

SOME NOTES ON THE INELEGANT GLOTTAL:
A PROBLEM IN UMA PHONOLOGY¹

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THE PROBLEM

Uma is an Austronesian language of west-central Sulawesi in Indonesia. The languages in this area tend to have five-vowel systems, penultimate stress, no final consonants and no consonant clusters. This is what we were expecting to find in Uma. But Uma, we quickly noticed, has a lot of glottal stops, including word-final glottal stops. Surely it couldn't be true that of Uma's twenty-odd consonants, only this one could occur word final. At first we thought that these final glottals might be just phonetic variants. But it was hard to ignore data such as the following:

úma no	túvu to steam rice in bamboo
úma' uncle	túvu' to live
motómo heavy	ma'ála to be able
motómo' delicious	ála' to pick up

When these words with final glottals are followed by consonant-initial clitics, consonant clusters arise, i.e. glottal plus another consonant.

úma'na his uncle	túvu'pidi still living
ála'ra pick them up	

So, it seems that Uma has no final consonants *except* glottal, and no consonant clusters *except* those caused by the final glottals - not an elegant solution.

We were eager to find another analysis, and this next bit of data made it almost imperative. These final glottals in Uma are peculiar in one other way: they *always* occur at the end of the root word. If a derivational suffix² is added to the root, the glottal moves right along and occurs after the suffix.

ána' child	
mo'anái' to have children (mo- is an intransitive prefix, and -i is a verb-making suffix)	
mohári' to fetch palm wine	
haría' palm wine container (-a is a noun-making suffix)	
lómpe' good	
kalompéa' goodness (ka-a is a noun-making circumfix)	

If the final glottal is analysed as a word-final consonant, it is strange indeed that it should move like this. It would be as strange as if in the English word 'good', the 'd' moved to the end of the word when the suffix '-ness' is added, thus becoming 'goonessd'.

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THE ANALYSIS

Rather than interpreting the final glottal as a segmental phoneme, we decided to view it as a word-level phenomenon.³ Just as intonation, stress, and other suprasegmentals function over a stretch of speech, defining phrases, sentences, etc., so this final glottal in Uma is functioning to mark off a whole word as 'glottalised'. Thus there are two word classes in Uma, non-glottalised and glottalised. A minimal pair like *uma* and *uma'* could be represented as /*uma*¹/ and /*uma*²/, or as /*uma*/ and /*UMA*/, or by numerous other conventions. The point is that the final glottal is not a segment, but like intonation or stress is functioning at a higher level of the phonological hierarchy.

What is the advantage of positing two word classes? Why not just have plain old word-final glottals? Practically speaking, there is no change in orthography; an apostrophe at the end of the word is the easiest way to mark the phenomenon in either case. But this solution is theoretically more satisfying.

First of all, it explains why the final glottal does not 'hold still' when suffixes are added. That glottal is not just another consonant in the sequence of consonants and vowels making up the word. It isn't a case of 'good' and 'goonessd', but more like 'I'm going' and 'I'm going home'. Falling pitch comes at the end of both utterances; it is not tied to a certain word. So the final glottal in Uma occurs at the end of the root word, whether it is a bare stem or a derived root.

A second reason the word-level solution is to be preferred is native reaction. Uma speakers who are linguistically aware say that certain words are spoken softly (Indonesian *lemah*), while certain other words must be said with emphasis (*pakai tekanan*). When trying to write their language, most speakers use an apostrophe for the final glottals, but by and large they neglect to use it consistently. Occasionally, too, an Uma speaker will suggest spelling a non-glottalised word with a final 'h' and leaving a glottalised word unmarked, a notion borrowed from Indonesian.

A third reason: in the speech of some Umans, especially young children, words with final glottals also have medial glottals before stops.

Normal pronunciation:	<i>ládi'</i>	<i>knife</i>	<i>karábi'</i>	<i>comb</i>
Child's pronunciation:	<i>lá'di'</i>		<i>kará'bi'</i>	

The entire word seems 'tense' to them, an indication that the final glottal is a word-level feature. If, in future generations, the pronunciation *la'di'* becomes the norm, the present orthographic rendering *ladi'* should still suffice. The final apostrophe marks the entire word as a 'tense' word.

Thus the word-final glottal in Uma is not a segment. We are freed from the inelegance of having only one possible word-final consonant and only one type of consonant cluster. In phonology, as in grammar and discourse, it pays to keep in mind the hierarchical structure of language. From a higher point of view, word-final glottals can be elegant.

NOTES

¹In this paper glottal stop is represented by an apostrophe, and stress by an acute accent. In 1974 we participated in a phonology course at the University of Texas at Arlington under Dr Marvin Mayers. We are indebted to Dr Mayer's *Discourse Phonology* for the insights shared in this paper.

²There are two types of suffixes in Uma. The outer suffixes act much like clitics. They do not cause the stress on the root to shift, and they occur after the final glottal, if there is any. (The three examples of consonant clusters have this type of suffix.) The inner suffixes discussed in the section above are mostly derivational in function. They become part of the root word, shifting the stress and occurring before the final glottal.

³In view of the outer suffixes discussed in note 2 above, perhaps it would be better to talk of glottalised and non-glottalised roots rather than words. But whatever one calls them, the point is that there are phonologically discreet groupings of syllables in Uma, some glottalised and some not.

