**Tone Alternations in Ugong (Thailand)**

David Bradley

**Introduction**

Ugong is a Tibeto-Burman language of the Burmic subgroup spoken by a small and diminishing minority in western Thailand; for details of the social factors involved in this decrease, see Bradley (1981, 1985, 1989).¹ It is in the process of being replaced by Thai, an unrelated language, which is quite different in its morphosyntax. The phonology of Ugong has been undergoing rapid change and dialect diversification; many of the changes have resulted in convergence of Ugong phonology towards that of Thai. I have discussed the dialect diversity (1978), and I have shown that the phonological convergence of Ugong towards Thai has been underway for a long time and is resulting in the elimination in native lexicon of segments and tones absent from Thai as well as the addition of segments and tones that are present in Thai (1986).

Another very interesting phenomenon concerns tonal alternations in nouns and verbs; these complex processes differ between form classes and are in the process of being fossilized or eliminated in the speech of semi-speakers. The end result is a tone system identical to that of Thai, without the alternations, which are not paralleled in Thai. The data are drawn from the speech of the Kok Chiang Ugong village; other dialects operate slightly differently. Kok Chiang Ugong has five underlying tones for native verb lexical items, and four for nouns and others; these are compared with the five tones of standard Thai in table 1.² For more details of Ugong segmental phonology, see Bradley (1981, 1986).

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² As in most Tibeto-Burman languages, adjectives are a subclass of verbs in Ugong.
Table 1: Ugong and Thai Underlying Tones

<table>
<thead>
<tr>
<th>Transcription</th>
<th>Ugong Nouns</th>
<th>Ugong Verbs</th>
<th>Thai</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>high level</td>
<td>high level</td>
<td>high level</td>
</tr>
<tr>
<td></td>
<td>(creaky)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ø</td>
<td>mid level</td>
<td>mid level</td>
<td>mid level</td>
</tr>
<tr>
<td>°</td>
<td>low falling</td>
<td>low falling</td>
<td>low falling</td>
</tr>
<tr>
<td>&quot;</td>
<td>mid rising</td>
<td>mid rising</td>
<td></td>
</tr>
<tr>
<td>&quot;</td>
<td>high falling</td>
<td>high falling</td>
<td></td>
</tr>
</tbody>
</table>

The secondary nature of the Ugong high falling tone for verbs will be discussed below; Bradley (1986) suggests that the mid rising is also secondary, though now well-established. Recent Thai loanwords retain their Thai tone; hence, many borrowed nouns have a high falling tone.

There are canonical restrictions on tones on stop-final syllables, which are outlined in Table 2; exceptions occur in loanwords.³

Table 2: Ugong and Thai Tones in Stop-final Syllables

<table>
<thead>
<tr>
<th>Transcription</th>
<th>Ugong Nouns</th>
<th>Ugong Verbs</th>
<th>Thai</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>final /k/</td>
<td>final /ʔ/</td>
<td>(all stop-finals)</td>
</tr>
<tr>
<td>°</td>
<td>high level</td>
<td>high level</td>
<td>high level</td>
</tr>
<tr>
<td>ø</td>
<td>mid level</td>
<td>mid level</td>
<td></td>
</tr>
<tr>
<td>&quot;</td>
<td>low falling</td>
<td>low level</td>
<td></td>
</tr>
<tr>
<td>&quot;</td>
<td>high falling</td>
<td>high falling</td>
<td>high falling</td>
</tr>
</tbody>
</table>

It can be noted that in any form class for native lexicon only three tones contrast in stop-final syllables; and that in Ugong the possibilities differ between nouns and verbs, and between verbs with final /k/ versus /ʔ/. This tonal difference between form classes is not unusual among Burmic languages; a similar example for Atsi is described in Burling (1967). It is also not phonetically implausible since Ugong, like nearly all Tibeto-Burman languages other than Karen, is verb-final; therefore, sentence-final intonation effects may influence verbs but not usually nouns.

Nominal Tone Sandhi

For nouns, there is a sandhi process in which a final syllable with underlying low falling tone in a two- or more syllable noun is phonetically

³ In Ugong native lexicon, only /k/ and /ʔ/ occur in final syllables; in Thai, only /p/, /t/, /k/, and /ʔ/.

56
high falling. This process is not recursive; it applies to derivational suffixes if these are word-final but not to inflectional ones. This is illustrated in examples 1 to 6.

1. /lǎʔphû/ → [lǎphû]  'areca'
2. /lǎʔphû+ca/ → [lǎʔphûca]  'areca leaf'
3. /lɔʔmà/ → [lɔʔmà]  'thumb'
4. /lɔʔ+mà+dàŋ/ → [lɔʔmàdàŋ]  'big thumb'
5. /lɔʔ+mà # nòŋ/ → [lɔʔmànòŋ]  'on the thumb'
6. /lɔʔ+mà+dàŋ # nòŋ/ → [lɔʔmadàŋnòŋ]  'on the big thumb'

This sandhi process results in a superficial identity between the inventory of tones in Ugong and Thai nouns. However, young semi-speakers are in the process of losing the alternation. The result is that some low falling tone final syllables in unanalyzable polysyllabic nouns are always realized as high falling, as in 7 and 8; in analyzable polysyllabic nouns there is variation between stem-final high falling and low falling tone, as in 9 to 12, and frequent low falling tone derivational suffixes as in 10 and 12 are always realized as high falling; these may create high falling tones in non-final syllables of nouns and low falling tones in final syllables.

These results are illustrated in examples 7 through 12; forms such as 8, 9b, 10a, 11b, and 12a are not used by fluent speakers aged about 30 years or more.

7. /lǎʔphû/  'areca'
8. /lǎʔphû+ca/  'areca leaf'
9a. /lɔʔ+mà/  'thumb'
b. /lɔʔ+mà/
10a. /lɔʔ+mà+dàŋ/  'big thumb'
b. /lɔʔ+mà+dàŋ/
11a. /lɔʔ+mà+nòŋ/  'on the thumb'
b. /lɔʔ+mà+nòŋ/
12a. /lɔʔ+mà+dàŋ+nòŋ/  'on the big thumb'
b. /lɔʔ+mà+dàŋ+nòŋ/

The variation in 9 through 12 is found only in readily analyzable compound nouns; it may be the result of generalizing the form without further suffixes, or of generalizing the sandhi rule to non-word-final environments. The fact that less analyzable forms like 8 do not vary suggests rather a lexical diffusion of reanalyzed high falling tones, which is is categorical for certain highly productive suffixes that tend to occur mainly in the sandhi environment, such as /dàŋ/ 'big' → /dàŋ/, and for unanalyzable polysyllabic nouns when there is no surface evidence in isolation of the underlying low falling tone in non-semi-speaker usage.
The variation is in different compounds for different semi-speakers; however, in general the low falling tones in final position are relatively much less frequent. That is, forms such as 9b implying loss of the sandhi rule without reanalysis to high falling tone are fewer than forms such as 9a and the related instances such as 10a and 12a. In my entire corpus there are seventeen instances like 9b out of many thousand tokens, all from two semi-speakers about twenty years old. Other semi-speakers follow the 9a/10a/12a pattern of overgeneralization or reanalysis.

A related reanalysis in two numbers may reflect an earlier stage when the noun sandhi process was more general. 'Seven' is always [ʔη], and the bound form of 'ten' in 'twenty' is always [ʔɛ], as in 13 and 14.

13. [ʔùŋŋ] ʔη yûk] 'seven Ugongs'
   Ugong 7 classifier
14. [nəŋ] ʔɛ yûk] 'twenty (people)'
   2 10 (bound) classifier

'Twenty', of course, fits the noun sandhi environment without the classifier, but neither fits with an immediately following classifier. There are no numbers with a surface low falling tone, and so it would be possible to subsume these two numbers into the sandhi process by changing the rule and to suggest that 'seven' is /ʔη/ and the bound form of 'ten' is /ʔɛ/; but in counting and elsewhere the high falling forms always occur; thus, it may be better simply to view these two numbers as underlyingly high falling. If so, they would show that current fluent speakers have the beginnings of the low falling to high falling reanalysis in numbers, and that semi-speakers are simply extending and generalizing a language-internal development. For numbers, the tonal inventory is very restricted: only mid level tone occurs with vowel–final or nasal–final numbers other than these two, and only high level tone occurs with stop-final numbers. This restriction may be due to a paradigmatic effect, reinforced by the syntagmatic effect from counting; a related factor is that the reconstructed proto-tones for the non-stop-final numbers between one and nine are the same (Bradley 1979: 338-340).

Verbs with high falling tone fall into various subcategories. Least interesting but most frequent are the Thai loanwords. Also numerous are those with final stops; unlike nouns, Ugong stop-final verbs do occur with underlying high falling tone. More interesting are certain two-syllable verbs in which the second syllable is high falling; the noun sandhi process may appear to be involved. However, two-syllable verbs with a low falling sec-

4 A classifier is an obligatory word that must occur with every non-round number in most Southeast Asian languages; the classifier that can be used with a noun is usually semantically determined. Thus, the classifier /yûk/ is appropriate when humans are being enumerated; there are also more general classifiers and measure classifiers.