

ON TONE CASE IN KWANYAMA AND HERERO

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PREAMBLE

In the October of 2004, I had the pleasure of renewing my acquaintance with Prof Arvi Hurskainen when I visited Helsinki as opponent in the public examination for Riikka Halme's PhD dissertation, (Halme 2004), which he had co-supervised with Thilo Schadeberg. In arranging for me to be an examiner of this thesis, Prof Hurskainen gave me the ideal opportunity to acquaint myself with the tonal system of Kwanyama (R21) and this paper is in part my thanks to him for this. While reading about Kwanyama, it was difficult not to attempt a comparison with the tonal system of Herero (R31), with which I was more familiar.

KEYS

It so happens that the last two languages which I have investigated in any detail, Sandawe and Herero, both contain a phenomenon which I felt was best described in terms of what I now call keys. Transferring the word 'key' to a phonological description creates a musical metaphor. Whole words, or parts of words, have their high and low tones realised within different pitch ranges. To take an example from the Sandawe of Mangastaa (Central Sandawe), which uses a key system to a much greater extent than Herero:

- (1) 
r¹òmósò ²gù^mbétàgèsì ²hèsú ²lèmêsû:sù ³pó:ésú ¹hàpú ²'amêpò
people meeting loc 3fSg woman 2Sg give 2Sg look after
decl 1Sg dem spec 3fSg 3fSg pron irrealis 2Sg

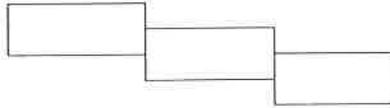
I gave this woman to you at a public meeting for you to look after

Keys are numbered from the highest downward and shown by a prefixed superscript number; the choice of key for each of the words in (1) is determined

by the syntactic structure of the sentence, and by the information structure of the sentence.

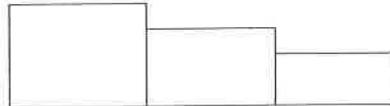
It should be left as an open matter, and perhaps one which varies as to language, whether the low tone in keys should be considered to vary in parallel to the high tone, and to be better diagrammed as:

(2)



or whether the following display better reflects the facts:

(3)



A closer investigation of stretches without high tones is needed: high tones tend to drag low tones up towards them.

Either way, I believe key to be an appropriate metaphor and will continue to talk about keys. The term 'register' has also sometimes been used, in a way not necessarily parallel to my use of 'key'; for example, Haacke (1999) uses it in his investigation of Khoekhoe lexical phonology; within other Khoe languages it seems to me that keys would be useful at least in lexical phonology. It is perhaps regrettable that the pitch characteristics of sentences are often the last piece of phonology to be investigated: many otherwise good descriptions do not seem to get that far.

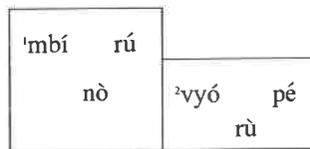
Some early works described downstep as a moving to a lower key. In Herero, as in Sandawe, downward transposition of key and downstep, although phonetically identical, are descriptively different phenomena; both constructs are necessary. (In Sandawe, there is one environment in which downward transposition and downstep are not phonetically identical.)

The transcription in (1) is a phonological transcription; Herero and Kwanyama are quoted in this paper using their orthographies, but omitting word boundaries which are not supported by the morphology, and adding tone marking. Glosses are intended to be minimal and illustrative, they gloss the word except where a morpheme by morpheme gloss is given; in the latter case, morpheme division is not indicated in the glossed word. Kwanyama examples are taken from Halme (2004), where fuller glosses are found.

To introduce keys into a phonological analysis of Herero obviates the need to mark a mid tone, or more than one mid tone, and with it the need to state complex

rules to show when underlying highs, and underlying lows, are realised as some sort of mid tone. In Herero, there is phonologically no mid tone, only high and low tones are needed in a phonological transcription. Whereas Möhlig et al. (2002: 95), (using their word division and their phonetic tones) write: *mbí ná órúvyó òrùpé* 'I have a new knife', using tone keys this can be written *'mbí 'nà 'òrú²vyó²òrùpé*, or *'mbí nà òrú²vyó òrùpé*, to only specify key when it changes. The same, diagrammed with the elisions to be expected:

(4)



In this way, Herero has the same number of tones as does Kwanyama, that is, two, high and low.

KWANYAMA

Halme (2004) presents a clear and tightly constructed analysis of tone in Kwanyama; it represents a noteworthy advance for linguists who wish to understand the tonal systems of Zone R languages. By reducing complex phonetic sequences of pitches, each associating with a syllable, to a two way contrast, H and L, and by showing how tone shifts one syllable to the right, she provides a basis for a full analysis of tonal phenomena in Kwanyama.

In her final few paragraphs, (Halme 2004: 149), she writes 'The interaction of tone and syntax, on one hand, and the verbal and nominal inflection, on the other, is especially intriguing. The Low tone of the special tone case and the polar tone used in the verbal inflection may have more in common than has been suggested in this preliminary study of Kwanyama tone.' '... it is clear that in various parts of the grammar there is a need for comparative tonal research into the western Bantu languages, and into languages of zone R (and K) in particular.' In this paper I wish to try to show how these different tonal phenomena do have 'more in common' by comparing Kwanyama and Herero.

Special Tone Case

It first needs to be noted that Kwanyama inflected verb forms can be divided into two classes, one in which an initial vowel is present, (the initial vowel has the form *o-*); the second does not have any such vowel. Those without the initial vowel are in turn categorised into three classes: basic, polarised and focused.

Polarised forms are basic forms with a polar tone prefixed to them; focused verbs have the form of basic verbs, but have the added characteristic of demanding the 'special tone case' on the following noun.

Halme describes the 'special tone case': it 'is constructed by having a Low-High contour on the augment in the underlying representation' (Halme 2004: 53). It appears after verb forms which Halme calls 'focused', 'these are Imperative and Hortative verb forms and some affirmative verb forms without an initial vowel ...' (Halme 2004: 55) (It should be remembered that Imperatives and Hortative verb forms themselves do not have an initial vowel.)

In an earlier article I showed how a verb in a main clause in Herero was expected to be in, or, at least, to start in, Key 1, but that the constituent immediately following the verb was in the lower key, Key 2. However, following certain verb forms, those in which the first morpheme is the subject agreement, there was 'a maintenance of Key 1, shown by the placing of a high tone in Key 1, on part of the beginning of a following word.' (Elderkin 1999: 158) The remainder of that following word is in Key 2.

I suggest that the high tone which was placed towards the beginning of the constituent following such a verb in Herero is parallel to the High in the 'Low-High contour on the augment' which Halme describes for Kwanyama in the special tone case (Halme 2004: 53). Either such a high tone is therefore to be reconstructed for a proto *état de langue* from which both Herero and Kwanyama are derived, or that proto variety should have the seed from which, by parallel development, these high tones could result. I assume that the immediate ancestor of both Kwanyama and Herero should be described using a system of keys.

In Herero, there are three things involved: the placing of the high tone, the transposition from Key 1 to Key 2, and the maintenance of Key 1.

Kwanyama concurs with Herero in the necessity of producing a high tone out of nothing in what Halme calls the special tone case.

In Kwanyama the downward transposition has been descriptively effected by the postulation of a low tone, the archetypical agent of downstep; downstep and transposition are often phonetically identical in their realisation, $^1H^2H$ is equivalent to H^1H . The 'Low-High contour' can be attributed to a *LH.

The maintenance of Key 1 is irrelevant in Kwanyama, because the language does not need keys in its description.

Verbs with initial vowel

Why should a verb have an initial vowel? Considering the tone patterns in the table of the affirmative tenses of Kwanyama (Halme 2004: 83), it is noted that the presence of the initial vowel demands that there is a low tone between the H of the

When this *-ku-* appeared in affirmative tenses before a subject agreement which had an initial consonant, it was completely deleted. Where the subject agreement is *-i-* (cl 8 and cl 9) or *-u-* (cl 3, cl 14 and 2Sg), the *-ku-* was also deleted; (these may have been interpreted as having an initial consonant). Before *-a-* (cl 1 and cl 6) the *-ku-* was retained. It then became susceptible of being analysed as the actual agreement for classes 1 and 6, and appears as such in the grammars.

So I see the formula

(9) *¹oko² verb word

as explaining the affirmative indicative forms with an initial vowel of Kwanyama verbs.

Polarised verb forms

This leads us straight to a consideration of what Halme (2004) refers to as polarised verb forms. These 'are prefixed with a polar tone in certain contexts ... Most commonly ... when preceded by an emphatic pronoun' (Halme 2004: 106).

(10) oko áéndelá ókó (Halme (394))
 17 s/he 17
 emph walked demII
 it's that way s/he went

Underlying, *aendela* has LLHH which would give *àèndèlá*. Here the prefixation of a polar tone which first displaces the Low of the *a-* (this floating L then deletes) and secondly spreads gives the underlying H HLHH producing, after left movement, *áéndelá*.

The presence of the polar tone is related to an earlier presence of a downward transposition from Key 1 to Key 2.

(11) *¹oko² verb word

A further example, where the (earlier) transposition follows *nà* + pronoun:

(12) ¹naashí ²támukáningá ²lení (Halme (391))
nà 7 demI you (pl) do 5 yours
 and when you will build your house

One context for the polarised form is after certain conjunctions, including *manghá* 'while'. The similarity to the Herero *má-*, which is used in the formation of several verb forms with a present or simultaneous meaning, may not be accidental: Herero *má-* takes Key 1; a following verb takes Key 2. In (13), the first

If the downward transposition is so important, then these forms lack this downward transposition at the criterial point. Either sequences with all Key 1 are at issue or sequences with all Key 2 or sequences with an upward transposition, from Key 2 to Key 1.

As focused verbs forms are in Key 1, in principle the lack of polarisation would be expected whether the preceding constituent were in Key 1 or in Key 2, and there is no easy comparison from Herero which I can adduce to parallel the preceding contexts for focused verb forms which Halme gives in Table 18 (Halme 2004: 104). It should be noted that in Herero a preverbal subject NP can show either Key 1 or Key 2.

However, 'the basic form without initial vowel is used in relative clauses' and 'in the dependent clauses introduced by the conjunctions *eshi* °LL 'when...', *manga* °LH/°HH 'while' or *ngeéngé* °HH 'if' (Halme 2004: 103). I would suggest that these are typical circumstances, not involving the verb of a main clause, where all constituents were in Key 2. The three conjunctions just quoted would be in Key 2, as would a following verb. Two of Halme's examples are now reproduced, adding key numbers as might be reconstructed for preKwanyama. Although we have been considering keys as the property of words or word parts, they may well go back to syntactic situation in which clause or phrase constituents as a whole were allocated a key; coordinated units within the same phrase typically share the key of that constituent; see for example ¹*òvìná* ¹*àvìhè* in (7), and ²*hèsú* ²*ìémésú:sù* in (1). The following examples are quoted with the post shift tones, but with the putative preKwanyama keys marked. In example (15), the verb, appearing in a relative clause, has the basic form; in (16), the verb, after the conjunction *èshi* 'when', is also the basic form.

- (15) ²oinamwenyo ²ei ²haitúká ¹ó²yáshíva ²óshóongalélé (Halme (369))
 animals 8 they₈ they invited meeting
 dem fly

the animals that can fly called a meeting

- (16) ¹o²ndáfika ²pétále ²eshi ²omungoyi ²taúdéngé (Halme (373))
 I arrived at the lake when nine it hit

I arrived at the lake when it was nine o'clock

CASE

As well as syntactic structure, a sentence is given information structure, the way in which new and old information is treated, the way in which certain constituents are brought to the attention of the listener. Units of information may be, or may not be, coterminous with sentences or clauses, or for that matter with any syn-

tactic unit. We can assume that certain clause or phrase constituents were brought into prominence by being given Key 1, the remainder of the information being in Key 2. (In Kwanyama this constituent may be the verb itself, a demonstrative, (for example *oko* and **oku*), or a conjunction.) This prominence in verbs is what Halme refers to as focus, her focused verb forms being reflexes of verbs in Key 1. If the subject of a clause were given prominence in a separate information unit, then it also would have Key 1. The choice between Key 1 and Key 2 for the subject NP in Herero relates to this.

What began as a feature of the information structure came to be taken into the syntactic structure when verb forms with an initial vowel became the unmarked form in Kwanyama; the point was reached when linguists found they had to write tone cases into the description of the language.

But if this is an explanation of certain phenomena in Kwanyama, there are still further questions which it raises.

One question is the origin of the high tone. Why should the reflex of a downward transposition entail its presence? It is there in the polarised form of verbs (all without the initial vowel), in the structure of verbs with the initial vowel and in the special tone case. In Herero it seems to be only present in what others, (Möhlig et al. 2002), call the 'object case'. As downstep is more readily noted between high tones, so perhaps the introduction of the second H assisted its recognition.

It is interesting to compare the Kwanyama rule of High Insertion, by which a H is placed on the second mora of a noun of more than three moras with no high tone. Although Halme does not consider it to be part of the environment for the rule of High Insertion, all her examples follow a verb, either finite or in a class 15 nominal. Can any connection be made between the H of the special tone case and the H of the rule of High Insertion? Unfortunately, a full systematisation of Herero verb forms is not available from which parallels might be adduced. And additional data from Kwanyama would be interesting: is a H inserted on a noun in a locative class with all low tones? (Note that the placing of the H of the special tone case on an syllable in Locatives nearer the beginning than in other nominals is a function of the elision of the first vowel in those other nominals; if High Insertion does occur with Locatives, does it too appear earlier?)

A third question, probably of relevance only for Herero, is the motivation for key maintenance there.

If the special tone case is a reflex of a downward transposition, what happens when the verb which it follows has itself been transposed down, for example into a relative clause? In Kwanyama verbs in relative clauses are typically basic forms, no special tone case follows, see example (15). In Herero however, I once elicited a relative where the equivalent of the special tone case was found with the verb

and the following constituent, which took the analogue of the special tone case, both in Key 2; I do not have textual examples. (In Herero only two keys are used. This is a limitation which other languages do not necessarily have; I am thinking of Sandawe where three is quite regular, but not too common in practice, and a fourth may sometimes be needed.)

Bantuists seem happy to refer to tone cases, despite their occurrence (in Herero, Kwanyama and UMBundu) being confined to position in certain syntactic sequences rather than expounding certain syntactic relations; (if one syntactic relation were to be expounded by different cases irrespective of position in sequence but dependent on the form of the verb in the clause, that is less of a problem for a case: a restriction to immediate post verbal position is suspicious). In the examples of Elderkin (1999), what Möhlig et al. (2002) see as the 'object' case, is shown to appear also with prepositional phrases (p. 158 (24–26)), adverbs (p. 158 (21–22)), locative nominals (p. 157 (20)) and the deposed 'subject' of a verb with locative subject agreement. Furthermore, it is clear from the examples in Möhlig et al. (2002) that only certain objects take the 'object' case; on this, see Elderkin (1999). Halme (2004) was well advised to be cautious by referring just to the 'special tone case'.

Schadeberg (1986; 1990), in his study of UMBundu, has drawn our attention to three tone cases which he labels Predicative, Object Case and Common Case. (In this short paper I have not considered the Predicative.) There are points of similarity between the system in UMBundu and the systems of Kwanyama and Herero. He summarises his historical conclusions by writing 'the UMBundu case system developed from the use of a weak demonstrative, the augment, and a predicative index.' (Schadeberg 1986: 445) Halme herself refers to more recent studies on tone and the augment (Halme 2004: 141).

By comparing Kwanyama and Herero, I postulate that, in the language from which these derive, information structure within an utterance raised one or more constituents to Key 1. Where Key 2 follows there was a downward transposition. This downward transposition provided the motivation for the generation of *LH, leading, after a verb, to what have been analysed as case forms.

'Tone cases' are the result of the syntacticisation of the rephonologisation of phonetic phenomena brought about by a downward transposition of key.

ENVOI

It seems that the Kwanyama tone system as described in Halme (2004) derives from a proto language which might well be better described by using the concept of keys. Kwanyama has lost keys. Earlier, as example (1), I quoted a Sandawe sentence. Helen Eaton and the Hunzikers are in the final stages of producing a

paper on the phonology of Western Sandawe, in which what I believe to be the immediately original phonological system using keys has been replaced by another which, at first glance, seem to derive much from neighbouring Bantu languages. It will be interesting to see if there are any similarities in the results of the loss of keys in Sandawe and Kwanyama.

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