[1]THE MUSICAL DIMENSION OF PERCEPTION IN THE UPPER CONGO, ZAÏRE

by

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Writing in 1591, Pigafetta relates the experience of a Portuguese explorer, Duarte Lopez, in what is now Angola. After describing a kind of guitar which he found there, he goes on to say:

> More than this (and very wonderful), by means of this instrument they indicate all that other people would express by words of what is passing in their minds and by merely touching the strings signify their thoughts. (Pigafetta p. 111).

Soon after I arrived myself in Central Africa, I was confronted with an experience similar to that of Duarte Lopez. An Olombo man who possessed a guitar *sese* (a so-called Hova guitar, brought into this area by the Arab slave-traders at the turn of the century) invited me to hide a coin in the clothing of one of his friends who formed a ring around him and said he would guarantee that another friend who had not seen where the coin was placed would be able to find it without any difficulty. I accepted the challenge and listened carefully to the guitar. The man found the coin easily and repeated the performance without me being able to see or hear any messages from the guitarist. I had to admit that I was baffled by what I had seen and that there was some feature of their perception which remained hidden from me. Some years later, when I had begun to study the way in which musical tone-patterns are important for speech in this part of Africa, I realised how these Olombo villagers had mystified me.

It was not until the end of the XIXth century that the relationship between tonal speech and musical signalling was tentatively suggested (Buchholz) and much longer before detailed, convincing accounts of this relationship were offered (Boelaert, Clarke, Burssens, Hulstaert, Carrington). But even today the extent to which the tonal patterns of speech penetrate into cultural behaviour is little realised by those to whom such patterns are not part of inherited speech forms. I suggest that it is no exaggeration to say that the existence of such tonal patterns in speech adds a further dimension to perception in the area where they are to be heard.

The linguistic basis for such musical patterns is now well known. In many parts of Africa south of the Sahara, as also in America and Asia, the linguistic elements called vowels and consonants are not sufficient to characterise meaning but must be supplemented by musical phrases. Every word has an inherent tonal pattern which helps the hearer to recognise what is signified by the speaker. To take some examples from Lokele, a language spoken by a fisher people west of Kisangani:

lóngo	m d	mountain or hill[2].
longo	d d	irritation
longó	d m	egg-shell or skull (something round and brittle!)

The four following verbs are only separated by tonal differences:

énéké	m m m	see!
éneke	m d d	let him see
énéke	m m d	don't let him see
éneké	m d m	he saw (long ago)

Notice that each syllable has one of two distinct tones — a high tone or a low tone.

[1] Substance of a lecture given at the Université Libre de la République de Zaïre, Kisangani, in December 1970.

[2] High tone is indicated by an acute accent placed over the syllable carrying it; unaccented syllables carry a low tone. These are fu ther indicated by the tonic solfa letters: m— high tone; d — low tone.

It is clear that the musical possibilities are not exhausted. The first example could have a fourth pattern: both syllables with a high tone: lóngó m m . But this would make nonsense of the word; no such word exists in the language. Similarly, eneke could have four other tonal patterns; but words with these other tonal patterns are never heard and would have no meaning for hearers.

It should not be thought, however, that tonal patterns are only important where they alone distinguish meaning. *All* words in Lokele have an inherent tonal pattern which must be used by the speaker. Observers from the West where so much stress is laid on the written word, and where linguistic perception is often visual rather than auditive, sometimes find it hard to grasp this musical nature of many African languages which are to be heard rather than read. The necessity for hearing the tones before properly identifying a word will have an important bearing on literacy work in the continent. Many of our western-style orthographies stop at indicating vocalic and consonantal elements in black and white; they make little or no attempt to show tone.[3] An inexperienced reader must often make a choice among several possible tonal patterns before he reads a word aloud (or mentally) and for this he needs to know the context of the word. Clearly, global methods of teaching reading will be more effective than syllabic ones. We must surely appreciate the remarkable intellectual achievement of many Africans who have learned to read their own language fluently in spite of being deprived of the musical dimension of speech in the written forms offered by western teachers.

Let us now examine in more detail some of the ramifications of speech-tones in Upper Congo culture.

GONG TALKING

The tonal nature of signals used for broadcasting messages on pairs of skin-topped drums, on drums with membranes whose note can be varied by altering tension, and on all-wooden slit-gongs with two-toned lips, has already been described for many parts of Africa including this Upper Congo area. It is realised that the linguistic elements of the broadcast language must be considerably longer than those of the corresponding spoken signals. This lengthening is achieved by using small stereotyped phrases rather than single words for every element of the broadcast language, the phrases used often being of a picturesque nature and forming an important part of the oral literature of the group using them. A few examples from Lokele will show this difference between the spoken word and the linguistic basis of the drummed signals:

Reference	*Spoken*	*Beaten*
manioc	lomata	lomata otíkala kóndo manioc remaining in the fallow garden
plantain	likondo	likondo líbotúmbela plantain bunch which must be propped up when ripe
white man	bosongo	bosongo olímó kondálokonda white man spirit from the forest
canoe	wáto	botanda lokoko wood lump to walk over (the water)
return!	inwáká	inóláká batíndí lambísa inóláká bakolo mbísa seléké batíndí bakolo sé bring back the feet, bring back the legs put the feet and legs down (*here*)

[3] Bible translation work often adopts special symbols for indicating tone where ambiguity might arise. But such symbols do not attempt to show all the speech tones of the printed text.

Further redundancy is added to the beaten message by the repetition of each phrase and the use of special opening and closing phrases.

Names of people and villages are couched in the same picture-like phrases so that the tonal pattern of the whole is characteristic. The gongs themselves may be given names which will be beaten out at the beginning or at the end of the drummed message. For instance, the Yamoya clan of Yalemba village, near the confluence of the Aruwimi with the Congo, end their message with the name of their talking-gong:

lómbo lómbo lwángaláká ato md md mdmm dd

the village section, the village section which used to have a lot of people in it.

The interest of these picture-like phrases for ethnology, history and linguistics has already been pointed out (Carrington 2).

OTHER SIGNALLING INSTRUMENTS

Any musical instrument which is capable of producing at least two distinct notes can be used to broadcast messages with such bitonal patterns. *Whistles* made of small round fruits and bored with at least two holes in the side are seen in this area. One hole is used to produce a note as in a flute, while the other is opened or closed to modulate the first note. Side-blown horns have a hole bored in the end which is opened or closed by the thumb to produce a high or a low note. *Whistling with the lips* can imitate the two notes of broadcasting instruments and serve for secret communications which do not have to travel far. *Yodelling* is frequently heard from fishermen returning to the village after work among the islands of the river. Wishing to send a message to their families while they are still some distance away from the village (a mile or more), they imitate the signals of the gong-language phrases by shouting *ke* or *le* for the low-toned syllables and *ki* or *li* for the high tones. Fishermen in the Basoko area use a similar yodelled language but in their case we hear *ko* and *o* for the low tone and *ku* and *u* for the high tone.[4] The shouted name for the white man in Lokele would thus be:

kelekeleliki kelikeleke

These yodelled messages can be heard clearly over distances where consonantal and vocalic differentiation would be impossible.

The simplest form of signalling instrument in this area is probably that known as *ekondo* by the Mba people (Bamanga) to the north of Kisangani and used during the *Kabile* initiation rites for their boys. It is a long pole with an oval cross-section; the broken stem of a long paddle is usually employed. This may be made to resonate better by placing it in contact with a large snail-shell held by string in the armpit of the *ekondo*-player. By beating the pole with a short stick across the long and short diameters of the oval cross-section, two distinct notes are heard. The song conductor strikes the tonal pattern of the first line of the song he requires the boys to sing and these are then supposed to recognise the song and start singing immediately. (Carrington 3.)

An interesting case of musical perception occurred recently here in Kisangani during performances by the police and military bands of the city. They were playing a popular song whose words recount the military events of the Upper Congo area in 1966 when the national army captured Kisangani from the upsurgent Katangese gendarmerie. The Lingala libretto of this song can be translated:

Who started it all?
The Diabos started it (i.e. the Katangese gendarmerie)
Then the ANC arrived (Armée Nationale Congolaise)
And the Diabos were scattered.

[4] The vowels of such shouted syllables suggest that in spoken language, high-toned syllables might tend to have closed vowels (i, u . . .) while low-toned syllables might tend to have open vowels (e, o . . .). A detailed count of Lokele syllables, however, does not show any significant difference in the number of syllables with open vowels bearing a low tone and those bearing a high tone, nor in the number of syllables with closed vowels, bearing the two different tones. In other words, the correlation between high tone and tenseness in the organs of speech which is characteristic of this yodelled language is not apparently to be found in the normal speech of the area.

The tune may be represented in tonic solfa as:

s m f sss l t l sss f s f mmm r f r mmm

After several repetitions of this theme, including a sung version by the whole band with instruments silent, the leading trumpet suddenly blew his instrument as a bugle, using two of the higher harmonics and emitted a series of two-toned phrases:

m ms s m m sms m mm s m m sss

He was clearly signalling as a talking-horn would. The audience recognised it as signalling and cheered the trumpetist but no-one would tell me what the linguistic basis of the signals was. The trumpetist himself refused to divulge these tonal phrases and I suspect that he was merely imitating horn-signalling without giving any specific message. However, small boys from the area began to put their own linguistic interpretations on these notes, making them out to be the tonal patterns of phrases too ribald for me to repeat in this audience. The point I want to make is that such two-toned playing was immediately felt by the hearers to suggest a linguistic basis and such a basis was indeed supplied by some of them.

If perception thus has a musical dimension in the Upper Congo so that musical sounds have a semantic connotation, how far does this affect the music of the area? I have tried to show already elsewhere that traditional Upper Congo songs are always closely bound to the inherent tonal patterns of words associated with them. The relationship is indeed so close that it would be no exaggeration to regard our Upper Congo song-melodies as nothing more than the essential tonal patterns of the libretto. This does not mean that we only hear two notes. Some songs are merely bitonal. But others have 3, 4, 5, 6 and 7 notes. In every case so far studied, however, it is possible to analyse such polytonal melodies into sequences of syllables within which the rise and fall of the melody obey exactly the movements required by changing semantic tone. One example may suffice to demonstrate this. It is a song sung in the language of the south-bank villages between the confluences of the Aruwimi and the Itimbiri, during the telling of a story about a father and his disobedient son. The pair are out fishing on the river when the boy sees a water-snake moving over the surface near their canoe. As he picks up a piece of firewood to throw at the snake, his father reprimands him and tells him to let the snake go. The boy throws the wood, misses, picks up another piece and throws, in spite of his father's remonstrations. In the end he hits the snake which then turns round, enters the canoe, bites the boy and makes off. The boy dies before the father can reach the village. As he sadly leaves his canoe, he cuts off the boy's right ear and holds it up in his hand while singing his way through the village:

Ear-o!
I speak to the heart of my child
The heart of my child doesn't listen.
Ear-o!

Compare now the tonal melodies of the syllables (high tones marked with an accent) with the tonal patterns of the song, broken up into sequence as suggested above:

litói-o	s l s s
léebékélá	s fi s s s
móna olókó	f m m f f
móna olókó acókaka	m r r m m r m r r
litói-o	d r d d

There is no discrepancy whatever between the semantic tones and the sung pattern, even though the sung melody is polytonal.

This is, of course, the method used by Congo orators, including Christian preachers, when they sing phrases to which the audience adds a constant-pattern refrain. Much has been written about the need for African music in Church worship and many suggestions made about ways of using such an indigenous medium of Christian praise and prayer.

In the Upper Congo area, no other method would be truly indigenous than the one just mentioned, namely, using the tonal patterns inherent in the spoken word. Pairing melodies culled from other African songs, however indigeneous they may be, would be as destructive of the tonal patterns of new words as melodies taken from European church hymnody. Many Europeans find it helpful to use African melodies fitted to European words in church worship as well as private prayer. It must be pointed out again, however, that such melodies divorced from the libretto that created them will have little significance for African singers.[5]

BIRD SONG

I should like to close this lecture by referring to a subject which some people will regard as fantasy. Here in the Upper Congo, as elsewhere in Africa, we are surrounded by musical melody in the form of bird-song. If my thesis is correct, that there is here a musical dimension to perception, does bird-song have a semantic reference for Upper Congo hearers?

Several experiences suggest an affirmative answer.

A Congolese preacher illustrated a sermon on Christian joy by saying that one of the common birds in this area sang the Lokele word for "joy", namely *limengo*, when it whistled the melody: m d l,. Now Lokele *limengo* has three essential low tones. When, however, the word is spoken in isolation, these essential tones are realised with a melody closely resembling that of the bird because of the phenomenon of "final cadence" whereby all the syllables show a progressive fall at the end of the spoken phrase or word.

A bird known to the Basoko people as *bosiobondole* sings:

d' l s l m

during the months of March and April. Local villagers interpret this linguistically as: hae haloa . . . "water has come", because they hear the song during the season of high water and say that the bird is complaining it can no longer feed on insects living in the tree-roots because these are covered by water. The semantic tones of this phrase are:

háe háloa

Clearly, the bird song does not reproduce exactly the tones of the spoken words in this case.

A further experience of meaningful bird-song was my own suggestion to a group of men near Basoko but was enthusiastically accepted by them and a further example given on their own initiative. We were cutting down a patch of forest to make manioc gardens when a bird nearby sang repeatedly in our hearing:

d ddd dss dddd

After several repetitions of this phrase, it changed to:

d d sd d d sd d d sdd

I whistled back the first phrase each time the bird sang it. The men with me were surprised to hear the teacher and a bird exchanging calls and asked me what was happening. I told them that for me the bird was speaking Lokele and saying:

he bosongo olúwí lokonda-lo — hey white man, so you know this forest?

the whistled notes being an exact reproduction of the semantic tones of the Lokele sentence. My reply was:

he inoli ilúwí lokonda-lo — yes little bird, I know this forest,

which has the same tonal pattern as the first phrase. The bird then changed to its second tune and one of the Congolese workers himself supplied apt words:

laoláu laoláu laoláu-o — very well, very well, very-well-oh!

I think I have given enough illustrations of the way in which musical tone has a semantic reference in many cultural features of Upper Congo life. It adds a further

[5] Much of the popular music from Congo, couched in the Lingala language, attempts to respect linguistic tones (cf. Carrington 5).

dimension to normal perception in this area. But to a person not accustomed to speaking a tonal language many of the phenomena described will seem strange and inexplicable just as Duarte Lopez was mystified by the Angolan guitar player nearly four hundred years ago.

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