

KASEM TONES AND ORTHOGRAPHY

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The paper discusses one aspect of Kasem orthography - the tone system. There are numerous homographs since the orthography conventions do not indicate tone, the distinguishing factor for many minimal pairs or sets of words. Too many homographs affect reading fluency and comprehension and many printed texts are unreadable. Indiscriminate tone marking, however, would entail heavy costs for readers and writers alike. The author calls, therefore, for an examination of the language with a view to establishing which homographs should be distinguished tonally in order to have effective written communication. A beginning has already been made in SIL/GILLBT publications.

Cet article présente un aspect de l'orthographe du kasem: le système tonal. Puisque les règles d'orthographe ne comprennent aucune indicateur du ton, il y a beaucoup d'homographes à cause des oppositions tonales. Le grand nombre d'homographes empêche une lecture courante et une compréhension facile. Plusieurs textes imprimés sont illisibles. Il serait cependant coûteux, de point de vue des lecteurs et des écrivains également, de marquer le ton partout. L'auteur recommande donc une étude de la langue qui établirait lesquels de ces homographes devraient porter des marques tonales afin de produire une communication écrite efficace. On a déjà commencé un tel travail dans les publications SIL/GILLBT.

0. INTRODUCTION

The aim of this paper is to describe the tonal system of Kasem, which to my knowledge is yet to receive a systematic account, and then to make suggestions for the writing of the language. Tone is of such importance that it ought to be given consideration in the conventional orthography of the language. Recent attempts at producing reading material have made a limited use of tone-marking, although no explanation has been provided for this new trend which deviates from the standard practice of omitting tone in conventional writing. This account will attempt to explain and evaluate this new trend and urge that more use be made of tone in Kasem orthography. It may be that departure from the orthodox practice will be found useful in other Ghanaian languages that exhibit tone phenomena similar to Kasem.

1. DEVELOPMENT OF KASEM LANGUAGE

The history of Kasem language development begins with the establishment of the Catholic Mission in Navrongo about 1906 and the introduction of formal and religious education in 1907. The pioneer missionaries made various translations of catechism manuals, biblical texts and hymns from French and Latin into Kasem for use by their converts, but unfortunately many of these are either unavailable or have not survived into the 1980s. Morin (1933) nevertheless provides some evidence of the kind of orthographic system adopted by the pioneer missionaries - people of French Canadian nationality who had settled in Northern Ghana after a spell of missionary activity in what is now Burkina Faso. The current orthographic convention in use by the Catholic Mission reflects only slight improvement on the earlier convention which has also influenced other later conventions such as that used by the Bureau of Ghana Languages (Kasem) and the now defunct Information Service (Kasem) convention and, to a lesser extent, the more recent and linguistically motivated conventions adopted by the Ghana Institute of Linguistics, Literacy and Bible Translation (henceforth referred to as SIL/GILLBT).

2. THE USE OF ACCENTS IN KASEM ORTHOGRAPHY

Most conventions used in writing Kasem share the common characteristic of discounting tone. For this and other reasons, such as (a) inconsistencies in representation and accommodation of more vowels than the number of conventional symbols, and (b) the insistence on imposing an Anglo-French system of word-division on a language employing different principles of word-formation, most Kasem orthographic conventions have been inefficient.¹ The SIL/GILLBT specialists have demonstrated an awareness of these problems including the issue of tone and have attempted several solutions. The problems and their solutions have not yet been set out in publication; however they become evident to the observant reader of GILLBT Kasem texts.

Although the early missionaries did not consider tone marking in their orthographies, they nevertheless employed French diacritics such as the accent grave which differentiates between /e/ spelt 'e' and /ɛ/ spelt 'è' and the accent circonflexe which differentiates between /o/ spelt 'o' and /ɔ/ spelt 'ô'. This system was introduced out of necessity, due to the availability of French language typewriters and the need to use French publishers for printed material. Although this convention did not persist, it has the advantage that diacritical marks over vowel symbols are not unfamiliar to some Kasenas.² Morin (1933), which followed this convention, is now out of print but copies are still in circulation. This previous use of accent marks, albeit to mark vowel quality rather than tone, goes some way towards discounting the objection that the introduction of tonal diacritics would appear exotic and might not find favour with the reading population. The drawback is that readers need to be made aware of the new values attached to the diacritics. They have to learn that a spelling such as *dèem* is not to be read as *dèem*.

3. THE TONES OF KASEM

Four basic tones have been identified (Callow 1965) and include three level tones: low [˘], mid [-] and high [ˊ]. The fourth tone is designated 'rising' tone [ˊ̎]. Other contour tonal realisations occur as a result of the loss of tone bearing segmental units and the subsequent attachment of the following unit's tone to a contiguous unit. This occurs across as well as within word boundaries. For example, some simple personal pronouns bearing low tone may absorb the high tone of a following future positive morpheme when the latter loses its segmental shape optionally.

- 1a. *kà wó bà* optionally 1b. *kǎ bà*
it will come it will come

Callow (op.cit.) introduces the phonological unit 'bar' as the domain of tone. Although Callow does not describe the concept fully, I agree with him that the domain of tone is a unit higher than the syllable which may comprise between one and four,

¹ Kasem has ten vowel phonemes which may occur long or short, nasalised or unnasalised. Length is represented in most orthographies but independently nasalised vowels may or may not be marked. There are only seven vowel symbols in use: a e ɛ i o ɔ u, hence the need to accommodate sounds that do not directly correspond with the symbols. The orthographies have not, however, adopted uniform means of effecting this.

Apart from the lack of agreement and uniformity there are inconsistencies even within the same tradition on the representation of vowel sounds. Attention has been drawn to these issues in my study *A Comparative Study of Kasem Orthographies* (unpublished typescript).

² This is a plus when considering the advantages and disadvantages of introducing tone marks into Kasem orthography.

possibly five, syllables; but the unit may also be a full word or part of a word. In terms of systemic theory, a hierarchy of four phonological units may therefore be established ranging from phoneme to syllable, bar and word. Awedoba (1989a) contains a description of the bar.

As the property of the bar, tone is not usually predictable, whereas the pitch level of a syllable occurring within it is known when the tone of the bar has been ascertained. In a bar whose tone is level, not contour, all the constituent syllables will bear identical tone pitches that could be high, low or mid. Thus it is redundant to mark the pitch levels of all the syllables contained in such a bar. In *kámı́* 'to wink', *bòrımáa* 'confused', *bōlo* 'valley' and *ná* 'water', all the tones are the same as the marked tone. Where the bar bears a rising tone, a glide pitch will be actualised only in those cases where the bar's structure comprises only one syllable. In a disyllabic or polysyllabic bar all the constituent syllables, except the final syllable, will have low pitch, but the final syllable bears mid pitch - hence *bǔ* 'child', *nǎga* 'leg', *dǎlimi* 'lick!' will be pronounced [*bǔ*], [*nǎgā*], [*dǎlimi*] respectively.

3.1 TONAL CONTRAST

The basic tones of Kasem are minimally contrastive. Just as numerous minimal pairs can be found to contrast any two phonemic consonants or vowels, so it is equally possible to find many pairs of words which contrast minimally any two tones, for example:

- | | |
|---|--|
| 2a. <u>High and low</u>
zı́ 'fall on'
zı̀ 'fashion out of metal' | 2b. <u>High, mid & low</u>
dḗ 'places or corners'
dē̄ 'day'
dḕ 'sticks' |
| 2c. <u>High and rising</u>
yé́ 'drive away birds with noise'
yé̄́ 'part/shift through material' | 2d. <u>Mid and rising</u>
chṓ 'to get mad'
chō̄́ 'drive vehicle' |
| 2e. <u>Low and rising</u>
ɲwè́ 'guinea worm'
ɲwé̄́ 'speeches' | 2f. <u>High, mid, low & rising</u>
Sǎ́ɲǎ́ 'place name'
sǎ̄ɲǎ́ 'side, ribs'
sǎ̀ɲǎ́ 'shea tree/cooking'
sǎ̄̄ɲǎ́ 'house, millet husk' |

As examples b and f show, sets of words or bars can be found where tonal contrast distinguishes between individual members of the sets. Not many words or bars in Kasem exist without the possibility of tone contrast with one or more other bars or words. Any Kasem orthographic convention which dispenses with tone will result in many tonal homographs. The implication is that the reader has more problems than the writer. The reader is often compelled to hesitate and pause to reconsider the texts he/she is confronted with.

The Kasem reader's problems are aggravated by other factors such as the fact that the minimally contrastive bars or words represented by one form may be of the same word class and therefore would potentially occur in the same place in the structure of the sentence.

A second problem is the existence of homophones belonging to the same nominal or verbal class.³ *kúri* 'feast' and *kúri* 'hearth stone' are both high tone, and are members of the same nominal class, selecting the same concordial markers. There is also a low tone noun *kùri* 'bottom', of the same nominal class, and a high tone verb *kúri* 'to select'. Orthographic marking of tone could distinguish the former, while the latter would be distinguished grammatically.

Present orthographic conventions place the burden of distinguishing between homographs on the reader. He has to look for clues throughout the text to enable him to choose between different potential meanings. Insisting on the status quo thus simplifies the work of the writers (who are a minority) and complicates the task of the readers (the majority). I agree with Stewart (1966) that it would be preferable to ease the readers' chore by introducing tone marking.

In drawing attention to the phonemic status of tones, it is important to remember that the phonetic context does not usually result in changes in the relative pitch levels of Kasem tones. So Callow was able to suggest (personal communication) the following heuristic structure for discovering tone identities:

3. à nē ... 'I saw

It is possible to generate the following utterances, using the above tonal device:

- 4a. à nē wē 'I saw God'
 4b. à nē wí 'I saw whistles'
 4c. à nē wè 'I saw red-flanked duikers'
 4d. à nē kwǒ 'I saw father'

No down-drift or down-step appear to occur in these utterances. It is indeed possible to generate a sentence like the following:

5. bà báa bà bā bā bíbára 'They won't bear tales'
 they fut neg come they tell tales

3.2 SIMPLICITY AND THE PROMINENCE OF TONE

Even without drawing attention to the grammatical importance of tone, it will be clear from the discussion so far that tone is of paramount importance in the structure of lexical items; it differentiates numerous pairs, and in some cases multiple sets, of bars and words that are more or less identical in segmental shape. The high phonemic value of tone calls for comment. The segmental structure of Kasem is too simple to express adequately the vast vocabulary of the language. Evidence of this is the fact of nineteen consonants and ten vowels and no vowel diphthongs. In fact, the distribution of vowels in bars shows a preponderance of 'polar' vowels i.e. /i ɪ, ə a, u ʊ/ over the non-polar vowels /e ɛ, o ɔ/. Thus in theory we have ten vowels, but in fact only six widespread vowels. Secondly, the ten are paired into five, and in all bars and most words only five vowels in theory may be drawn upon including three polar and two non-polar vowels. The

³ Kasem nominals can be grouped in terms of five genders which are grammatical, and also carry semantic connotations. Each gender is a pairing of a singular and plural nominal class; there are five regular pairings hence the five genders. Morphologically suffixes provide a clue to the class of the nominal, but prefixes occur too, particularly in the numeral. Syntactic concordial markers are the determiners but pronominal markers exist for each class. *Kúri* 'feast', *kúri* 'hearth stone' and *kùri* 'bottom' are Nominal Class 3 nouns since they are singular in these examples. They also belong in Gender II which is partly defined by the determiners *dem* (singular) and *yam* (plural).

available vowel resources for word formation are in fact far more restricted than appears at first sight.

The consonant phonemes number nineteen. In syllable structure these consonants do not cluster except in fast speech when the loss of the high front vowel in trisyllabic bars enables a limited number of consonants to cluster together as in *buruma/burma* 'confused state', *zamsu/zamsi*, 'to learn', *logsu/logsi* 'to go to the next', etc. The only other cluster involves /w/ and any of the other 18 consonants. In these cases the 'w' is interpreted as either labialization or the result of desyllabification of a back polar vowel such as /u/ or /u/.

The most pervasive syllable shape is CV. Most bars and words are monosyllabic but disyllabic forms of CVCV are common. Trisyllabic bars are rare though trisyllabic words are somewhat common. The former are of CVCVCV structure but the latter may sometimes exhibit CVNCVCV forms.

The conclusion, then, is that the language places restrictions on the range of segmental permutations and prefers short words. Having thus limited the segmental resources homophony becomes unavoidable, and tone becomes the means for disambiguating segmental homophony.

Since the language uses tone it would be unwise for the orthographic convention to omit tone altogether, and the orthography must and does suffer markedly by failing to represent tone.

3.3 SOME GRAMMATICAL FUNCTIONS OF TONE

The traditional distinction that systemic grammarians, such as Halliday et al (1964:22), make between lexis and grammar, which relates the former to open-ended sets and the latter to closed systems with choice from a limited number of component terms, enables a distinction to be made between content words (lexical items) and structural words (grammatical items). The distinction is not without problems. Nevertheless it will be adopted here for illustration of the importance of tone in the grammar. The examples so far used to illustrate tone have been confined to lexical items, but tones also distinguish between pairs of structural words constituting a closed system.. Tone may also be used to symbolise grammatical categories such as case, tense, aspect etc. These uses of tone will now be exemplified, again to illustrate the importance of tone.

3.4 WORD DERIVATION AND TONAL CHANGES

Many Kasem words enable other related words to be derived by means of segmental changes. The process may or may not involve tonal changes. Sometimes the tonal changes that accompany the derivational process appear to be more important than the segmental changes as in the following. The non-aspectual verb *zúrā* 'to be cold', and the verb *zùri* 'to cool', the adjectivals *zǔru* 'cold' and *zúri/zúra* 'cold' exhibit the same stem but differ with respect to their suffixes and more importantly the tones that they carry. The tonal changes as well as the segmental ones must be indicated if these different grammatical word forms are to be distinguished. Compare the following verbs and their nominal derivatives:

- | | | | | | |
|-----|---|------------|-----|--------------------------|----------------------|
| 6a. | dōl / dōla | 'to throw' | and | dola / dol | 'invisible missiles' |
| 6b. | lǔ / lùgə / lùrə | 'to leak' | and | lúra | 'leakage' |
| 6c. | té / tá / tá / tága | 'to shoot' | and | tāpa / tē | 'bow' |

All low tone verbs make their imperative forms by substituting a rising tone:

- 7a. **dùri** 'to run' : **dǔri** 'run!'
 7b. **bùri** 'to bite deep' : **bǔri** 'bite deep!'
 7c. **và** 'to hoe' : **vǎ** 'hoe!'

The verb of motion has among its forms three which are distinguished from each other by tone:

- 8a. **vé** imperative form: 'go!'
 8b. **vě** imperfective form showing intention: 'is going'
 8c. **vè** perfective aspect but also habitual: 'has gone/went/goes'

3.5 PRONOUN TONE AND CASE

The simple pronouns have a CV shape but a few of them have a V shape, and one a N shape. In a few cases tone distinguishes between pronouns:

- 1) the first person non-emphatic pronoun subject **à** bears low tone while the second person plural subject **á** bears a high one. But for tone, therefore, these two pronouns would be homophonous. The written utterance **a tua** means either 'I came' or 'you (plural) came'. Without tone in the written form the reader will not readily differentiate between these two.
- 2) The Nominal Class (NCL) 3 pronoun singular subject and the Nominal Class 9 pronoun plural subject are homophonous. They bear low tone and differ from the first person plural subject pronoun which bears a high tone.

- 9a. **dí** First person plural subject pronoun
 9b. **dì** NCL 3 singular subject pronoun
 9c. **dì** NCL 9 plural subject pronoun

The written utterance **de tua** is therefore potentially ambiguous. It could mean 'we came', 'it came' or 'they came'.

For most simple pronouns, case distinctions are made not by segmental but rather by tonal changes. Subject pronouns, with the exception of the first and second plural pronouns, are marked by low tone. The object case is marked by a high tone:

- 10a. **bà** 'they', 3rd pers. pl. subject
 10b. **bá** 'them', 3rd pers. pl. object

In the structure of the Kasem sentence subject precedes the verb element and object follows the verb. Thus for most sentences syntactic constraints prevent subject and object pronouns from being confused. In certain stylistic utterances the object pronoun may be included in the verb phrase as in 11a:

- 11a. //a / wo <kó> nɛ // 'I never experienced that'
 S O P

as opposed to:

- 11b. //a / wo nɛ / kó //
 S P O

Even so, there is still a minority of cases where the written form is syntactically ambiguous, thus leaving to tone the task of distinguishing between one syntactic interpretation and the other e.g. **a pɛ o kaane** which means either:

'I gave (it) to his wife'	a / pe / ò kaane //
	S P O
or: 'I gave him a wife'	a / pe / ó / kaane //
	S P O ₁ O ₂

3.6 INITIAL AND SUBSEQUENT SUBJECT

A Kasem sentence may start with a pronoun subject; this initial pronoun subject should be distinguished from other subject pronouns or subsequent subject pronouns that will be realised when the sentence is serial. Subsequent subjects have the same referent as initial subjects. They are, however, differentiated by bearing Mid rather than Low tone when the aspect of the serial is perfective. Given that the aspectual distinctions are neutralized in some verb forms, tone plays a crucial role in specifying the meanings of serial structures. The written utterance *a ve a yi* has many meanings, two of which are 'I arrived on time' and 'I arrive (habitually) on time'. In spoken language the use of tone allows the two meanings to be distinguished thus:

- 12a. // à vè a yí // 'I arrived on time'
 I arrived I reached
- 12b. // à vè à yí // 'I arrive (habit.) on time'
 I arrive I reach

Similarly the orthography does not distinguish between //bà dùri ba dí// 'they ran they won (perfective)' = 'they won the race' and //bà dùri bà dí// 'they run they win (imperfective)' = 'they (habitually) win (races)'

3.7 ADJECTIVAL COMPOUNDS AND APPOSITIONAL CONSTRUCTIONS

Many adjectivals in Kasem also stand as nouns. For example, *dìgiru* may be 'dirty' or 'dirt', *chìchíru* may be 'ogre' or 'strange'. Structural ambiguities can result when such adjectival/nominal forms are juxtaposed with nouns. The resulting structure could be interpreted as apposition or as a noun-adjective structure. However, in the latter case, the noun is usually truncated. Tone is employed to differentiate between the two structures. For example, in the appositional construction meaning 'dirt found in water' *ná* does not change its tone, hence we have *ná dìgiru*, but in the construction meaning 'dirty water' *ná* becomes *nà*, and the construction is realised as *nà dìgiru*. Note also the tonal differentiation between the following which Kasem conventional orthographies do not distinguish:

- 13a. *dwā yónā* 'soup is palatable'
- 13b. *dwè yónā* 'palatable soup'
- 13c. *dwā yónā* 'fish for soup'

4. WHY TONE IS NOT COMMONLY USED IN KASEM ORTHOGRAPHIES

Given the lexical and grammatical importance of tone, the failure to take it into account in writing the language requires explanation. A number of reasons may be advanced which make the omission less surprising.

Firstly, there is the European (Anglo-French) legacy. Tone or intonation do not have the same significance in European as in African languages like Kasem. The former do not mark tone, and accent signs specify vowel qualities rather than tone, as previously mentioned for French. The early French Canadian missionaries thus used accent symbols

to differentiate vowel qualities in the writing of Kasem. If they perceived tonal differences they made no attempt to symbolise them.

Secondly, the missionaries were not trained in linguistics and were not highly conscious of the tonal phenomenon in the language. They could not distinguish objectively and consistently the different tones of the language, nor could they appreciate the lexical and grammatical importance of tone. Not even after decades of residence and participation in the community did they succeed in checking personal lapses in tonal pronunciation. Native speakers, too, in spite of their intuition, have difficulty in identifying and distinguishing between tones, as any exercise involving language teachers will show. Thus, although native speakers' speech habits show a high degree of sensitivity to tone, few could attempt a systematic representation of it without an introduction to the subject. Such an introduction has been lacking until recently.

Thirdly, even those with training who can distinguish systematically between one tone and another, are still wary about writing it. Many users cannot easily be taught to read tone correctly, not to mention writing it. The fear is that erroneous tone marking will be a disservice to writing the language and will discourage most users.

Related to the third factor, is the sloppy way many people write by hand. Tone signs are bound to be confused. Associated with this is the fear that tone marks in typescripts will be too much bother for the typist. A mitigating consideration, however, is that since tone is a feature of the bar and as many words contain only one bar, most words will require only one tone mark, irrespective of the number of syllables.

5. SELECTIVE USE OF TONE MARKS

Kasem is one of many Ghanaian languages most of whose users do not write tone; to my knowledge tone is not marked in any other Gur orthography in Ghana. The merits of this approach can best be judged by considering the structure of the respective languages. Languages that exemplify key lowering phenomena might benefit less from tone marking than languages where discrete level tonal phenomena exist. Ewe makes a selective use of tone marks. It has discrete level tones like Kasem but tonal level is also influenced to some extent by consonants.⁴ Kasem tones are not influenced by phonetic context nor do consonants influence the tone of a bar. Kasem appears, therefore, to require tone marking even more crucially than Ewe.

Important as tone is in Kasem, it would not be wise to institute a system of tone marking for all words. The best advice is to follow the Ewe practice of marking tone only for the few words for which it is really necessary. Such words would include tonally contrastive pairs or sets of words and would usually be words with grammatical rather than lexical function. Grammatical words occur more frequently in texts and are less easily distinguished by contextual clues than lexical homographs. SIL/GILLBT staff have identified some of these words as their numerous publications illustrate. Unfortunately other groups with an interest in writing Kasem have not followed suit. To my knowledge the issue has never come up for discussion at Kasem orthography meetings.

The SIL/GILLBT orthographic practice since 1975 has been to differentiate a small corpus of words, mostly grammatical, by the use of the high tone mark ‘ˊ’. The

⁴ See Ansre 1961 and 1963. Ewe has three level phonetic tones: high, mid and low. Mid and low are allotones. In addition there are two compound tones - rising and falling. The orthography marks tone with a high tone diacritic.

membership has tended to change throughout their publications. Moses Tɔ̀ɔ̀ 4 [MT] 1975 includes the following:

- 14a. wó [wó] 'future positive marker'
- 14b. ná [nā] 'conditional marker'
- 14c. á [á] 'second person plural subject pronoun'
- 14d. bá [bá] 'future negative marker'

Some lexical words have also been included such as nía [níǎ] 'mouths' and ní [ní] 'mouth'. The latter spelling has motivated the spelling dedaan-ní 'late afternoon' which is also found in this book, though the suffix ní has only a figurative meaning and is not quite the same as ní/nía 'mouth'. The postposition téi 'place' also occurs in this book.

Kasena Sensɔ̀le Tɔ̀ɔ̀ [K.S.T.] 1976 contains in addition to ná, and wó, spellings like ó 'he will...', ká 'it, he, she will...' and á 'I will...'. In Moses Tɔ̀ɔ̀ 4 the spelling á is necessary if a distinction is to be made in writing between the second person plural subject and the first person singular subject which is an identical pronoun carrying low tone. However, to represent the phrase à wó 'I will...' by á leaves no means for distinguishing the two pronouns. Fortunately second person plural subject pronouns do not occur in K.S.T. In another 1976 publication, Ga-Vara Na Ye Tei to Tɔ̀ɔ̀ we find not only ká, ó and á but also kó, bá and ń. Clearly these spellings are doubtful as they reflect the reduced form of a construction where a personal pronoun combines with a future positive marker. The reduced forms and the canonical forms of these constructions are both possible in spoken Kasem. SIL/GILLBT writers appear to have reconsidered the advisability of these spellings and to have eliminated them. Publications issued after 1978 do not have such spellings.

A study of the most ambitious of GILLBT publications in Kasem and also by any group of writers so far, the We Ni-Duure Tɔ̀ɔ̀ (The New Testament in Kasem) published in 1988, reveals the following items which are spelt with tone marks:

- 15a. á [á] : second person plural subject marker
- 15b. ná [nā] : conditional marker
- 15c. wó [wó] : future positive marker
- 15d. bá [bá] : future negative marker
- 15e. taá [tàá] : continuative particle in a second person plural serial construction
- 15f. dáa [dáa] : place and location indicating separation or distance away from
- 15g. dáane [dáa ní] : locative, place

These are the most frequently occurring spellings where tone marks are used. However, the book numbers over 670 pages and a few other spellings using tone marks may have escaped my attention. Such unnoticed spellings, if they occur, are likely to be of lexical words.

5.1 THE JUSTIFICATION OF SIL/GILLBT USE OF TONE MARKS

As pointed out earlier, it is hard to justify spellings like á [à wó] 'I shall' etc. which employ a uni-graph and tone mark to represent what is essentially a personal pronoun and a future positive marker. Spellings like ní and téi which occur in earlier publications may also be questioned. These are lexical rather than structural items and it is not obvious why these words and not others should be selected for tone indication. Fortunately these particular spellings have been eliminated in the Testament. The same criticism might apply to the indication of tone on words like dáa 'place/locative marker' which occur in the New Testament. A spelling such as dáane is potentially confusing. It comprises two bars and therefore two differing tone units. Possible confusion arises

because there are several mono-bar words which resemble this word but differ in tone pattern and in syntactic function, such as /dàanu/^L 'to visit', /dáanu/^H 'to delay', /dāanu/^M 'together'.

A spelling such as **á** for the second person plural subject pronoun is appropriate for it enables a differentiation to be made between this pronoun and the first person singular subject pronoun **à**.

5.1.1. The Future Morphemes and Tone Marking

Tone must be marked to distinguish between two orthographic words which could otherwise be mistaken for each other. Ambiguity would arise if no means existed for differentiating the second person plural subject pronoun from the first person subject pronoun. Thus **a tua** would mean 'I came' or 'you came', but in a system where **á** represents the second person plural, **a tua** means 'I came' and **á tua** means 'you came'. But this argument cannot be applied wholly to the future markers. They are not homographs. There are two terms in the future tense system which are realised in /wó/ 'positive' and /báa/ 'negative'.

The indication of tone for the positive future marker is justified by the existence of /wù/ 'negative perfective aspect marker'. Both 'positive future' and 'negative perfective' markers are preverbal and occur after the subject. They do not co-occur in the same clause. A reader could mistake one for the other unless a tone mark is used to distinguish them. There appears therefore to be a good basis for using the tone mark here. However, the two particles rarely contrast in identical structural contexts and the shape of the verb word usually suggests whether or not the verb group is future. For example, **vala wo va** can only mean 'farmers will hoe' and never 'farmers did not hoe', but **vala wo vage** means 'farmers did not hoe' and not 'farmers will hoe'. Most verbs inflect for the future tense. There is thus no compelling reason for using tone marks to distinguish between **wo** 'future positive' and **wo** 'perfective negative'.

The future negative word /báa/ does not minimally contrast with the imperfective negative /bā/ since there is also a difference between them in vowel length. The two could be distinguished without tone marks by spelling /báa/ as **baa** and /bā/ as **ba**. Even if the two are written as **ba** there would be textual clues to distinguish them because most verbs have a future form. For example, **vala baa va** means 'farmers will not hoe' and **vala ba vara** means 'farmers do not hoe'.

While clause structure or, more particularly, verb shape is a means for differentiating the future positive from the perfective negative clauses on the one hand, and the future negative from the imperfective negative clauses on the other, note that in the case of the monosyllabic verbs it is vowel weight alone which distinguishes between future and non-future forms and between perfective and imperfective forms.⁵ Weight unfortunately is never symbolised in Kasem writing. This means that at the orthographic level the distinctions are neutralised in monosyllabic verbs. Thus **vala wo di** is ambiguous and could mean either 'farmers will eat' or 'farmers did not eat'. Similarly **vala ba di** could mean either 'farmers will not eat' or 'farmers do not eat'. We could of course write the former as **vala baa di** 'farmers will not eat'.

⁵ Vowel weight carries a distinction between light and heavy (non-light) vowels. Among the phonetic correlates of the light/heavy distinction is the duration or perceptual length of the vowel. Light vowels are shorter and pronounced almost as if there was a glottal catch terminating them. Light vowels precipitate vowel processes such as coalescence while heavy vowels cause vowel sequencing.

5.1.2 The Conditional Marker and Tone Marking

The decision to mark tone on the conditional marker [na] derives from its possible contrast with [nà], the rankshifting marker. Both are preverbal particles occurring between subject and verb. They do not co-occur and thus there is a paradigmatic choice relationship here. One marks a dependent conditional clause; the other marks a rankshifted or embedded clause. A sentence containing one of these particles could be misinterpreted in the absence of tone marking.

Sentence structure is often able to tell the reader whether na is [nā] or [nà]. In almost all cases the rankshifting [nà] is associated with a [tú] occurring at the end of the rankshifted sequence e.g.

16. naao kom ba na go to 'the cow that they killed'
cow the they na kill tu

[nà...tú] could therefore be considered a single disjointed morpheme, thus distinguished from [nā] both syntactically and morphologically, removing the need for tone diacritics. However, [tú] can occur without [nà] in rankshifted groups (as opposed to clauses).⁶ Both a and b below are acceptable:

- 17a. chichoo kom yaga ne to 'the madman in the market'
madman the market in tu
- chichoo kom na we yaga ne to 'the madman in the market'
madman the na is market in tu

There are also instances of [nà] occurring in preverbal position without [tú], although these structures do not involve rankshifting, as in the following example.

18. vala na wo vage 'But farmers have not hoed'
farmers nà neg hoe

These types of utterance have a declarative structure but express surprise or have an exclamatory function.

In addition to those cases where [nà] may occur without [tú], reading fluency is also affected by the potentially considerable separation between the two. Thus the reader may have no immediate clue to the identity of the preverbal na in question and may have to hesitate or wait to the end of the sentence before being certain. In the following example, the to is ten words away from the na:

19. buko wom ba na kwe ba ye ba joŋi wonnu
maid they nà take they marry they obtain things
- ba di ba ti to
they eat they finish tu

'[You mean] the daughter whom they married out for bridewealth which they have already squandered.'

The SIL/GILLBT decision to differentiate between nā and na is therefore well-motivated. Furthermore there are yet more morphemes in Kasem with the segmental shape na, even apart from lexical words. The plural imperative marker [na] is one, as well as the polar interrogative marker [nà]. These particles are differentiated from the

⁶ In the systemic approach a distinction is made between sentence, clause, group (phrase), word and morpheme.

preverbals because they do not usually occur before the verb, but do, however, pose comprehension problems for the reader. The imperative marker is post-verbal and the interrogative marker is clause or sentence final. But this distinction may be neutralised in sentences lacking complements (objects) and adjuncts. Though imperative utterances usually lack overt subject pronouns and interrogative sentences usually have subjects, when the addressee of an imperative is plural, the inclusion or omission of the subject is entirely a matter of style and choice. The following are options of an imperative expression:

- 20a. **á zage!** 'Get up'
 20b. **á zage na!** 'Get up'
 20c. **zage na!** 'Get up'

Option b is ambiguous as written. It could also be a question 'Did you get up?' if na is interpreted as nà. There is a comprehension problem here though it is less likely to arise than some of the other cases discussed.

5.1.3 Problem of taa

If spellings like ná, á, wó can be justified, the spelling taá [tâá] (cf. 15e) occurring in the Kasem New Testament cannot be easily explained. If this spelling is acceptable similar spellings such as zaá [zâá, zāá] 'anyway', maá [māá, mǎá] 'consequently' and yaá 'in the past' cannot be excluded. These spellings do not appear in SIL/GILLBT publications, nor are they justified.

Awedoba (1989a) has argued that preverbal items such as za 'anyway', da 'again', ma 'consequently', ya 'in the past', ta 'should', bá 'future negative' and a few others are auxiliary verbs which because of their mono-syllabic structures, have been transformed apparently into particles. Each of these has a vowel enclitic that is a copy of the core vowel of the preverbal. We know that these enclitics are pronoun reflexes because of the tone changes that occur on them. The tone changes are nearly the same as for subsequent subject pronouns in serial constructions; just as we would not mark the tones of such pronouns no serious justification exists for marking the tones of enclitics of preverbal items. The only exception would be the negative future marker bá which we have previously discussed; even here it is not the enclitic's tone which is marked.

Following the above argument, the spelling taá has no justification. However, if the aim is to distinguish it from the preverbal particle ta [tā] 'still', one could argue that [tā] should be marked for tone.

It is awkward to mark the low tone member of a pair with a high tone diacritic while the mid tone member goes unmarked, thereby creating the impression that the latter bears a lower tone.⁷ I suggest that the two particles be distinguished by writing [tâ] as taa and [tā] as ta. No tone marks will then be necessary. This decision is based on the grammatical or structural difference between them. Both are preverbal and contrastive as to place of occurrence, but /tā/ is a particle and cannot have a subject and /tâ/, an auxiliary verb, has a subject. Wherever /tâ/ occurs a serial construction is unavoidable and a subject pronoun realised as either n or a must follow /tâ/. This is evident from the following examples:

⁷ In spite of the existence of four basic tones GILLBT employs only the high tone diacritic in the orthography. It has the value of high or mid tone. Where there is tonal contrast the higher tone is marked. Where three tones contrast it appears that either the two lower tones will be unmarked or the two higher tones will be marked. In the case of the contrast between [tā] and [tâ], it is /tā/ rather than /tâ/ which ought to be marked with the high tone.

- 21a. n ta dí ‘You still eat’
 You tā eat
- 21b. n ta-n dí ‘You should continue to eat’
 You tà you eat
- 21c. a ta dí ‘I still eat’
 I tā eat
- 21d. a ta-a dí ‘I should continue to eat’
 I tà I eat

For the sake of differentiating the two, /tā/ could be spelt as **taa** to show that it is an enclitic.

5.2 OTHER CANDIDATES FOR TONE-MARKING

Once the principle has been established for using tone marking to distinguish grammatical words which contrast in tone and which serve as terms in a system, additional words appear to qualify for tone symbolisation.

- 1) Other negation markers such as /yí/ ‘imperative negative’ and /yà/ ‘mandative negative’ need differentiation. Utterances like the following would be ambiguous without tone marking.
22. á ye va : 22a. á yé va ‘don’t hoe’
 : 22b. á yè va ‘you should not hoe’
- 2) The first person plural subject pronoun /dí/ needs to be distinguished from several other subject pronouns such as Gender II, NCL 3 (singular) pronoun /dì/ and Gender V NCL 9 (plural) pronoun /dí/. Without orthographic differentiation the following utterances would be ambiguous:
23. de día : 23a. dé día ‘we have eaten’
 : 23b. dè día ‘they (Gen, V) have eaten’
 : 23c. dè día ‘it (Gen. II) has eaten’
- Genders V and II pronouns cannot be differentiated and must remain as homographic homophones.
- 3) The verb *ve* ‘to go’ has several shapes each corresponding to a term in the verb system such as tense, aspect, mode etc.; some of these shapes are differentiated tonally as follows:
- 24a. /vé/ ‘go!’ Imperative
 24b. /vè/ ‘has gone’ Perfective
 24c. /vě/ ‘is going’ Imperfective
 24d. /via/ ‘has gone’ Perfective Absolute mode
 24e. /vù/ ‘went’ Perfective.

Since *vala ve gao* may mean either *vala vĕ gao* ‘farmers are going to the bush’, or *vala vè gao* ‘farmers have gone to the bush’ or *vala vé gao* ‘farmers should go to the bush’, it is necessary to distinguish between the high, low and rising tone forms of the verb shape *ve*. This raises questions about the wisdom of using only one tonal diacritic i.e. the high tone mark.

- 4) The time adverbials *deém* ‘long ago’ and *deèm* ‘last year/last season’, though lexical rather than structural, may need to be differentiated in writing. The contextual clues that might disambiguate these words may not be in the immediate context.

The items discussed above use tone to distinguish between a tonal minimal pair or a set of items contrasting in tone, and therefore require tone marking. In addition there are a few other words that may be so distinguished from their partial homophones. Such a set is not likely to contain more than 20 words. This has the advantage of teachability.

Teachability appears to motivate the use of only one tone mark to distinguish contrastive pairs of words. The word bearing the higher tone is marked by the high tone diacritic. Indeed all cases of tone marking in SIL/GILLBT Kasem writings involve pairs of words. If we accept some of the additional cases mentioned above, more than one tonal diacritic may be necessary to distinguish between three words minimally contrasting in tone. Such tone marks could be high and low. The mid tone mark would not be advisable because of confusion with the other two.

6. CONCLUSION

The GILLBT workers judged correctly the need for introducing a limited amount of tone symbolisation into the writing of the Kasem language. There is also a need to explain the basis for that symbolisation and to consider the possibility of increasing the corpus of words bearing tone marks. So long as the number of such words is kept to a minimum, readers and potential writers should not feel overburdened.

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RESPONSE TO 'KASEM TONES AND ORTHOGRAPHY'

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Dr. Awedoba's article is very timely and deals with the issues affecting the writing of tone in Kasem in a pertinent and helpful way. I would like to respond to one or two of the specific issues which he raises, since I have had a part in some of the decisions involved.

1. There is no doubt on the need to write the second person plural unemphatic pronoun as á to distinguish it from the first person singular unemphatic pronoun a. This is especially true in speaker-addressee oriented material (such as letters) where either has a high probability of occurrence.
2. The future particles wó (affirmative) and bá (negative) have a stronger case for tone marking than Dr. Awedoba makes out. This is because the majority of verbs in most contexts do not, in fact, indicate the necessary distinctions by inflection. In other words,

marking of tone on these particles is not redundant in most contexts. Writing the future negative particle as **baa** would be a possible solution, but I think this would represent vowel weight rather than true length, and as Dr. Awedoba points out, vowel weight has not (as yet) been indicated in this way. I have not found any intuitive tendency to write a double vowel for this particle, and Dr. Awedoba himself does not appear to back this possibility himself. Marking both these particles with an accent has the secondary advantage of giving a consistent signal as to the use of the future tense.

3. Interestingly, writing [nā] as **nā** reinforces this last concept, since it represents the unrealised 'if' or 'when', and regularly co-occurs with a future tense in the main clause. However, the compelling reason for taking this course is that given by Dr. Awedoba, namely the potential separation between [nā] and its accompanying [tú].

In considering the other **na** particles (polar question marker and plural imperative marker) other signals may disambiguate these. The obvious one is that a question **na** is almost always immediately followed by a question mark. In GILLBT materials the imperative **na** is linked to the preceding verb (or rarely, a preceding object pronoun) with a hyphen. This has proved helpful in distinguishing it from lexical words such as **na** 'water' which could potentially also occur immediately following a verb.

- | | | | | | |
|-----|-------------------|-------------|-----|-------------------|----------------------|
| 1a. | á joŋe! | 'take (it)' | 1d. | joŋe na! | 'take water' |
| 1b. | á joŋe-na! | 'take (it)' | 1e. | á joŋe na! | 'take water' |
| 1c. | joŋe-na! | 'take (it)' | 1f. | á joŋe na? | 'did you take (it)?' |

4. As well as linking the imperative **na** to the verb with a hyphen, GILLBT practice has also been to link unemphatic object pronouns to the preceding verb with a hyphen. This covers the final example quoted by Dr. Awedoba in section 3.5, which would be differentiated as:

- | | | |
|-----|---------------------|---------------------------|
| 2a. | a pɛ o kaane | 'I gave (it) to his wife' |
| 2b. | a pɛ-o kaane | 'I gave him a wife' |

This hyphen indicates that the pronoun is linked to the verb as an object, rather than to the noun as a possessive. By so doing it also indicates that it is high tone (rather than low, as in 2a), and that it is in close phonological association with the verb. This is a very necessary device for all third person pronouns, and the only way to resolve the above and similar ambiguities. While not as necessary in the case of 1st and 2nd person singular unemphatic object pronouns, the same convention is followed. In the case of 1st and 2nd plural object pronouns, these always take the emphatic form, and a hyphen is not used.

This indicates that one is not necessarily dependent on the use of diacritics like accents to indicate tone. There may be other symbols which can indirectly or directly indicate tone, and which may be easier to handle typographically.

5. Dr. Awedoba's point on the doubtful basis for writing **taá** is well taken. I would say, however, that the decision was made by the orthography committee to reflect the presence of the high tone pronoun enclitic following the imperfective particle [tâ]. It is thus basically an extension of marking the 2nd person plural pronoun for tone, **á**, rather than marking the tone of [tâ] itself. This does also (very necessarily) distinguish it from the particle [tā] 'still'. There is, however, an inconsistency in that the presence of the 2nd person singular pronoun following [tâ] is indicated separately:

- | | | |
|-----|-----------------------|-----------------------|
| 3a. | ye ta n keera | 'stop crying' (sing.) |
| 3b. | á ye taá keera | 'stop crying' (plur.) |

Dr. Awedoba's suggestion of writing the imperfective marker as **taa** to show that it is always followed by a pronoun enclitic is a good one, although there would still be the question of whether also to write the 2nd person singular [**n**], as in 3a above.

6. It is true that the decision to write **dáa** and **dáane** was made on purely pragmatic grounds, to avoid actual ambiguities arising. This is the only case of using tone to distinguish otherwise homographic lexical items.

7. As far as Dr. Awedoba's suggestion for expanding moderately the inventory of items marked by tone, I would agree that the case for distinguishing the 1st person plural unemphatic pronoun **de** from its low tone homographs for 3rd person pronouns is a good one. The disadvantage of this is that one would be marking by far the commoner case and leaving the comparative rarities unmarked. This is, however, a better choice, I think, than choosing to mark the 3rd person **de** with a low tone mark, and thus introducing two different diacritics.

Distinguishing between high tone **deem** 'long ago' and low tone **deem** 'last year' is also a good contender since there is unlikely to be anything in the context to give the reader a clue. I feel the case for the others mentioned is less compelling. Considering the degree of under-representation in the Kasem orthography, principally in the number of vowel symbols and the lack of tone marking, it may seem remarkable that anyone can read it fluently! However, many can and do read with great fluency, and that in increasing numbers. Dr. Awedoba's paper is to be commended in pointing out the need to write tone on a pragmatic basis. 'Will it help the reader?' is the paramount question, and that is what he has sought to answer.

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