

The representation of tones in the orthography

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The orthographic representation of tones has raised a major controversy with three different views commonly expressed in the literature. Some linguists argue that tones should not be written in the orthography. Crofts ([1976](#)) and nonlinguist missionaries hold such a position. Other linguists, including Thayer ([1981](#)) recommend a selective marking of tone. Still others, Gudschinsky ([1970](#)), Wiesemann ([1989](#)), and Longacre ([1953](#)), argue that tones should be written fully in the orthography. Let us first analyze these three positions and then examine how tones should be written in Anyi orthography.

1. Toneless orthography

Pike ([1946:252](#)) notes that those who hold the position of toneless orthography claim that "the natives do not need the extra symbols (tone marking), since they can guess what the words mean without them because the context makes it clear." Crofts ([1976:129](#)), one of the supporters of a toneless orthography, found in her study that readers have no trouble when tone is not written in the orthography. Moreover, she contends that "marking tone on every syllable would greatly increase the difficulty in teaching people to read, perhaps discourage older folks from ever learning. And it would increase publishing costs considerably." However, other studies, including Gudschinsky ([1970](#)), Wiesemann ([1989](#)), Longacre ([1953](#)), and Pike ([1946](#)), have shown that the context does not help very much in toneless orthographies. The following quotation found in Gudschinsky ([1970:23](#)) attests to the fact that the context does not help.

(1994). *Notes on Literacy*, 20(3).

An intelligent, educated native speaker of a tone language of West Africa was asked to read a page from a primer in his own language. He remained staring at the page without speaking for so long that the people around him became embarrassed. Finally they said, “Never mind. It’s quite all right if you don’t want to read it.” The African replied, “Oh, no, no. I’ll be ready in a minute. It’s just that I haven’t figured out yet what it is supposed to say, so I don’t know what tone to read it with.”

Pike (1946:252) rejects toneless orthography because he contends that “it encourages bad reading habits by forcing the beginner to read ahead, for contextual clues, and then turn back to guess the meaning of earlier words.” Gudschinsky (1970:24) provides another example which emphasizes how a toneless orthography can create bad reading habits.

A native speaker of a Bantu language of Rhodesia was asked: “Does the fact that tone in your language is not written make any problems when people read it?” He replied immediately, “No. Not at all. Everybody learns to read and has no problem.” He was then asked, “But don’t people sometimes have to read things twice? Once to know what it says and once to read it correctly?” With a look of shocked surprise, he said, “Oh! Is that why we read our own language back and forth? We always say that we read our own language back and forth and back and forth, but we read English straight along. We can read English in about half the time that it takes to read our own language, but never knew why.”

The problems encountered by readers when tones are not marked in the orthography seem to be very widespread. Lucht (1978:26) provides the following example from Siane, a language spoken in Papua New Guinea. What makes this example unique is that the reader is also the writer of the text.

It is because of tone that I’ve had to go back and reread several times what I wrote the day before in order to know what I meant on this translation work I’ve been doing. We all have to do something about it. What shall we do?

2. Selective tone marking

The linguists who encourage the use of selective tone marking recommend that tones be marked in the orthography only when it is necessary to disambiguate lexical or syntactic structures. This approach seems like an improvement over toneless orthography. However, Wiesemann (1989:16), Longacre (1964:132–133), and Smalley (1964:41) claim that selective tone marking should be avoided. Wiesemann gives the following reason for rejecting selective tone marking:

It should be mentioned here that a system which marks tone where it is minimally different in individual words is not a good system. In such a system, for each individual word one must learn whether it carries a tone mark or not. To mark low tones only on words where there is a minimal

tone pair makes the teaching of tone a matter of memory, rather than a matter of rules linked to pronunciation.

Longacre (1964:133) argues that selective tone marking “presupposes that one has already made a list of all the words in the language to see which ones are minimal pairs. Such a claim is pretentious since most newly written languages do not have good dictionaries.” Smalley (1964:41) also rejects selective tone marking because “it represents the speech system of the language in such an inconsistent way, it compounds the learning problem seriously and, in many cases, means that the reader never learns to use the tone symbols at all because he meets them in such an inconsistent fashion.”

3. Tone orthography

Since toneless orthography and selective tone marking have been rejected as viable solutions, the only option left is an orthography that represents tones. A number of guidelines have been proposed to avoid overloading the orthography with tonal diacritics. Wiesemann (1989:16) argues that it is not good to write all tone nuances because “the more tones that are marked, the harder it becomes to teach the system.” Therefore, for the discussion of the orthographic representation of Anyi tones, I will resort to Williamson’s (1984:42) Tone Economy Principle (Section 1.6.4). She proposes that the most common tone be left unmarked.

4. Lexical functions of Anyi tones

Anyi has two level tones, high and low, and two contour tones high-low and low-high. The most important function of tones at the lexical level is to differentiate nouns. This means that words such as $t\epsilon\epsilon$ ‘sin, ugly’ and $t\epsilon\epsilon$ ‘fishing net’ differ only because they have different tonal configurations. The first has a low-high pattern, and the second a high-low pattern.

Monosyllabic nouns can have either high tones or low tones. However, low tones are more frequent than high tones. Low tones are said to be unmarked. In CV¹V² and polysyllabic words, the low-high contour tone is more frequent than the high-low contour tone. High-high and low-low patterns are extremely rare. They tend to occur only in ideophonic words.

5. Grammatical function of tones

Unlike nouns, verbs **do not have a lexical differentiation function at the systematic phonemic level.** It is only when they are used in tensed constructions that they acquire a distinctive function. Tone placement on verbs is characterized by a number of morpheme structure constraints:

5.1. Positive tone placement constraints

1. On monosyllabic words
All monosyllabic verbs have a high tone on the vowel.

2. On CV¹V² and C¹V¹C²V² verbs

All CV¹V² verbs and C¹V¹C²V² verbs have a low tone on the first vowel and a high tone on the second vowel.

The tone pattern of Anyi verbs at the systematic phonemic level can be summarized as follows:

Monosyllabic verbs CV (high tone on V)

CV¹V² verbs CV¹V² (low tone on V¹, high tone on V²)

Disyllabic verbs: CV¹CV² (low tone on V¹, high tone on V²)

In the underlying representation a verb such as *nɛn* 'to drink' always has a high tone (see examples 32a through 32d below.) However, when it occurs in some sentences, its high tone is sometimes changed into a low tone.

5.2. Negative tone placement constraints

There are two tone-placement constraints on CV¹V² and C¹V¹C²V² or CV¹GV² words:

1. On CV¹V² verbs

There is no CV¹V² verb stem in which V¹ has a high tone and V² a low tone.

2. On C¹V¹C²V² and CV¹GV² words

There are no words of the structure C¹V¹C²V² and CV¹GV² where V¹ has a contour tone.

6. Some grammatical functions of Anyi tones

Abena (1985:1) argues that in Akan "the functional load carried by tone is more frequent at the level of grammar than at the lexical level." In Anyi, the tone on verbs fulfills important grammatical functions as exemplified by the sentences below. Sentences (32a) through (32d) below illustrate cases where a change in the tonal configuration of the verb and its adjacent subject pronoun introduces new semantic changes.

Example 32.

Habitual aspect: M in n ʋn nzaán
I drink wine
I drink (it is not a taboo)

(Low tone on M in, High tone on n ʋn)

Intentional mood: M in n ʋn nzaán
I (intend to) drink

(High tone on M in, High tone on n ʋn)

Future: M in n ʋn nzaán
I will drink wine

(1994). *Notes on Literacy*, 20(3).

(High tone on *M in*, High tone on *n vn*)

Declarative sentence: *M in n vn nzaán*
 I drink wine (factual statement)

(Low tone on *M in* and *n vn*)

Semantically, it is generally argued that a sentence is in the intentional mood when the subject is in the first person singular, and the action expressed by the verb focuses on the intention of the speaker. It is, however, very hard to distinguish it from the simple future. The habitual aspect, on the other hand, expresses actions that are performed over and over as a matter of habit. The difference between the declarative and the habitual is sometimes fuzzy, since it may be that the same person is making a statement about a habitual action.

What is worth noting in these examples in relation to Anyi orthography is that in these structures, the tones on the verb and the subject pronoun change occasionally. Let us start with the verb first. In (32a) through (32c), the verb has its original high tone. But in (32d), the original high tone of *n vn* changes to a low tone. Remark that the tonal configuration on the verb alone cannot help us distinguish between (32a), (32b), and (32c), because in these three sentences the verb *n vn* has the same high tone. It is the tone on the pronominal subject that helps make these distinctions. In addition to the tone of the verb, the tone of the subject pronoun is important in distinguishing between (32a) through (32d). In (32a) and (32d), the pronominal pronoun has a low tone. In (32b) and (32c), it has high tone. Now, let us take both the tone of the verb and the tone of the pronoun into account and compare (32a) and (32b).

It would be costly in terms of space to go through each case. The example of (32a) and (32b) will suffice to highlight the necessity of writing tone in the orthography.

(32a) and (32b) vary in one respect only, that is, the tone of the pronoun in (32a) is a low and that of (32b) is a high. Both have a high tone on the verb. This means that if nothing is done to signal this difference in the orthography, in a written text a reader may find himself with an ambiguous sentence. In order to understand such a sentence he would have, first, to read ahead to understand the context. It is only when he has understood the context that he can determine what the proper tone should be. As noted in Section 2.9.1, this can be a frustrating experience in a situation where reading aloud is called for. A toneless orthography puts an intolerable burden on the reader. The reader's task could be made easier just by marking the tone on the *M in* of the intentional mood and not marking it on the habitual aspect.

7. The representation of tones in the orthography

The grammatical functions of tones discussed above make it a necessity to represent them in the Anyi orthography. Longacre (1964:136–137), Nida (1964b:26–27), and Wiesemann (1989:16) agree that when tone changes affect verb tenses and pronominal subjects, tones should necessarily be marked in the orthography. Consequently, Anyi tones need to be represented in the orthography.

The issue that is raised now is how to write tones and at the same time avoid overloading the orthography. Overloading the orthography is the argument the advocates of toneless orthography have frequently used. They argue that writing tones on every tone-bearing element would overload the orthography and cause a slowdown in reading. This is a legitimate concern for which a solution must be found. A solution can be proposed which relies on the universal tendencies of tones discussed by Maddieson (1978:342). He enunciates the following universal tendency in tone languages: “Systems in which high tones are marked [fewer] are more frequent than systems in which low tones are marked.”

What this means is that for a language with two level tones such as Anyi, low tones have a higher frequency than high tones. This observation in conjunction with the Tone Economy Principle can minimize the overload effect in Anyi orthography. The two principles indicate that **only high tones are to be marked in the orthography**. This solution is economical because it saves the writer time, since he (she) marks only the least frequent tone, that is **high tone**. The Tone Economy Principle also offers a solution to the technological alibi that the standard typewriter cannot represent contour tones. By suggesting that only high tones be written, it neutralizes the need to represent both high-low and low-high tones by the circumflex diacritics “^” and “˘” that linguists use to represent rising and falling tones. Therefore, in the following CV¹V¹ words (where the two vowels are identical) only the high tone will be marked.

Example 33.

Sequence of two germinate vowels

<i>boó</i>	‘forest’
<i>taá</i>	‘motherhood’
<i>táa</i>	‘tobacco’
<i>tuú</i>	‘gun’
<i>toó</i>	‘corn meal’
<i>túun</i>	‘dark’

atéende

‘type of tree’

baá

‘child’

8. The representation of phonetic tones in the orthography

The final issue to be addressed has to do with whether or not phonetic tones should be represented in the orthography. It is not irrelevant to ask, at this point, if phonetic tones too should be marked in the orthography since it has been argued that lexical tones and grammatical tones are to be represented.

Anyi, like many West African languages, is a terrace-level language. This means that as the sentence goes downward, high tones and low tones are progressively lowered to the extent that sentence-final elements are hardly audible. In some instances, a low tone in sentence-initial position is realized higher or as high as the next high tone. Conversely, a high tone in sentence-final position is realized lower or as low as a sentence-initial or medial-low tone. Terrace-level is caused by two phenomena known as **downstep** and **downdrift**.

Downstep happens when the low tone responsible for lowering the following high tone has a surface manifestation ([Welmers 1973:87](#)). Downdrift, on the other hand, occurs when the low tone responsible for lowering the following high tone has no surface manifestation. These two can be represented schematically as follows:

Downstep (automatic downstep)

$(H) + L + H \longrightarrow (H) + L + |H$

(“|” preceding H indicates a downstepped high)

Downdrift (nonautomatic downstep):

$(H) + + H \longrightarrow (H) + + |H$

(The blank between the two “+” shows that the low tone responsible for the downstepped high has no surface manifestation.)

My position is that phonetic tones need not be represented in the orthography of Anyi, first because they do not fulfill any lexical or grammatical functions in the language. Second, representing phonetic tones will necessitate the creation of additional diacritics such as rising slopes, falling slopes, and hosts of other conventions to inform the reader about the overall contour of the sentence. Since an orthography is not a spectrogram, it will be quite futile to provide such information in the text.

(1994). *Notes on Literacy*, 20(3).

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Another argument that militates against representing phonetic tones is that, in many languages and as well as in Anyi, the factors responsible for phonetic tones are not well understood yet. Anderson (1978:138) points out that emotional and expressive factors influence tones. Bolinger (1978:474) claims that pause and intonation affect tones. Hombert (1974:171) argues that there are tone differences between long and short utterances. My decision not to write phonetic tones in the orthography finds additional support from Voorhoeve (1964:130–131). He found in his study of Saramacca, a language spoken in Surinam, that,

The students had not the slightest difficulty in reading aloud from the text in which the perturbations (phonetic tones) were not noted ... I would advocate that tonal perturbations which follow fixed rules should not be written in the orthography.

9. Summary

After having examined the lexical functions and some of the grammatical functions of tones in Anyi, I have come to the conclusion that high tones should be marked in the orthography. I proposed that nominal stems should have their phonemic lexical tones represented in the orthography. Tone marking on verbal stems, on the other hand, should reflect the grammatical function of the construction they occur in. I proposed that tone marking follow the Tone Economy Principle in order to avoid the **overload effect**. Finally, I argued against marking phonetic tones in the orthography, first because they are contentless, and second, because they will be difficult to represent.

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