This paper focuses on tonal alternations in the Urhobo noun phrase. Urhobo is an Edoid language spoken extensively in Delta State, Nigeria. The language has two basic tones, high and low, plus a phenomenon of downstep, both automatic and non-automatic. The noun phrases examined include the noun + noun associative construction, the noun + relative clause construction, and noun reduplication, which is used to express the equivalent of the English noun phrases that signal "every + noun" and "only/so many/so much + noun." This paper is a purely descriptive study intended to present facts that would lead in the long run to a better understanding of tonal alternations in Edoid languages. Theoretical analysis would be done only when necessary. (Author/SM)
NATIONS IN THE URHOBO NOUN PHRASE

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ABSTRACT

This paper focuses on tonal alternations in the Urhobo noun phrase. Urhobo is an Edoid language spoken extensively in Delta State, Nigeria. The language has two basic tones, high and low, plus a phenomenon of downstep, both automatic and non-automatic. The noun phrases examined include the noun + noun associative construction, the noun + relative clause construction and noun reduplication which is used to express the equivalent of the English noun phrases that signal "every + noun and "only / so many / so much + noun". This paper is a purely descriptive study with the intention of presenting facts that would lead in the long run to a better understanding of tonal alternations in Edoid languages. Theoretical analysis would be done only when necessary.

O.O PREAMBLE

Urhobo operates a terraced level tone system with two basic tones, low and high, plus a phenomenon of downstep. There are also two gliding tones, HL (falling) and LH (rising) which are derived from the basic tones. There is downdrift, such that after a high – low sequence, a succeeding high tone is realized on a lower level than the preceding high tone while after a high-downstep sequence, a succeeding high tone is realized on the same level as the downstep (Kelly 1969; Welmers 1969, 1973; Elugbe 1989; Aziza 1997). Only vowels bear tone in this language.

Most nouns in Urhobo are either disyllabic or trisyllabic and have the structure prefix + stem. The prefix is always a vowel while the stem always begins with a consonant. Many nouns differ in meaning only because they differ in tone. On the basis of tone patterning, Urhobo disyllabic nouns in their citation form can be classified into five tone groups, namely.

a) low - low
   (i) usi 'line'
   (ii) ukpe 'year'
   (iii) eni 'elephant'

b) low - high
   (i) usi 'starch'
   (ii) eni 'headpad'
c) high - high
   (i) uko  ‘cup’
   (ii) ñgba ‘war lord/hero
   (iii) uwe  ‘nose’

   d) high - low
   (i) ukpe  ‘bed/bedroom’
   (ii) ñgba  ‘thirty’
   (iii) ëse  ‘gift’

   e) high - downstep
   (i) uwe  ‘thorn’
   (ii) ñgba  ‘in-law’
   (iii) òtc  ‘land, ground’

In addition, most nominals in this language which signal agentive meaning are derived from verb + noun sequences. They usually bear only low tones irrespective of the lexical tones borne by the nouns in their citation form. (Note that verbs as well as singular subject pronouns are said to be toneless and bear the tones of the grammatical configurations in which they are used (Elugbe 1989; Aziza 1997)). In the citation form, all verbs and all singular subject pronouns are realized on the low tone. Verbs do not differ in meaning as result of differences in tone. The process of nominalization is beyond the scope of this paper but it includes the following: (i) Prefixation: to enable the nominal correspond to the structure of the Urhobo noun. (ii) Vowel elision or glide formation affecting the final vowel of the verb, since vowel sequences are not permitted at surface level in this language. If the verb stem vowel is [+ High] glide formation takes place, otherwise the vowel is elided. (iii) Tonal alternation of the lexical tones borne by the noun, so that all vowels in the nominal are realized on the low tone. Examples include:

2. a) si + ñbe = [osjõbe]
   write
   book
   ‘a secretary’

   b) cidia + agbara = [ocidjagbara]
   sit
   chair
   ‘a chairman/president’
In this paper, we shall be looking at how tone works in the Urhobo noun phrase. The three types that we are concerned with here are the noun + noun phrase, the noun + relative clause and noun reduplication.

1.0 **TONAL ALTERNATIONS IN THE ASSOCIATIVE NOUN PHRASE**

In Urhobo, the noun phrase consists of a noun and a modifier. All modifiers follow their head noun. The associative construction to which the noun + noun (N+N) and noun + relative clause (N+Rel) belong is marked by an independent grammatical morpheme /rE/ which we shall call the associative marker (AM) and it occurs between the noun and its modifier. The vowel of AM is always
elided in normal conversational speech and, in fast speech, even the consonant is also elided, although it is easy to recover both in slow deliberate speech.

In terms of tone, we assume that the associative construction is marked by a floating high tone which we shall call the associative tone marker (ATM). This tone usually gets segmentalized on the vowel segment of AM in a N + N construction and on the final segment of the subject of the relative clause in a N + Rel clause phrase.

1.1 **TONAL ALTERNATION IN THE NOUN + NOUN PHRASE (N1+N2)**

In the N1+N2 associative construction, the ATM is segmentalized on the vowel of the AM. When this vowel is elided, the tone obligatorily relinks onto the prefix vowel of N2 resulting in the deletion of the lexical tone in that position if it is low but it is high, the two high tones merely contract into one. This means that the prefix vowel of N2 is always high toned at the phonetic level irrespective of the tone it bears in the citation form. Note that !H does not occur in the prefix position. It is also interesting to note that the lost low tone has no lowering effect on any surviving tone in the sequence. This is because, as has been pointed out elsewhere (Aziza, 2001), although there is downdrift in the language, a low tone has a lowering effect on a succeeding high tone only if it is present in the surface structure. If it is deleted before it gets to the surface, it simply disappears leaving no trace on surviving tones. (This means that a lost low tone does not result in phonetic downstep in this language). Thus, tonal alternation in the N1+N2 construction affects only the tone of the prefix vowel of N2; all other tones are unaffected. The following are some examples.

3. a) \( \text{ob} + \text{re} + \text{eni} = \text{[ob} \text{reni]} \)

<table>
<thead>
<tr>
<th>AM</th>
<th>ATM</th>
<th>Vowel Segment</th>
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<tbody>
<tr>
<td>L L</td>
<td>(H)</td>
<td>L L H L</td>
</tr>
<tr>
<td>hand</td>
<td>AM</td>
<td>ATM</td>
</tr>
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b) \( \text{iribo} + \text{re} + \text{inonE} = \text{[iribo} \text{riononE]} \)

<table>
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<th>AM</th>
<th>ATM</th>
<th>Vowel Segment</th>
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</thead>
<tbody>
<tr>
<td>LH H</td>
<td>(H)</td>
<td>L H L</td>
</tr>
<tr>
<td>Pepper</td>
<td>AM</td>
<td>ATM</td>
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c) \( \text{uko} + \text{re} + \text{gb} = \text{[uko} \text{rgba]} \)

<table>
<thead>
<tr>
<th>AM</th>
<th>ATM</th>
<th>Vowel Segment</th>
</tr>
</thead>
<tbody>
<tr>
<td>HH</td>
<td>(H)</td>
<td>H H</td>
</tr>
<tr>
<td>Cup</td>
<td>AM</td>
<td>ATM</td>
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The last two examples in 3 above are recursive N+N phrases and, as can be noticed, they are similar in every respect to the simple N+N phrase, the only difference being that more nouns are added to the string to extend the phrase. The AM which bears the ATM precedes every additional noun while the same processes of vowel elision of AM, relinking of ATM on the prefix vowel of N2 and the deletion of the low tone in that position take place.

1.2 **TONAL ALTERNATION IN THE NOUN + RELATIVE CLAUSE**

Ordinarily in this language, the subject of a clause retains its lexical tones as the forms in 4a below show. In the associative construction comprising noun + relative clause, ATM is segmentalized, not on AM but on the final vowel of the subject of the relative clause. This subject immediately precedes the verb of the

---

5
clause. Since, as we have said, AM is underlyingly toneless, when its vowel segment is elided no tonal alternation occurs on the prefix vowel of N2; rather, it occurs on the final vowel of the subject of the relative clause. This vowel is always retained but the lexical tone it bears gets obligatorily deleted and is replaced by the H of ATM if it is low or a non-automatic downstep but if it is high the two merely contract into one. Thus, the final vowel of the subject of the relative clause is always H. Compare the forms in 4a with those in 4b below.

4. a) (i) obɔ + rɛ + eni + rere = obɔ reni rere
   Hand AM elephant ate ‘a hand (that) an elephant ate’

   (ii) aje + na + ʋo + ɪɣɔ = aje na ʋɪɣɔ
       Woman the has money ‘the woman has money’

   (iii) ɔfɛ + hue + aje = ɔfɛ hwɛje
       Man beat/killed woman ‘a man beat/killed a woman’

   (iv) ɪɣɔ + ʃeri = [ɪɣɔ ʃeri]
       Money fell money fell

b) (i) obɔ + rɛ + eni + na + + rere = obɔ reni na rere
    hand AM elephant the ATM ate a hand that the elephant ate’

   (ii) ekpu + rɛ + ɪɣɔ + rɛ + aje + + ʋɔri =
        bag AM money AM woman ATM had

        [ekpu ɪɣɔ rɛ ʃɛri vɔri]
        ‘a bag of money that a woman had’
2.0 TONAL ALTERNATION IN NOUN REDUPLICATION

Noun reduplication is a morphological process in which interesting tonal alternations take place. Two types of noun reduplication are considered here: the first is used to express the equipment of the English noun phrase `every/each + noun' while the second signals `only/so many or much + noun.

For the sake of convenience, we shall refer to them as complete and partial noun reduplication respectively.

2.1 COMPLETE NOUN REDUPLICATION

This construction conveys the meaning `every/each + noun' and it is marked segmentally by an independent morpheme `kɛ' which occurs before the noun.

The vowel of this morpheme is obligatorily elided in normal conversational speech although it is recoverable in slow deliberate speech. Both the morpheme and the noun are reduplicated to make up the noun phrase.

In terms of tone, we assume that noun reduplication is also marked by a floating high tone which we call the reduplication tone marker (RTM) which gets segmentalized on the final vowel of the first occurrence of the noun. This results in the deletion of the lexical tone in that position if it is low (as the forms in 5 a - c show) or if it is a downstep (as the forms in 5 d - e show). All other tones remain intact. Note again that the output is vacuous if the affected tone is already H as in 5b, e, and h.

5. a) kɛ + obɔ + + kɛ + obɔ = [kobɔkobɔ]
   L L (H) L L L H L L
   Part. Hand RTM part. hand 'every/each hand'
b) $\text{kE} + \text{ukpe} + \text{ukpe} = [\text{kukpekukpe}]$

bed RTM bed ‘every/each bed’

c) $\text{kE} + \text{uwevi} + \text{uwevi} = [\text{kuwevikuwevi}]$

house RTM house ‘every/each house’

d) $\text{kE} + \text{DSE} + \text{DSE} = [\text{koseskose}]$

father RTM father ‘every/each father’

e) $\text{kE} + \text{orere} + \text{orere} = [\text{korekore}]$

town RTM town ‘every/each town’

f) $\text{kE} + \text{eve} + \text{eve} = [\text{kavekave}]$

goat RTM goat ‘every/each goat’

g) $\text{kE} + \text{uko} + \text{uko} = [\text{kukukoku}]$

Cup RTM cup every/each cup

h) $\text{kE} + \text{agogo} + \text{agogo} = [\text{kagogokagogo}]$

bell RTM bell ‘every/each bell’

2.2 PARTIAL NOUN REDUPLICATION

This construction conveys the meaning ‘only/so many or much + noun’ and affects only the plural form of the noun. Unlike the first type described above, this one is not marked by any independent segment. Rather, all the sound segments except the prefix vowel and the initial consonant segment(s) of the first occurrence of the noun are deleted. The retained segments are then prefixed to the second occurrence of the noun which appears in full.

In terms of tone we assume that the same processes that marked the complete noun reduplication also mark this partial type such that RTM also gets segmentalized on the final vowel of the first noun resulting in the deletion of
any lexical tone in that position if it is a low or a downstep and applies vacuously if the tone is a high. When the sound segments of the first noun are deleted, they are deleted together with the lexical tones that they bear. Only RTM survives and gets relinked on the prefix vowel of the noun duplicate resulting in the deletion of that lexical tone if it is a low or downstep. Examples include the following.

6. a) *iwevi* + + *iwevi* = [iwiwevi ]
   L L L (H) L L L L H L L
   House RTM house ‘only/so many houses’

b) *egɔ* + + *egɔ* = [egegɔ]
   L H (H) L H L H L H
   bottles RTM bottles ‘only/so many bottles’

c) *usi* + + *usi* = [usjusi ]
   L H (H) L H L H
   starch RTM starch ‘only/so much starch’

d) *igbede* + + *igbede* = [ igbigbede ]
   L L H (H) L L H L H L H
   Needles RTM needles ‘only/so many needles’

e) *egba* + + *egba* = [ egbegba ]
   H H (H) H H H
   Warlords RTM warlords ‘only/so many warlords’

f) *ibro* + + *ibro* = [ ibriibro ]
   H !H (H) H !H H H !H
   halves RTM halves ‘only/so many halves’

g) *ire* + + *ire* = [irirere]
   H H !H (H) H H !H H H !H
   towns RTM towns ‘only/so many towns’

However, if the noun involved in such reduplication is a gerund, a different output is observed. Gerunds are derived from verbs through a process of affixation. A full account of the process of gerundivization is beyond the scope of this paper and so only the highlights will be described here. It includes the following: (I) Prefixation, in which a vowel segment e- or ε- (depending on the
ATR vowel harmony requirements of the verb stem vowel) is prefixed to the verb. [+ATR] vowels select e- while [-ATR] vowels take e-. This is to enable the gerund conform with the structure of the Urhobo noun which is prefix vowel + stem. (ii) Suffixation, a suffix -o or -ɔ is added if the verb stem vowel is [+High], the choice again depending on the harmonic requirements of the vowel: [+ATR] vowels take -o and [-ATR] vowels take -ɔ. However, if the verb stem vowel is [-High], the suffix is deleted from the string. (iii) If the verb stem vowel is [+High], the addition of the suffix creates an environment for glide formation and so the [+High] vowel becomes [j] or [w] at the surface level depending on whether we are dealing with a front or back vowel. (iv) The construction is marked by a L-H sequence: L is borne by the prefix vowel while H is borne by the suffix. However, where the string does not take a suffix, the stem vowel bears the high tone. The following are some examples:

7. a) ku - ekuo [ekwo]
   pour - pouring
   L H

   b) si - esio [esio]
   write/pull - writing/pulling
   L H

   c) fa - ëfa
   flog - flogging
   L H

   d) kpɔ - ɛkpɔ
   dry up - drying up
   L H

When the noun in the reduplication construction is a gerund, a HL glide results on the prefix vowel of the second noun in the output evidence that a non-grammatical L tone will delete in the initial position of the base. This glide is derived from the juxtaposition of the two tones that mark the gerund. The effect of the segmentalization
of RTM is vacuous since the two high tones merely contract into one. In 8 below we present some examples.

a) ekuo  +  + ekuo  -  [ekwekwo]
L H (H)  L H  L HL H
Pouring  RTM  pouring  'only / so much pouring'

b) esio  +  + esio  -  [esjesio]
L H (H)  L H  L HL H
Writing/pulling  RTM  writing/pulling  'only / so much writing/pulling'

c) efa  +  + efa  -  [efefa]
L H (H)  L H  L HL H
flogging  RTM  flogging  'only / so much flogging'

d) ekpɔ  +  + ekpɔ  -  [ekpεkpo]
L H (H)  L H  L HL H
drying up  RTM  drying up  'only / so much drying up'

A comparison of the forms in 8 with those in 6 reveals that whereas a HL glide occurs on the prefix vowel of the noun duplicate in 8, the H of RTM replaces the L in the same position in 6 (see especially 6b-d). Thus, in 6, the vowel of the stem along with the lexical tone it bears gets deleted as part of the reduplication process, evidence that only lexical tones delete.

SUMMARY AND CONCLUSION

In this paper, we have tried to describe some tonal alternations that occur in the Urhobo noun phrase without recourse to theoretical analysis. Two types of associative constructions, the N1 + N2 and the N + Relative clause, and two types of noun reduplication were examined. One thing common to all four constructions is the presence of grammatical tones which surface as floating high tones and they always get segmentalized on vowel segments somewhere within the constructions such that even when the segments bearing them get elided or become nonsyllabic glides as a result of certain phonological processes, these tones do not delete. From the evidence presented here, we can safely say that only lexical tones are affected in tonal alternations while grammatical tones are not. This implies that grammatical tones have more relevance in the grammar of this language than lexical tones.
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