ACHIEVEMENTS AND CHALLENGES IN THAI PHONETICS

by Jørgen Rischel

Department of Phonetics

University of Copenhagen.

0. Introductory remarks

It may be appropriate to explain the background of the present paper - its raison d'être, as it were - by way of introduction. These explanatory remarks may at the same time serve as a general apology for the shortcomings of the paper.

When the present author was kindly invited to contribute to the International Conference on Thai Studies, I felt that I could do this only in the capacity of an observant and interested outsider. Having little personal experience in the field, I am at least not burdened with scholarly biases, and I have therefore felt that I might make the most meaningful contribution to this Conference by attempting to give a general appraisal of one component of Thai studies, as it presents itself in all its impressiveness to an outside linguist.

The component in question is THAI PHONETICS. This term is understood here in a broad sense, viz. as including both phonology and instrumental phonetic study, and comprising not only descriptive study but also studies in diachrony (sound change) and linguistic reconstruction. One major reason for considering synchrony and diachrony together is that Thai linguistics is an outstanding example of the fruitfulness of combining these two "axes" of linguistic research. This means, on the one hand, carrying out descriptive work with a view to the "historical" implications of the results; on the other hand, it means doing comparative work and linguistic reconstruction on a firm descriptive basis and with a view to the possibility of defining interesting issues for the empirical study of extant languages and dialects.

For obvious reasons this review article must be confined to research on Thai proper, i.e. Standard Thai and Thai dialects. Thus, in principle, it disregards research on other Tai languages and dialects, even though the latter have to a considerable extent been studied with Thai as an (implicit or explicit) reference, and even though this research often provides data that are both typologically and genetically essential for Thai studies in the narrower sense. - Needless to say, evidence from other Tai languages and dialects plays a prominent role in the literature on the reconstruction of Proto-Tai; still it can hardly be questioned that Thai, particularly Central (or "Standard") Thai has been investigated in more detail than other members of the language family, so that a narrowing of the scope to Thai studies does not do injustice to the level of achievements of the field as a whole.

And now comes the really apologetic part: while working at this paper I have come to realize that it is hopelessly ambitious in scope, a.o. because there are reports of numerous (largely unpublished) theses and unpublished papers which have not been accessible to me. The remarks below are based on familiarity with a (somewhat randomly limited) subset of the literature; still, I have been audacious enough to give references (without comment) also to work I have not read myself, because I find the high level of activity in the field to be a highly distinctive feature in itself (which is, in a sense, as interesting as the "state of the art").

1. Segmental phonology and phonetics of modern Thai

1.1 Segmental phonology

The segmental phonology of the Thai syllable has been dealt with in numerous publications (see Bibliography) which cannot be reviewed here. The following remarks are confined to a few issues; the overall pattern (which is basically very simple) and the standard phonemicizations are not given here (see references such as Henderson 1949, Haas 1964, and Noss 1964, which represent more or less different approaches).

One major issue is the segmental or prosodic status of certain features of the FINAL PART OF THE SYLLABLE. A prosodic interpretation is proposed by various scholars, e.g. Hashimoto (1979): the final stops and nasals are variants, reflecting a "performance feature" of staccato (shorter syllable and stop ending) vs. legato (longer syllable and nasal ending).

There certainly is a fundamental difference between syllables with final stops and nasals, but this is part of an all-pervasive difference between "dead" and "live" syllables, i.e., between syllables checked by means of a final stop and <u>all</u> other syllables. The latter distinction is generally recognized as being useful both in descriptive and in comparative work. Marvin Brown (1965, 1976) argues that at least for Ancient Thai syllable final stops were in fact nasals plus a "dead tone". For Modern Thai he has come to a conclusion (1978, p. 33, 36) somewhat reminiscent of that of Hashimoto. He now finds that "deadness" is neither a property of tone nor of final consonant but of the syllable as such: spoonerisms and reduplication patterns suggest that it is a separate syllable component /ʔ/. Both analyses may remove a redundancy which is otherwise present for open syllables in a long vowel [V:] versus syllables in a short vowel [Vʔ]: these differ in "deadness" just as do syllables in [Vm] vs. [Vp], etc., and hence vowel length may be considered redundant in $[C_oV:]$ and $[C_oVʔ]$ syllables.

It is indeed an interesting feature of Thai if there is a clear-cut <u>dichotomy</u> between syllables with a resonant termination (including open syllables) and syllables with a non-resonant termination, nothing else. This combines with a phonotactic <u>dichotomy</u> between syllables with and syllables without a final consonantal segment. We may thus set up four syllable types resulting from the intersection of the two dimensions:

	resonant termination	non-resonant termination
with -C	VC^{nasal}	VC^{stop}
without -C	V: / VV	V?

This scheme seemingly exhausts the general manner-of-articulation possibilities with regard to the final part of the syllable, that is, it specifies that there is (i) no possibility of syllables ending in consonantal resonants other than nasals, (ii) no possibility of a voicing or aspiration contrast of final stops, (iii) no possibility of final continuant (non-occlusive) obstruents. All of this is, incidentally, seen very clearly from the adaptation of loanwords, in which a final lateral is replaced by /n/, a sibilant by /t/ (in words such as football, English).

Phonologists working within the more phoneme-oriented tradition (like the present author) have to face the necessity of determining whether the consonant system should be regarded as defective in syllable final position, or whether one should speak of extensive neutralisation here. The former solution forces the analyst to choose between /p t k/ and /b d g/ as syllable final stop phonemes (incidentally, the "prosodic" solution outlined above does not in itself account for the lack of palatals finally). The latter solution, which has been advocated by Haas (1964, p. XI), has the obvious drawback that it introduces an otherwise unnecessary phoneme /g/. Moreover, it has been challenged by Abramson (1972), who observes that the final stops are unvoiced, so that /p t k/ rather than /b d g/ is an adequate transcription. This observation must be supplemented by information concerning the voicing conditions in case of adjacent stops in syllables such as /klāp bâan/, but it seems safe to state that the final stops are basically of /p t k/-type, and this is also the prevalent phonemicization (it is the phonemicization chosen also in Brown 1967 for didactic purposes).

To the present author there is something appealing in the prosodic solution to the analysis of syllable terminations. However, it should be emphasized that this is a strictly phonological issue. As such it may be essential both in diachrony and in connection with patterns of reduplication, etc., but the specific limitations on syllable structure in Thai should not lead us to assume that there is something quite special about the way people produce these syllables. Brown (1965) refers to "control phonology" as the theory underlying his analysis, and in his later work (1976) he explicitly refers to Action Theory. However, I fail to see that action theory

is immediately applicable here. Action theory is interesting for phonetics
as an approach to the question of how speech gestures are planned and con-
trolled (it is indeed a very promising way of acquiring new insights in
speech physiology), but it would hardly predict that a Thai speaker handles
a syllable such as [ʔim] quite differently from the way a speaker of, say,
English or German does it.

In fact, the case for Brown's and others' prosodic solution is not
quite as strong as it may seem at first sight. This solution predicts that
a short unchecked vowel cannot terminate a syllable, but what then about
such syllables as the particle [khâ] without a final glottal stop? Brown
himself actually gives an example of minimal contrast between final /ʔ/ and
zero in his excellent AUA Thai course, viz. hǎʔ vs. há (as short forms of
/khráp/ and /khá/, respectively, cf. Brown 1968, p. 139). One may say with
Bee that "final particles ... have their own 'particular' phonology" (Bee
1975, p. 26 with explicit reference to the minimal pair /hǎʔ/:/há/), but why
not allow for an extension of the syllable scheme to include the peripheral
type /C_oV/ (or /C_oVh/?? , cf. Rischel & Thavisak 1984, p. 245) with a short,
unchecked vowel?

In modern Thai VOWEL LENGTH cannot be made entirely a function of
syllable termination anyway, or at least it would be a rather strained solu-
tion in cases of vowel plus a final resonant, i.e. a nasal or a semivowel.
Brown first seems inclined to handle such contrasts as /kan/:/kaan/ in terms
of "delayed onset" under the dead tone analysis, but he ends up with what
seems a straightforward length contrast for modern Thai. (For vowel length
in a comparative/diachronic perspective, see also Brown 1979.) As I see it,
this logically entails that the analysis also accounts for the minimal con-
trast between, say, /khâa/ on the one side and /khá/ or /khâʔ/ on the other,
that is, a potential distinction between long and short open syllables, for
which the particles fill a gap (also cf. the remark on "linker syllables" below).

The only remaining skewness, then, is the absence of a contrast between
/ʔ/ and zero finally after a long vowel, i.e. a contrast of the type /khaaʔ/:
/khaa/ or /khâaʔ/:/khâa/. There is no such contrast, but open syllables
may certainly have a glottalized termination associated with particular
types of tone, i.e., we are in a sense back to the "prosodic" treatment of
syllable final /ʔ/ (possibly as an aspect of phonation type, cf. Egerod
1971, p. 167-169).