

DEEP AND SURFACE STRUCTURE IN TONE LANGUAGES

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In a recent paper¹ it was pointed out that there are two views about the units for which tone is to be specified. One view is that tone is associated with syllables, and that a tone language is one in which syllables have features of pitch associated with them. The other, less common view, is that features of pitch are rather associated with morphemes or words, and that it is only in languages where the morpheme is normally one syllable long (e.g. Chinese, Yoruba) that there is no real ground for choosing between the two possibilities.

It was further pointed out that descriptions of African tone languages do quite often treat the morpheme (or word) rather than the syllable as the tone-bearing unit.² Essentially, this is done in the many treatments which divide stems into TONE CLASSES. Thus verb stems, for example, are often divided into high and low tone classes; the high or low tone can be regarded as a morphemic feature just as well as a syllabic one. In the case of nouns, there are usually more possibilities (at least four or five tone classes). Here there is a choice between two treatments. Either the tone classes can be regarded as indivisible wholes, or they can be regarded as complexes of features. FEATURE is used here in an extension of Chomsky's use of 'syntactic features' in ASPECTS OF THE THEORY OF SYNTAX;³ since his introduction of features into linguistic theory, their use has been extended considerably. Thus it is now possible to use features not only to say that a given noun is, for example, [+Animate], but also that it has an irregular plural or that it undergoes some particular phonological rule.

The following example from the Kolokuma dialect of Ijò should help to make plain the difference between treating the tone classes as wholes and treating them as a complex of features.⁴

In Kolokuma, morphemes can be divided into five tone-classes on the basis of the tone pattern they produce in a syntactically determined TONE GROUP, when they are initial in this group. Thus:

Tone class	Isolated form	Pattern when initial in tone group
1	burú 'yam' ⁵	buru gboro kǐmj 'yam-plant-er'
2	dírí 'medicine'	dírí gùǒ kǐmj 'medicine-make-r'
3	wárí 'house'	wárí kǒrǐ kǐmj 'house-build-er'
4	sǒpọ 'shop'	sǒpọ dii kǐmj 'shop-keep-er'
5	kẹnǐ 'one'	kẹnǐ séri 'one time'

¹ K. Williamson, 'The definition of a tone language', to be published in PROCEEDINGS OF THE XTH INTERNATIONAL CONGRESS OF LINGUISTS.

² A recent example is: T. Edmondson and J. T. Bendor-Samuel, 'Tone patterns of Etung', *J.A.L.* vol. v (1966), pp. 1-6. They treat tone 'primarily at the level of the phonological word' and regard a tone pattern as something spread over the syllables of the word; thus there is a single pattern which is low-high-high on a trisyllabic noun, low-high on a disyllabic one, and rising on a monosyllabic one. ³ M.I.T. Press, 1965.

⁴ The possibility of using morphemic features to break down tone classes was first suggested to me by Professor Morris Halle and Mr David M. Perlmutter of M.I.T.

⁵ High tone is marked ', low is unmarked.

