

Tone in Èkpeye Associative Construction

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Abstract: This paper discusses the behavior of tone on Èkpeye associative construction. Èpeye is a minority language spoken in the Niger Delta Region of Nigeria West Africa. It is classified as an Igboid language under the Benue-Congo phylum within the larger Niger-Congo family by Williamson and Blench (2000). Èkpeye stands as an isolate within the Igboid family.

For this study data were collected and analysed using the theory of autosegmental phonology, a theory that advocates for the independence of the tonal and the segmental tier, such that tone extends beyond the vowels and consonant segments that bear them (Odden 1995:446). There are four surface tones in Èkpeye: a high tone (H) a low tone (L), a phonemic downstep and a falling tone. The realizations of these tones on nouns have been accounted for using the autosegmental theory. The analysis reveals that Èkpeye has five underlying tonal melodies: H L HL LH and LHL realizable on nouns. This study goes further to demonstrate the tonal alternations that occur when nouns are used in associative construction in Èkpeye. The study reveals that the associative construction in Èkpeye is marked by a high floating tone.

Keywords: Èkpeye associative construction, autosegmental phonology.

1. THEORETICAL FRAMEWORK

This study is based on Autosegmental Phonology proposed by Goldsmith in 1976 to account for the phenomenon of tone as found in African languages. Goldsmith rose against the linear approach to phonological representations earlier adopted by Chomsky and Halle (1968) in their book, *The Sound Pattern of English (SPE)*

As rightly observed by Gussenhoven & Jacobs (2011:148), phonological representations were presented in *SPE* as bundles of binary features which make it impossible to represent aspects of pronunciation that characterize more than one segment as a single feature. In this model, tone features were not adequately represented as the binary notation employed by Chomsky and Halle could not account for contour tones with two different tonal specifications.

In fact, tonal specifications were virtually neglected by this model as they were considered as 'suprasegmental' features distinguishing them from 'segmental' thus viewing pitch as different from and not part of the phonological segmentation into phonemes (Goldsmith 1976:36).

This is a fundamental shortcoming of *SPE* which the autosegmental phonology addressed by proposing two or more parallel tiers of representations with each tier consisting of a string of segments (Goldsmith 1990:8).

Goldsmith adopts a multi-dimensional approach in which segments are arranged on separate parallel tiers and it became easier to handle the pitch feature phenomenon.

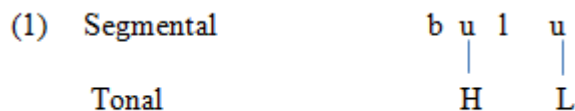
There are two levels of representation in *SPE*, the underlying and the surface.

There are rules that convert the underlying representation to surface representation and these rules can add or delete features.

But the thrust of autosegmental phonology is that the underlying and surface forms consist of parallel strings of segments arranged in two or more tiers, none of which ‘depend’ or ‘ride on’ the others. Each is independent in its own right, hence the name ‘autosegments’.

Despite the fact that the tiers are independent, they still need to be connected to each other through the use of association lines.

Autosegmental phonology represents tone on a separate tier – the tonal tier – and on this tier each segment is specified for tone only as illustrated in (1).



(Goldsmith 1990:8).

Here, tones are presented on separate tiers from the segments that bear them and they are connected by association lines.

The tiers represent the separate but ‘coordinated’ activity of the different gestures of speech involved in the production of a speech sound (Goldsmith 1976:29).

Apart from the issue of contour tone, autosegmental phonology also resolves the phenomena of tonal preservation, melody levels, the issue of floating tones, and the bi-directional spreading in language which could not be accounted for by standard generative phonology.

While we may not go into the details of discussing all the tenets of autosegmental phonology as stated above, we will briefly explain the issues of floating tones and tonal spreading because they are the main features that characterize the behavior of tone in the Èkpeye noun phrase.

1.1 Floating Tones:

Autosegmental phonology predicts the existence of a segment that has only the tonal component without a segmental material which at some point during derivation, merges with some vowel, thereby transferring its tonal specifications to that vowel (Goldsmith 1976:78).

Odden (1995:447) defines floating tones as tones which are independent of vowels.

The concept of floating tone is used in two ways. On one hand, it refers to segments which exist only at the tonal tier, and on the other hand, it is used to talk about segments which are not associated with any vowel at a given moment in the derivation (Goldsmith 1990:20).

In the first usage, floating tone refers to a segment which consists solely of tone that marks certain grammatical constructions in some African languages.

In the second sense, floating tone refers to a phenomenon where the tone of a deleted vowel does not get erased but becomes ‘floating’ to be re-associated to some other segment.

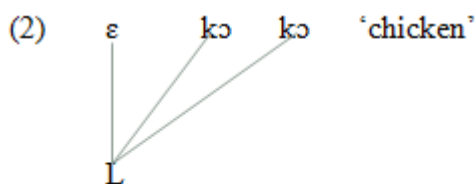
1.2 Tone Spreading:

A Further phenomenon which the autosegmental theory accounts for is the process of automatic spreading of features both to the left and right, over segments unspecified for those features (Goldsmith 1976:35).

Though the phenomenon of tone spreading is attributed to Hyman & Schuh (1974) (cf Leban 2006), its application is widely acknowledged in autosegmental phonology.

Tone spreading entails that a tone that is associated with a single vowel will, in certain languages, be spread, or doubled, to an adjacent vowel (Goldsmith 1990:29).

The application of tone spreading will conform to a template as shown below with example from Ikaan:



(Salfner 2009:)

2. TONES ON NOUNS

Èkpeye disyllabic and trisyllabic nouns in citation forms can be classified into different tone groups as shown in examples (3).

(Note: in this paper, items are marked with the following tonal conventions: the low tone as [`] and the high tone as [^], the falling tone as [^] on the vowel bearing the tone , while downstep is marked as [!] before the syllable bearing the downstep.)

2.1 Disyllabic Nouns:

Low – low	(L – L)		
(3) a. ògè	‘machete’	òlà	‘village’
	low – high (L-H)		
b. ikpí	‘billy-goat’	ìzì	‘husband’
	high – high (H –H)		
c. úkó	‘leg’	ídá	‘father’
	high – low (H –L)		
d. álà	‘year’	ónò	‘fowl’
	high – downstep (H -!H)		
e. ú!kpo	‘bone’	í!ze	‘tooth’

2.2 Trisyllabic Nouns:

Low –low – low	(L –L –L)		
f. òdèlè	‘vulture’	òbàlà	‘blood’
	low –low – high (L –L – H)		
g. òkàní	‘loin cloth’	àgídá	‘chair’
	low –high – high (L –H – H)		
h. ògání	‘kitchen knife’	ògbídí	‘insect’
	high –high – low (H – H – L)		
i. úwélè	‘wind’	àgbádà	‘bed’
	low – high – low (L – H – L)		
j. ùkómà	‘man’	ògbólò	‘cassava’
	high – high – downstep (H – H -!H)		
k. ízá!za	‘broom’	ówá!jı	‘money’
	low – high – downstep (L – H - !H)		
l. èlá!ηö	‘sun’		

3. ASSOCIATIVE CONSTRUCTION

In Ekpeye, there are noun + noun constructions that denote possession. This is often referred to as associative construction in African linguistics. Most languages mark associative constructions with an associative morpheme which could be a morpheme made up of segments and tone or it can be entirely tonal (Salffner 2009:222).

In Ekpeye, the noun denoting a possessor is placed after the noun expressing the thing possessed and this possession is marked with a floating H tone. When nouns are juxtaposed, it is the boundary tones that usually get affected. Both phonological and tonological processes usually apply. Whatever the case, the associative morpheme is entirely tonal. In what follows; we show some nouns in associative constructions.

3.1 L + L Nouns:

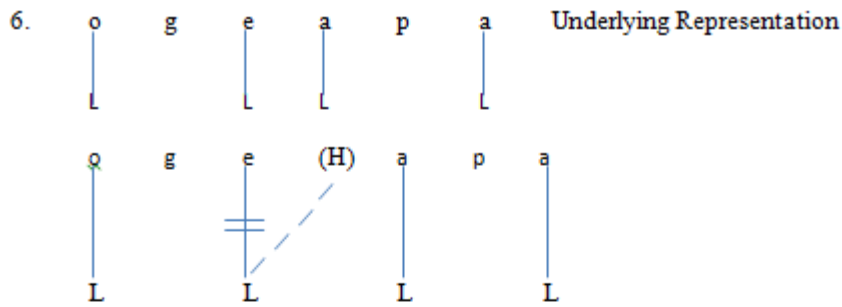
In this kind of construction, H always replaces the tone of the final vowel of the first noun. This is an H associative marker that is assigned to the left. The vowel of this H morpheme is usually lost to the phonological process of vowel deletion. However, the H tone does not disappear; rather it survives and docks unto the nearby TBU to the right. The derivations are shown in 4.

4. (a) ògè + àpà → ògè + H + àpà → ògé àpà → [ògápà]
 ‘machete’ ‘tilapia’ ‘machete for tilapia’ ‘tilapia’s machete’
- (b) ikpèlè + òdèlè → ikpèlè + H + òdèlè → ikpèlé òdèlè → [ikpèlódèlè]
 ‘lizard’ ‘vulture’ ‘lizard for vulture’ ‘vulture’s lizard’

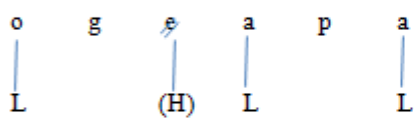
3.2 H + L and L + H Nouns:

- 5 (a) ówó + àpà → ówó + H + àpà → ówó àpà → [ówápà]
 ‘belly’ ‘tilapia’ ‘belly of tilapia’ ‘tilapia’s belly’
- (b) úkó + òdèlè → úkó + H + òdèlè → úkó òdèlè → [úkódèlè]
 ‘leg’ ‘vulture’ ‘leg of vulture’ ‘vulture’s leg’
- (c) éká + àpà → éká + H + àpà → éká àpà → [ékápà]
 ‘hand’ ‘tilapia’ ‘hand of tilapia’ ‘tilapia’s hand’
- (d) í!ze + ikpèlè → í!ze + H + ikpèlè → ízé ikpèlè → [ízíkpèlè]
 ‘tooth, ‘lizard’ ‘tooth of tilapia’ ‘tilapia’s tooth’
- (e) òdèlè + ézè → òdèlè + H + ézè → òdèlé ézè → [òdèlézè]
 ‘vulture’ ‘king’ ‘vulture for king’ ‘king’s vulture’
- (f) àbà + ónò → àbà + H + ónò → àbá ónò → [àbónò]
 ‘feather’ ‘fowl’ ‘feather of fowl’

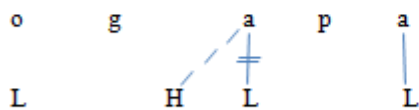
As seen from the examples in (5) above the floating high tone has an influence on the final vowels of the preceding nouns. The floating high tone associates leftward and dissociates the underlying tones of the final vowels. This floating tone is often left unassociated due to a phonological rule of vowel-deletion. However, it survives and gets re-associated with the first vowel to its right, displacing any non-high tone that was associated with the TBU. Words that begin with a high tone do not appear to undergo any tonal change. The floating high tone, when it docks, will merely replace the old H-tone with a new H-tone. The influence of the floating high tone will change the following underlying, normal tone, LL to surface as LH, HH as HH, HF as HH, H!H as HH. Here, we show the derivation of [ògápà] in an autosegmental fashion.



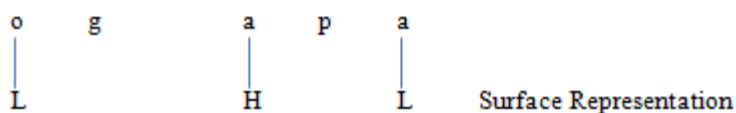
H tonal morpheme attaches leftward and delinks L



Vowel deletion and H tone floating



Floating H docking and L deletion



3.3 H + H Nouns:

- 7. (a) ówó + ókpá → [ówó!kpa]
 ‘belly’ ‘fish’ ‘belly of fish’
- (b) ékpé + ídá → [ékpí!da]
 ‘inheritance’ ‘father’ → ‘father’s inheritance’
- (c) é!dí + ókpá → [éd ó!kpa]
 ‘rope’ ‘fish’ ‘rope for fish’
- (d) ówá!ɾ + ízá!za → [ówájízá!za]
 ‘money’ ‘broom’ → ‘money for broom’

The nouns that are made up of all high tones as in (7 a & b) do not show any tonal change. So, the effect of the floating H tone is not noticed. The tonal alternation that occurs here is that the final of a string of Hs is realized as downstep. In other words, a concatenation of high tones automatically results in the downstep of the final H.

3.4 LH + L:

- 8. (a) ìzì + Àdá → ìzì + H + Àdá → [ìzÁdá]

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‘husband’	Ada	‘husband of Ada	‘Ada’s husband’
(b) ìkpí	+ òlà	→ ìkpí + H + òlà	→ [ìkpólà]
‘billy-goat’	‘village/ community’	‘billy-goat for community’	

Here, the final vowels of the first nouns begin with high tones and they do not appear to undergo any tonal change. The floating high tone merely replaces the old H-tone with a new H-tone.

3.5 HL + H Nouns:

9. (a) únò	+	íká	→	[ún ikà]
‘fowl’		‘farm’		‘fowl for fam’
(b) ókóbò	+	Ógbó	→	[ókóbògbò]
‘box’	+	‘name of a place’		‘box for Ógbó’
(c) ágbádà	+	ídá	→	[ágbád idà]
‘bed’ +	‘father’	‘bed for father’	‘father’s bed’	
(d) úgwù	+	òh ^w ó	→	[úgw òh ^w ò]
‘frond’	‘palm tree’	‘frond of palm tree’	‘palm frond’	

This combination presents a different tonal behavior from what we have seen so far. The previous sections show that there is a floating H tone that marks associative construction in Èkpeye. In HL + H combination however, the floating H tone phenomenon does not apply. There seem to be some sort of prohibition against the sequence *HLH in Èkpeye. Whenever this ‘unlawful’ sequence is bound to occur, the common repair is for the pitch of the following H to drop to low. Hence, an underlying HLH is realized as HLL at the surface. In (8), the final vowels of the preceding nouns bearing the low tone got deleted, yet the low tone remains and re-attaches to the adjacent TBU spreading to the final TBU. So, HL + H associative constructions are not marked by the floating H tone associative marker. Rather, the final low of the preceding noun, though, usually deprived of its vowel due to a phonological process of V-deletion, floats and relinks to the adjacent H-toned syllable displacing the high tone and spreading to the rest TBUs. The assumption is that this is a repair strategy against the occurrence of HLH in Èkpeye.

4. CONCLUSION

The paper has discussed the way tone behaves when nouns are brought together in the associative construction in Èkpeye. The analysis has been done within the framework of Autosegmental Phonology. The study demonstrates that the associative marker in Èkpeye is entirely tonal. Nouns with different tonal combinations were juxtaposed and the analysis reveals that while nouns with L + L, H + L, H +H and LH + L show evidence of a floating H tone marking the associative construction, HL + H is not marked by a floating H tone. Rather, the final floating low of the preceding noun docks unto the adjacent H-toned syllable displacing the high tone and spreading to the rest TBUs. It is assumed that this is a repair strategy against the occurrence of HLH in Èkpeye.

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