

THE TONES OF NOUNS IN KIKUYU

K. C. Ford
Department of Linguistics and African Languages
University of Nairobi, Kenya

1. Introduction

Kikuyu¹ evidences a tone system that is generally accepted (see Harries [1952]) as being analysable with two underlying level tones. Further studies [Ford 1973 and 1974] have shown that there are certain other interesting characteristics of the system, notably the use of downstep as an intonational phenomenon, certain regular processes of high-tone assimilation and dissimilation, and the largely non-predictable sub-categorising of lexical forms into particular tonal sub-classes. Verb roots form sub-classes of their own (see Sharp's statement in Benson [1964], and section 5 below), but the forms of words used in utterances, including verbs, exemplify a sub-classification that is most fully represented in the case of nouns. This paper will be concerned with this sub-classification and will indicate how it underlies the working of a large part of the tonal phonology of the language. Because there is an intonational² overlay to Kikuyu utterances, it will be necessary first to outline some of the intonational processes, in order to establish underlying tonal forms employing a 2-tone

¹Financial support for this work from the University of Nairobi is gratefully acknowledged, as well as the informant assistance of many speakers, but especially John Mathenge and Anne Mahihu. The description is based ultimately on Mr. Mathenge's speech, which is typical of the dialect spoken around Nyeri town. The transcription is broad phonetic, with all symbols having their IPA value except for the following individual conventions: y = voiced palatal glide [j]
j = voiced pre-palatal affricate [dʒ]
c = voiceless pre-palatal fricative [ç], sometimes affricated [tç].

Combinations of nasal + consonant are to be interpreted as pre-nasalized consonants. Tones are marked ['] high; [ˋ] low; [ˊ] rising; [!'] downstepped high; and [!ˋ] downstepped low.

²A distinction is drawn between intonational tone-changes, which are markers of mood (statement/question) and polarity (positive/negative), and tone-changes proper, which are brought about by the immediate tonal context (processes of assimilation and dissimilation).

basic opposition. Nouns differ in their tonal patterns both because of the influence of neighboring tones and because of intonational context. Previous writers have attempted to stabilize these various forms by establishing tonal classes (see, for example, Sharp's work in Benson [1964]), but no real attempt has been made to establish underlying tonal forms to which the various surface realizations can be systematically related.

2. Intonation

Kikuyu regularly reinforces the distinction between positive and negative utterances by introducing tonal differences, especially in utterance-final position. This may be summed up as a lowering of many final high tones in certain negative environments. It so happens that nouns (or other forms) when pronounced in isolation bear what might be termed a negative intonation; when such words are placed in an environment following a positive verb, we find a different tonal pattern:

- (1) m̀v̀èrànià 'examiner'
 (2) né m̀v̀èrànfá 'he's the examiner'
 (3) ndiònríé m̀v̀èrànià 'I didn't see the examiner'

3. Surface Tones

The following seven tonal classes of noun can be established. In the examples that follow, two forms of each word are provided, one representing the single-word utterance, the other the form after né 'it is/they are'. It will be noticed that the high tone of né causes certain following low tones to be assimilated to high. The significance of the classification itself will be made clear in the subsequent discussion. Loan words are not considered to begin with, but will be discussed and related to the rest of the vocabulary in section 6. As all the tone-change processes operate in a left-to-right direction, it is the value of the final tone in a word that is especially important; the following examples provide the full set of final-tone alternatives for each class.

(4) class i	ngõ	'firewood'	né ngõ	'it's firewood'
	ɲjò:ɔ́nǎ	'Njuguna'	né ɲjò:ɔ́nǎ	'he's Njuguna'
	ngó:ngónf	'bed-bug'	né ngó:ngónf	'it's a bed-bug'
	keà:á:àrǎ̀	'stile'	né keà:á:àrǎ̀	'it's a stile'
class ii	kà:riòkǐ	'Kariuki'	né kà:riòkǐ	'he's Kariuki'
	keámberéria	'beginning'	né keámberéria	'it's the beginning'
	mócé:ɔ́nǎ	'stinging-plant'	né mócé:ɔ́nǎ	'it's a stinging-plant'
	mwà:nèkǐ	'Mwaniki'	né mwà:nèkǐ	'he's Mwaniki'
class iii	mó:ɛ̀rǎ̀niá	'examiner'	né mó:ɛ̀rǎ̀niá	'he's an examiner'
class iv	ɲǎ̀ǎ	'Ng'ang'a'	né ɲǎ̀ǎ	'he's Ng'ang'a'
class v	mwà:rèrèriá	'spokesman'	né mwà:rèrèriá	'he's a spokesman'
class vi	mò:ngǎ̀í	'Mungai'	né mò:ngǎ̀í	'he's Mungai'
class vii	mó:βǎ̀ké	'tobacco-plant'	né mó:βǎ̀ké	'it's a tobacco-plant'

Classes i and ii show little difference in their tonal forms in isolation and after né --only the high-tone assimilation being evidenced after né with the class ii forms. In fact, three tones (high, low, and rising) are employed, and further analysis of the rising tone is provided below.

Classes ii-v display the final high-tone lowering which is an intonational marker; compare the following:

- (5) ndò:níré mwá:rèrèriá 'I saw the spokesman' [remote past]
 (6) ndiòníré mwá:rèrèriá 'I didn't see the spokesman' [remote past]

Classes vi and vii similarly alternate a low and a rising final tone; class vi, like class iv, does not involve the process of high-tone assimilation after né and the other forms that trigger it.

4. Underlying Tones

The following sub-sections will discuss the analysis of the various ambivalent tones exemplified in (4), and a summary of underlying forms

employing a 2-tone opposition will be given. Further discussion of forms of nominalization and certain processes of tone-change will cause this statement of underlying forms to be slightly modified.

4.1 Classes iii-v. In considering the underlying tonal forms of classes iii-v, it is not possible to predict in any natural way (or in a way that is not tantamount to making such tones high underlyingly), that it is the second or subsequent low tones that become raised. We thus choose the following forms as basic and derive the isolate or negative tones by a general intonational process of final lowering (so-called flattening):

- | | | | |
|-----|-----------|---------------|-------------|
| (7) | class iii | /mòvèrànlá/ | 'examiner' |
| | iv | /ŋàŋá/ | 'Ng'ang'a' |
| | v | /mwà:rèrériá/ | 'spokesman' |

Further support for these underlying high tones is provided by the fact that in certain environments, when other basic high tones become downstepped after a block-raising process (so called because a block of consecutive low tones is affected, minimum one), these tones too become downstepped:

- | | | | | | | |
|------|-------|--|----------|------|---------------|---------|
| (8) | névwó | mwá:váhínpá | átáhé | mà:é | /mwá:váhínpá/ | class i |
| | | so that | weakling | draw | water | |
| | | 'so that a weakling might draw water' | | | | |
| (9) | névwó | móvèránífa | átáhé | mà:é | | |
| | | 'so that an examiner might draw water' | | | | |
| (10) | névwó | ŋáŋá | átáhé | mà:é | | |
| | | 'so that Ng'ang'a might draw water' | | | | |
| (11) | névwó | mwá:rèrériá | átáhé | mà:é | | |
| | | 'so that a spokesman might draw water' | | | | |

4.2 The rising tone. The remaining classes pose additional problems because many forms exhibit an opposition of three tones. The final rising tones (in isolation) of some members of classes i, ii, vi and vii display a regular form of ambivalence in that they may surface

as either a high, a low, or a rising tone. The rising tone is restricted to utterance-final position and may then be lowered internationally, as exemplified in the citation forms of class vi and vii nouns. The behaviour of the final rising tone in classes i and ii regularly differs from that of classes vi and vii, notably in that the intonational final flattening operates on the former in more restricted contexts:

- (12) kàriòkí ii) 'Kariuki', but
 (13) nò:nfré kàriòkí 'I saw Kariuki'
 (14) mòpákè vii) 'tobacco-plant', and
 (15) nò:nfré mòpákè 'I saw a tobacco-plant'

When occurring sentence-medially, the reflex of the rising tone (this is a useful temporary label, but should not prejudice our analysis) is regularly a high or a low tone, conditioned in some respects by tonal class (i and ii versus vi and vii), the value of the tone following (high or low), and, to a limited extent, the syntactic context. The process involved is dissimilation, and the reflex of the rise is a low tone before a following low tone, or series of consecutive lows, which then becomes raised to high:

- (16) áhèiré kàriòkí ßrífírí /kàriòkí/ ii); /ßrífírí/ ii)
 'he gave the peppers to Kariuki'
 (17) áhèiré mò:ngáí ßrífírí /mò:ngáí/ vi)
 'he gave the peppers to Mungai'

Before a following high tone, the reflex of the rising tone is often a high tone which in turn downsteps a following high or series of highs:

- (18) áhèiré kàriòkí nǎtá /nǎtá/ i)
 'he gave Kariuki a star'
 (19) áhèiré mò:ngáí nǎtá
 'he gave Mungai a star'

In certain contexts (syntactic), however, class vi and vii items maintain

a low tone before a following high tone which remains unchanged. Compare the following:

- (20) ii kàrì'òkí n̄é mwè:ṽá 'Kariuki is good'
 (21) vi mò:ṽgáí n̄é mwè:ṽá 'Mungai is good'
 (22) vii mòbákè n̄é mwè:ṽá 'the tobacco-plant is good'

In certain other environments, we find that the reflex of the rising tone is regularly a downstepped high tone. This is the case after a raising process when all basic high tones are similarly downstepped. Thus, using the same frame that was employed to diagnose the underlying high tones of classes iii-v, we find:

- (23) n̄éṽwá mòbákè ... 'so that a tobacco-plant ...'

Again, parallels are readily found in other frames:

- (24) áhèiré ñjòróná ṽgó /ṽgó/ i)
 'he gave Njuguna some firewood'
 (25) áhèiré ñjòróná mòbákè /mòbákè/ vii)
 'he gave Njuguna a tobacco-plant'
 (26) áhèiré ñjòróná kèṽṽáí /kèṽṽáí/ v)
 'he gave Njuguna a crocodile'

Further comment on the alternation of the final tone of ñjòróná -- a fact which is also relevant to the analysis of the rising tones-- is provided in 4.3 following.

On the basis of the evidence above, we analyze the surface rising tone as an underlying high tone, but one which must be marked unstable. In this way, we can account most economically for the data, since all downstepped high tones can be derived by a single process from underlying high tones. We are also able to maintain an underlying 2-tone (high/low) opposition, though by using a non-tonal diacritic feature like [\pm unstable], we are thus suggesting that the language makes more restricted use of certain varieties of high tone which are only evidenced utterance-finally (compare also the data in section 4.3

following).³

4.3 Another unstable high tone. Examples (24)-(26) exemplify another form of ambivalence in the alternation of a final high and low tone in *njòyóná*, which is a class i noun. When a class i or ii item ends in two consecutive high tones, the final high tone becomes unstable in certain contexts and will drop to low before a following low or series of consecutive lows, which are in turn raised to high. Before following high tones, the final high tone of these words is unchanged, though the following high or series of consecutive highs is downstepped. This is an exact parallel to the process of high-tone dissimilation discussed in respect of rising tones above.

- (27) *áhé'iré njòyóná ßírfíßírf* /njòyóná/ i); /ßírfíßírf/ ii)
 'he gave the peppers to Njuguna'
áhé'iré njòyóná máróá /mároá/ i)
 'he gave the millet-beer to Njuguna'

It is suggested that the same diacritic feature [unstable] be used to distinguish this type of unstable high tone. These forms never surface as a rising tone and can be kept distinct from those that do in being phonologically predictable.

4.4 Summary of underlying forms. Class i and ii forms with stable high and low tones can be judged to bear them underlyingly, and the set of underlying tones for the various noun types can be summarized by the following examples (where [u] = [unstable]):

- (29) class i /*ɔgó*/ 'firewood'
 [+u]
 /*njòyóná*/ 'Njuguna'
 [+u]-predictable
 /*ɔgó:ɔgóní*/ 'bed-bug'
 /*kéayáràrò*/ 'stile'

³Bennett [1974] sees the surface rising tone as an underlying falling tone. His comments are unfortunate in relying on diachronic evidence to the exclusion of synchronic data (basically, he feels that it is a falling tone because the reflex in a neighboring language is often a falling tone, and because he hypothesizes that the historical origin might have been the coalescence of two tones through the loss of a syllable). Whatever the supposed origin of this tone, we see it as a high tone (though of a special type) because it behaves too obviously like other high tones in Kikuyu.

ii	/kàrìòkɪ/ [+u]	'Kariuki'
	/kèambèrériá/ [+u] - predictable	'beginning'
	/mòcé:rénɪ/ [+u]	'stinging-plant'
	/mwà:nèkì/ [+u]	'Mwaniki'
iii	/mòrèràniá/ [+u]	'examiner'
iv	/ŋàŋá/ [+u]	'Ng'ang'a'
v	/mwà:rèrériá/ [+u]	'spokesman'
vi	/mò:ŋgáɪ/ [+u]	'Mungai'
vii	/mòβáké/ [+u]	'tobacco-plant'

Subsequent discussion and analysis will lead us to modify the above scheme slightly; section 7 will make explicit the status of the classification itself in respect of the non-predictable information required for the correct specification of the surface tones.

5. Nominalizations

There are twelve ways of deriving nouns in Kikuyu, mostly from verbs, and, as noted in Barlow's [1960] discussion, at least three can be used freely in making new words from almost any verb. The tonal patterns of derived nouns are interesting to compare with the classification established so far, in that they make clear certain relationships between particular sub-classes. It can be demonstrated that certain of the tone classes may be paired together in that nouns formed from vowel-initial stems, so that the noun prefix coalesces with the stem-initial vowel to form a single surface syllable, regularly belong to one class, while those derived from consonant-initial roots regularly belong to the other. The classes that are related in this way are as follows:

(30)	<u>vowel-initial</u>	<u>consonant-initial</u>
	i	ii
	iv	v
	v	iii

The first opposition is evidenced in several forms of nominalization, including the following:

(31)	mòòà:kì	ii	'player'	òá:kà	'play'
	mòròrì	ii	'watcher'	ròrà	'watch'
	mòtáhí	ii	'drawer'	táhà	'draw (water etc.)'
	mwà:néki	i	'hanger'	ànékà	'hang up'

The second and third oppositions affect verbs of certain sub-classes only. Verb roots are sub-classified on the basis of both their imperative singular positive forms and their infinitive tones. The scheme is as follows:

(32)	<u>Imperative</u>	<u>Infinitive</u>	<u>Gloss</u>
class 1a	tě / t'é	ròtět	'throw away'
1b	táhà	ròtáhá	'draw (water)'
1b	βù:ndfòíà	kòβù:ndfòíà	'teach'
1b	cùrácùrà	ròcùrácùrà	'prowl about'
class 2a	òá:kà	ròòà:kà	'play'
2a	βì:ndòrà	kòβì:ndòrà	'turn'
2a	cà:mbíçòkà	ròcà:mbíçòkà	'lose quality'
2b	ròrà	kòròrà	'watch'

Nouns derived from verbs of classes 1a, 1b, and 2a with consonant-initial roots fall into tone-class v, when forming the mò- -eré 'way of ...' nominalization; those derived from vowel-initial roots are class iv:

(33)	mòβì:ndóránéré	v	'way of turning'	βì:ndòrà	'turn'
	mòβù:ndfòánérié	v	'way of teaching'	βù:ndfòíà	'teach'
	mwì:nánéré	iv	'way of singing/ dancing'	ínà	'sing/dance'

Nouns of this type derived from class 2b roots with consonant-initial stems fall into tone-class iii, while those from vowel-initial roots are class v:

(34)	mòvòránéré	iii	'way of buying'	ròrà	2b	'buy'
	mwà:ránérié	v	'way of speaking'	àriá	2b	'speak'

Nouns of class iii are, in fact, relatively few in number, since all those so far noted are examples of particular kinds of nominalization derived from consonant-initial verb roots of class 2b.

Several ways of deriving nouns treat forms from causative class 2b roots differently in assigning them to tone-class vii:

(35)	mòβì:ndóróó	v	'one turned'	βì:ndórá	2a	'turn'
	mòβàríá	vii	'one who notches'	βàríã	2b	'notch'
	mwà:rió	vii	'one spoken to'	àríã	2b	'speak'

It is to be noted that no special class is used for forms from vowel-initial roots. Classes i, iv, and vi are related in the sense that their initial low tones are not subject to tone-raising by the process of high-tone assimilation that block-raises low tones to the level of a preceding high tone; with few exceptions, membership consists of items that have the initial tone pattern Low + High (if the initial tone is low), and which have initial syllables which represent the coalescence of any of three forms of prefix (V-, CV-, or N-prefix) with a vowel-initial root. Among the few exceptions are the following personal names:

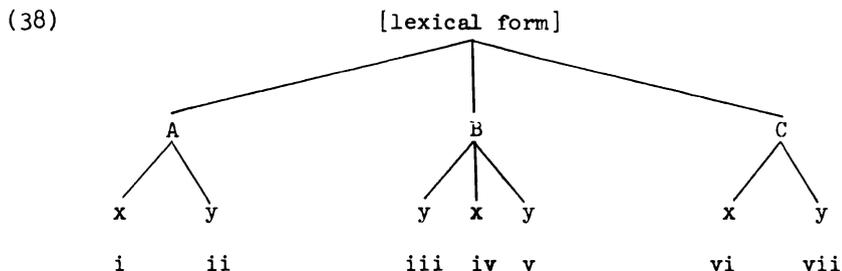
(36)	njàó	ii	'Njau'
	njèrĩ	ii	'Njeri'

Class vi is particular in not entering into the scheme of derived forms, and to date only eleven members have been noted: five place-names, one personal name, and five loan-words.

Vowel-initial syllables in nouns will all assimilate to a preceding high tone, but those of classes ii and vii (which are subject to initial-tone-raising) are kept distinct by an additional raising of the syllable following the vocalic prefix:

(37)	<u>isolation</u>			<u>raised</u>		
	ʔβùrĩ	i	'umbrella'	né ʔβùrĩ		'it's an umbrella'
	ʔyéɾó	ii	'tooth'	né ʔyéɾó		'it's a tooth'
	ʔβùríã	vii	'looting'	né ʔβúríã		'it's looting'

The classification, together with the internal relationships made clear from the analysis of derived nouns, may be summarized as follows:



Key:

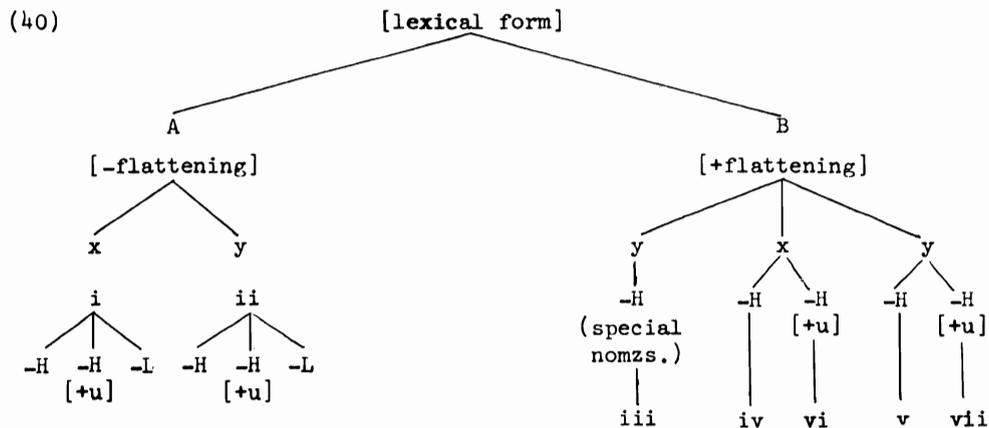
- A. forms with either low, stable high or one of two types of unstable high final tone
- B. forms with final high tone(s) that may be lowered intonationally
- C. forms with unstable high final tones which may be lowered intonationally
- x. no initial-low-tone-raising potential
- y. with initial-low-tone-raising potential

There are, however, several factors which indicate that the above system of relationships should be modified to indicate that classes i and ii are viewed as a unit that opposes classes iii-vii as another. We have already seen that the final unstable high tone of classes vi and vii distinguishes itself from that of classes i and ii so that certain tone-change rules will require such a statement of class-restriction for their correct operation. We note, too, that the final high tones of classes iii-vii are related in undergoing the process of flattening. With the operation of the two processes of high-tone assimilation (single low-tone-raising and block-low-tone-raising), we regularly find situations in which items of classes i and ii with final high tones trigger the rule of block-raising, while items of classes iii-vii involve the rule of single-raising. In the following examples, an item of class i or ii ending in a final low tone causes downstepping of both high and low tones across the boundary (subject + verb); class i or ii items ending in a high (stable

or unstable) tone involve the process of block-raising, with compensatory downstepping of basic high tones that immediately follow the raising process; class iii-vii items involve only the process of single-raising with no downstepping:

(39)	mwà:ráhìpá	ʒ́nfré	'a weakling saw'	/ʒ́nfré/, /mwà:ráhìpá/	i
	njòvónà	ʒ́nfré	'Njuguna saw'	/njòvónà/	i
	wà:ró:òì	ʒ́nfré	'Waguthi saw'	/wà:ró:òì/	i
	kàḡèrf	ʒ́nfré	'Kang'eri saw'	/kàḡèrf/	ii
	kàriòkì	ʒ́nfré	'Kariuki saw'	/kàriòkì/ [+u]	ii
	mwà:nèkì	ʒ́nfré	'Mwaniki saw'	/mwà:nèkì/	ii
	mòvèràniá	ʒ́nfré	'the examiner saw'	/mòvèràniá/	iii
	ḡàḡá	ʒ́nfré	'Ng'ang'a saw'	/ḡàḡá/	iv
	rákírí	ʒ́nfré	'Gakiri saw'	/rákírí/	v
	mò:ḡḡáì	ʒ́nfré	'Mungai saw'	/mò:ḡḡáì/	vi
	mwà:ḡḡí	ʒ́nfré	'Mwangi saw'	/mwà:ḡḡí/	vii

On the basis of this evidence, the influence of which is pervasive, we modify (38) as follows:



where the rule of intonational flattening applies to forms B but not A; where y forms have initial tones that are sensitive, if low, to the single-raising assimilation process, while x forms cannot be so raised; and where -H(igh) and -L(ow) represent the forms of final tone evidenced in that class.

6. The Tonal Forms of Loan-words

It is interesting to compare the tonal forms of loan-words and see how they have been assimilated into the system of tonal sub-classification that has been described so far in relation to the native nominal vocabulary. We find that loans can be readily assigned to each of the basic classes, except class iii. We note that there are some general tendencies, in that many Swahili loans belong to classes vi and vii, and that many English loans are placed in classes iv and v, but there are many exceptions. We thus conclude that the general sub-classification is non-predictable for membership except for derived nouns.

Examples of loan-words and their tonal classes:

(41) class i	mwà:rímó	'teacher'		
	βì:òfì	'P.C.' (Provincial Commissioner)		
	βftá	'war'		
	cáúrì	'affair'		
class ii	βítá	'Peter'	mà:ndàréná	'Magdalene'
	βírfβó	'Philip'	íòàβétá	'Elizabeth'
	màrfá	'Mary'	βìβìríá	'Bible'
	mòβf:ră	'ball'	mòβícf	'cook'
class iv	rúβáðf	'Rufus'	βà:ngírf	'bangle'
	ɲjòèèβú	'Joseph'	f:ɲjínf	'engine'
	òámó:màtá	'thermometer'		
	ndémó:kíráðé	'democracy'		
class v	róké:cónf	'location'		
	kéβà:ngá	'large panga'		
	βàré:òírámú	'pyrethrum'		

class vi	háńá	'Anne'		
	áńjé:ńdá	'agenda'		
	íćá:ńf	'tea-plant'		
	βó:tf	'vote'		
	óβú:òf	'nonsense'		
class vii	káβúté:ńf	'captain'	mbíðá:ré	'curry-powder'
	βùràńá	'sweater'	kéβókó	'leather-whip'
	mòćá:rá	'wages'		
	ńdáβòró:ńdff	'the P.W.D.' (Public Works Department)		

It will be noticed that the pitch-accent of many of the English and Swahili forms is represented in Kikuyu by a long high tone.

7. Conclusion

Given the large number of derived nouns in Kikuyu, including three open derivational classes, it seems likely that the system of tonal sub-classification evolved around the different forms evidenced derivationally. It is in this area that the functional load of tone is highest, serving to distinguish several minimal oppositions, for example,

- (42) mwá:ríó ii 'way of speaking'
 mwá:ríó vii 'one spoken to'

Probably because of the dominance of derived forms numerically and their relatively rigid tonal scheme, Kikuyu speakers rarely disagree on the tonal pattern, while with loan-words there can be several forms current at the same time and well-tolerated.

The following is a summary of the non-predictable tonal information required for the various forms discussed.

1. The marked high value /' / of the single tonal opposition must be specified.
2. If the final tone of the word is high, the marked positive value of the diacritic rule-feature [\pm flattening] will be specified.
3. Except for those items unmarked for the feature [\pm flattening] which end in two consecutive high tones (and which have a predictably unstable final high tone), the marked positive value of the diacritic feature

[±unstable] must be specified.

4. Those items which have a vowel-initial root or nasal prefix such that the prefix coalesces with the initial syllable of the root, and which have an initial tone pattern low + high, will be assumed automatically to block the assimilation rule of single-raising; all other forms will be assumed to undergo this rule. All exceptions will therefore be marked for one or the other value of the rule-feature [±single-raising]. This rule can only apply to those forms with initial low tones.

In (43) below examples of underlying forms are listed; reference may be made to the earlier summary in (29):

(43) /ɲgɔ́/	'firewood'	
[+u]		
/ɲjoxóná/	'Njuguna'	
/ɲgɔ́:ɲgonf/	'bed-bug'	
/keaxárarɔ/	'stile'	
/kariokf/	'Kariuki'	
[+u]		
/keamberériá/	'beginning'	
/mocé:ɣenf/	'stinging-plant'	
/mwa:neki/	'Mwaniki'	
/moxeraniá/	'examiner'	[+flattening]
/ɲaɲá/	'Ng'ang'a'	[+flattening]
/mwa:rerériá/	'spokesman'	[+flattening]
/mo:ɲgá/	'Mungai'	[+flattening]
[+u]		
/moβaké/	'tobacco-plant'	[+flattening]
[+u]		

The tonal processes involved in deriving the surface tones can be summarized as follows:

- (44) a. High-tone assimilation:
- i. single-low-tone-raising
 - ii. block-low-tone-raising
- b. Dissimilation with unstable high tones.

- c. Rising-tone realization.
- d. Intonational final-high-tone-lowering (= flattening).
- e. Forms of downstepping:
 - i. after block-tone-raising (applies to high tones only)
 - ii. intonational, both across syntactic boundaries and utterance finally, reinforcing mood (statement, command and direct question) and polarity (positive, negative) distinctions: this affects both high and low tones.

REFERENCES

- Barlow, A. R. 1960. Studies in Kikuyu Grammar and Idiom. Edinburgh: Blackwood.
- Bennett, P. 1974. "Towards an adequate account of Kikuyu Tone." Unpublished paper.
- Benson, T. G. 1964. Kikuyu-English Dictionary. London: Oxford University Press.
- Ford, K. C. 1973. "Prolegomena to the analysis of Kikuyu tones." Ms.
- Ford, K. C. 1974. "Tone and intonation in Kikuyu." Report of University of Nairobi research project, unpublished.
- Harries, L. 1952. "Some tonal principles of the Kikuyu language." Word 8:140-144.