- Pulleyblank, D. (1998) *Tone in lexical phonology*. Massachusetts. M IT Unpublished Doctoral Thesis.
- Sagay, E (1986). *The representation of features and relations in non-linear Phonology*. Massachusetts. M IT Unpublished Doctoral Thesis.
- Urua, E.E (1990). Aspects of Ibibio phonology and morphology. PhD Thesis. Department of Linguistics, University of Ìbàdàn.
- Welmers, W.E (1973) *African language structures*. Berkeley, University of California Press.