Some occurrences of sandhi and morphonology in Tai

Lev N. MOREV
Institute of Oriental Studies, Russia

As is known, the languages of the Tai family are (mono)syllabic languages. The Tai syllable has perceptible boundaries and is easily identified in speech and writing. The peculiarity of the Tai syllable lies in its hard, rigid structure. It manifests itself in the impossibility of positional alternations and resyllabization. It is precisely these properties of the Tai syllable that determine the typology of Tai languages, i.e. analytism in the sphere of exhibiting functional categories, configurativeness in the field of expressing syntactic relations, and the word combination as a main means of coining new lexical units. But one should not treat this assertion about the invariablity of the Tai syllable as absolute in the literal sense of the word. There is no natural language that has not undergone changes during its history. It is also true for the Tai languages. Though Tai has showed a high degree of conservatism during its history at least since the 13 century AD, the basic typological features of Tai have remained unchanged. Nevertheless, modern Tai is *somewhat different from that one. The historical trend of the phonological system as* has been noticed by many Tai scholars includes the dropping off of finals, the loss of oppositions between long and short vowels, the transformation of initial clusters, the reduction of the number of tones, etc. If we go further into the history of these languages, according to the opinion of R. Shafer, A. Haudricourt, P. Benedict, S. Yahontov and others, the modern monosyllabics status of Tai is not innate, formely it was di/polysyllabic, i.e. the root morpheme consisted either of two full syllables. as it is now in the Austronesian languages, or of a presyllables plus full syllable, as it is now in the Austroasiatic languages.

All the above mentioned transformations are diachronic. But synchronically, the Tai syllable looks like a tightly knitted unit resistant to outside effects. But sometimes it fails to stand up to tension, yields to external pressure and sustains changes at this or that point of its structure. The weakest elements in the syllable structure are phonetic tone and vowel length. They are most sensitive to environment. These facts are well known and described by many authors, cf. Noss (1966), Samang (1972), Cheng (1992), Yuphaphan (1990), Cai (1987), et al. That is why here there is no need to go into lengthy considerations, and it is enough to make some remarks and cite a few examples.

In Zhuang (according to Cheng, 1992 and Cai, 1987, when two syllabomorphemes combine into one syntagma the tone of the first syllable changes

in the following way (number indicates the quality of tones according to the notation of Chao): 31→42, 35→55, 24→55, 33→42. E.g. *rai*^{35} 'egg', *kai*^{35} 'hen', but *rai*^{55} *kai*^{35} 'hen's egg'; *yaan*^{31} 'house', *haa*^{31} 'thatch grass', but *yaan*^{42} *haa*^{31} 'house roofed with thatch'; *no*^{33} 'meat', *mau*^{24} 'pig', but *no*^{42} *mau*^{24} 'pork'.

In Standard Thai, as it follows from investigations of S. Hiranburana and Ross, contour tones of syllables in unaccented position after into level tones, i.e. 31→55, 24→55 or rarely into 22. E.g. *phyan*^{31} 'friend', *bann*^{31} 'house', but *phyan*^{55} *bann*^{31} 'neighbor'; *saw*^{24} 'pile', *thong*^{33} 'flag', but *saw*^{55} *thong*^{33} 'flagstaff'. Level tones undergo only slight changes, i.e. the first tone (33) and the fourth tone (55) retain their former levels, but the second tone (22) rises one step and becomes (33), e.g. *kan*^{22} 'handle', *miit*^{33} 'knife', but *kan*^{33} *miit*^{31} 'handle of knife'.

The above cited alternations of tones sometimes are viewed as having phonemic value (cf. Noss, 1964; Chongmin, 1992). Indeed, these tonal changes help to distinguish certain items in the text, or in other words tones take part in anlysing the discourse into syntagmatic units. It evokes the feeling that tone alternations have grammtical value. But it is necessary to bear in mind some relevant facts.

First, the tone alternation in this case is a secondary event; it is presupposed by syntactic relations of components, but not the other way round. It mostly occurs with the headword of endocentric constructions and in relation with certain syntactic functions within the sentence. And it does not obtains regarding coordinative and verb-object constructions. For instance, in the Lao phrase *khaa*^{24} *kheen*^{24} 'limbs' (lit. 'leg hand') or *cap*^{22} *mii*^{33} 'to shake hands' (lit. 'to catch arm') all the components retain their original tones. Second, the tone alternation assumes the phonemic value not independently but only together with other prosodic features, e.g. pause, intonation, rhyme. Thus, the alternations of tones in the aforecited cases in Tai should evidently be treated just as sandhial phonetic changes, without phonemic value.

Alongside the variation of tones within syntagmas there can be alternation of vowel length as well. The general rule for this phenomenon looks like the following: *the vowel length of the syllable in the weak position tends to become shorter, but in* the strong position on the contrary, it tends to become longer, e.g. St. Thai *nam*^{4} *kin*^{1} 'drinking water' (lit. 'water to drink'), but *kin*^{4} *naam*^{4} 'to drink water' (i.e. alternation of short and long /a/).

The alternation of vowel length as well as alternation of tone have no independent phonemic value, it is purely a phonetic phenomenon eventually determined by syntactic function of the element in question.

Within endocentric bipartite syntagmas weak elements sometimes undergo more serious modifications than the change of tone and the shortening of vowel. In some instances, particulary in compounds, one can see the reduction or deletion of the syllable rhyme, i.e. the dropping off a final consonant and the neutralisation of a

vowel. For instance, in ST. Thai a generic morpheme *maak*^{2} 'fruit' shrank and became atonal /mə/, as in the word *məphraaw*^{4} 'coconut'. Another example is St. Thai *chənai*^{5} 'this kind' derived from combination *chan*^{5} *nai*^{5} (lit. 'kind', 'this').

In some instances such a neutral vowel in fact becomes mute and so it causes the origin of new secondary consonant clusters, e.g. Laha *mnaa*^{6} 'tomorrow', which originates from the compound *mɨɨ*^{4} *naa*^{5} (lit. 'day', 'face/future'); *msop*^{4} 'flea' which comes from compound *meeng*^{1} *sop*^{4} (lit. 'insect', 'flea'). However, in this instance the initial /m̃/ can be treated as a syllable-forming due to its nazalisation. It agrees with Saravit's (1979) reading of Lue *mleeng*^{4} 'evening', which originated from *mɨɨ*^{6} *leeng*^{4} lit. 'time', 'evening' as a result of the deletion of ryhme in the first syllabomorpheme. One feature in common can be observed in Tai-ya, i.e. *snai*^{3}/*sənai*^{3} which is a contracted form of *san*^{3} *nai*^{3} 'now', 'at present' (lit. 'moment', 'this').

Besides transformation of prosodic elements Tai sandhi also manifests itself in such forms as assimilation and dissimilation. An example of ordinary trivial assimilation can be easily seen in colloquial Thai *jang*^{1} *ngai*^{1} from *jaang*^{2} *rai*^{1} 'how', 'by which way', N. Zhuang *fan*^{6}-*su*^{1} 'you' (lit. 'group', 'you' /plural/), cf. *fam*^{6}-*ming*^{1} 'you' (lit. 'group', 'you' /singular/), *fang*^{6}-*yau*^{2} 'we' (lit. 'group', 'we'), i.e. the final consonant of the first morpheme adapts itself to the initial consonant of the following morpheme after the principal of localization series. And dissimilation can be illustrated by Kam (Dong): *njau*^{6} 'to be in' + *nai*^{6} 'this' which become *njau*^{6} *ai*^{6} 'here'; *pai*^{1} 'to go' + *nɔu*^{1} 'where' becomes *pai*^{1} *ɔu*^{1} 'where are (you) going'.

A more interesting phenomenon is incontiguous assimilation registered by Shi (1983) in Gaoba dialect of Kam in Guizhou. In certain compounds of this dialect there is accommodation of the initial of second syllabomorpheme to the initial of first syllabomorpheme, e.g. *naa*^{3} *zjang*^{1} 'apperance' (lit. 'face', 'nose'), where *zjang*^{1} is an alternant of *nang*^{1} 'nose'; *kau*^{3} *yaan*^{1} 'night' (lit. 'time night'), where *yaan*^{1} substitutes for *ʔaan*^{1} 'night'; *cji*^{3} *zjaam*^{1} 'thirteen' (lit. 'ten three'), where *zjaam*^{1} represents *haam*^{1} 'three'. As it goes from the examples cited above the initial consonant of second syllabomorpheme changes for the resonant of the same localization series as the consonant of the first syllabomorpheme.

This dialect also demonstrates substitution of initial consonants in the second syllable in certain quantitative word-combinations, i.e., in the combination of a numeral 'one' or 'ten' with classifier or with unit of measurement. The initial consonant of the latter changes for the consonant of the same localization series, cf. *məi*^{4} 'classifier for trees', but *i*^{1} *wəi*^{4} 'one (tree)'; *tui*^{4} 'cup', but *i*^{1} *zjui*^{4} 'one cup'.

Sometimes sandhi has its impact upon both preceding and following syllables. There are several occurences of such sandhi. The most widespread is contraction of two adjacent syllables into one through haplology. During this process the preceding syllable usually retain the initial consonant, and the following syllable retains its rhyme, i.e. vowel, final and tone. Such a sandhi is peculiar to frequently met endocentric constructions with the first component designating 'man', 'time',

'place' etc. and the second component - deictic pronouns. Many interrogative or relative pronouns of these languages are formed in this way, especially the pronouns with the meaning 'who', i.e. 'man' + 'which', as St. Thai *khrai*^{1} < *khon*^{1} *rai*^{1}; Lao, Lue *phai*^{1} < *phuu*^{4} *dai*^{1}; Tai-ya *phəə*^{1} <*phuu*^{3} *ləə*^{1}; Tai-Deeng *xəə*^{1} < *xuu*^{4} *ləə*^{1}; Tai (viet) *kay*^{1} < *kun*^{4} *tay*^{1}; Zhuang *pjay*^{2} < *pou*^{4} *lay*^{2}; Bou-i *day*^{1} <*dai*^{4} *lay*^{1}; Saek *dəə*^{1} < *dai*^{4} *dəə*^{1}; Ahom *phrai* < *phuu rai* 'who'; or deictic words with the meaning 'when', 'where', 'here', 'there' and etc., e.g. Zhuang *kjan*^{4} 'there' < *ki*^{2} *han*^{4} (lit. 'place' + 'which' ; *kjaw*^{2} 'where' < *ki*^{2} *lay*^{2} (lit. 'place' + 'which'; Maonan *caw*^{1} 'where' < *ci*^{6} *naw*^{1} (lit. 'place' + 'which'; *jaa*^{5} 'that way' < *jang*^{6} *kaa*^{5} (lit. 'way', 'manner' + 'that'.

There are some other standard combinations of the same type. So, in the Zingshan dialect of Lingao (Hainan Island) a contraction of syllables occurs when a demonstrative pronoun combines with a classifier, e.g. *ma*^{2} 'that' + *həu*^{5} 'classifier for animals' converge into *məu*^{5} 'that (definite, individual) animal'. In Moulam there is a contraction of numeral *nə*^{5} 'one' and 'classifier for unclassified objects' *at*^{5} into one syllables *nat*^{5} 'one piece' (of something); in Tai-ya *to*^{1}; classifier for different objects and demonstrative pronoun *nai*^{3} 'this' merge into the pointing word *tai*^{3} 'this' /is a.../.

In all the above mentioned changes sandhi had only phonetic value though not without after-effects in the change. But in fact in some Tai dialects sandhi changes had already acquired phonemic properties. For example, in the Shetong dialect (Northern Zhuang) the substitution of initial consonant of classifier for another consonant of the same localization series designates singularity, individualization, e.g. *məi*^{4} 'classifier for trees' but *wəi*^{4} 'one certain (tree)'; *pu*^{1} 'classifier for people' but *wu*^{1} 'one certain person'. The same meaning has the change of tone (any tone to high 55) of the classifier in the Zingshan dialect (Linggao Hainan), e.g. *mai*^{4} *kai*^{4} *həu*^{5} 'one definite hen' (lit. 'female hen') modified classifier *həu*^{2}; i.e. tone 5 instead of original tone 2 (Shi, 1983).

Lastly, more explicit morphonological alternations occur in aforementioned Gaoba dialect of Kam. In this dialect the change of initial consonant in certain nouns converts the noun into a factitive verb, e.g. *tjin*^{1} 'stone', but *jing*^{1} 'to kill with stone', 'to stone'; *mit*^{10} 'knife', but *wit*^{10} 'to stab', 'to kill with knife'; *ʔan*^{2} 'yoke', but *ran*^{2} 'to beat with yoke'. Judging from examples cited by Shi Lin (1983), I believe such alternations for the most part are peculiar to the nouns denoting tools and instruments which are used to hurt or to do harm to somebody.

When it is a verb, the change of initial consonant brings about the meaning of resultativeness or effectiveness, i.e. the goal of action expressed by the verb is presumed to have been achieved. For example, *tjai*^{3} 'to trample', but *jai*^{3} 'to trample to the end or to death'; *tui*^{3} 'to scoop', but *zjui*^{3} 'to scoop out the end'. So, in this instance as well in previous ones the alternation displays itself in the form of substitution of initial for the consonant of the same localization series.

The morphological events of this kind are unique to Tai. The explanation of this phenomenon is not easy. It looks like an innovation, possibly prompted by some Sino-Tibetan or Austroasiatic languages that possess phonemic alternation of tones and of linear elements. Whatever its source, it needs further investigations.

In Tai there are few other alternations which at first sight look like they are morphophonemic. For instance, St. Thai *ruam*^{1} 'to unite' (transitive) vs. *ruam*^{3} 'to associate' (intransitive); Lao *liik*^{5} 'to go aside' vs. *phiik*^{5} 'to go aside' (rare), vs. *ciik*^{5} 'to tear lengthwise or obliquely' vs. *piik*^{5} 'to go aside' (archaic), 'wing' (noun), 'odd (of numbers)'. In contrast to the aformentioned events, these alternations are irregular, do not allow one to derive a general morphophonemic rule, and they are good only for the present instance. Their motivation or explanation lies in historical linguistics and dialectology.

Thus, above cited linguistic data are attested for a rather limited sphere of activity for morphonological rules. It occurs only with certain syntactic constructions formed by definite lexical items. First of all, it is intrinsic to the quantitative phrases including numeral 'one' and the classifier. At the same time, it can be inferred from all the aforesaid that the Tai syllable is by no means absolutely invulnerable. It can become loose and undergo certain changes including morphonological ones especially at syllable juncture: assimilation, dissimilation, and contraction. But they are quite meager for evoking inflection. Anyhow, linguistic facts testify to the gradual evolution of the structure of the Tai syllable which now accounts for the general grammatical system of Tai on the whole. These changes are probably the first forerunners of the typological shift in Tai in the distant future.

Note: In this paper specific Tai sounds are transcribed with the following signs: *y-* for a velar approximant; *ɨ-* for a high, back unrounded vowel; *e-* for a low, front vowel; *ʔ-* a glottal stops; symbols *j* after consonants marks palatalization, i.e. *zj-* means *ʑ* etc.

REFERENCES

Chen, Chongmin. 1992. "A comparative study of tonal sandhi in Zhuang and Han." *MZYW* 3:34.

Gandour, Jack. 1975. "On the representation of tone in Siamese." In J. R. Chamberlain ed., *STLWJG*. Bangkok. pp. 172-173.

Samang Hiranburana. 1972. "Changes in the pitch contours in unaccentuated syllables in spoken Thai." In J. Harris and R. B. Noss eds., *Phonetics and Phonology*. Bangkok. pp. 26-27.

Yuphaphan Hoonchamlong. 1990. "Tones in Thai." *Phasa le phasasat* 1:13.

Shi Lin. 1983. The phenomenon of sandhial changes in Dong." *MZYW* 5:46.

Liang Min. 1986. "Word-order in attributive syntagmas of Zhuang-Dong languages." *MZYW* 5:15.

Noss, Richard B. 1964. *Thai Reference Grammar*. Foreign Service Institute. Washington. English Language Center of the University Development Commision. Bangkok.

Cai Peikang. 1987. "Tonal sandhi in Yuming dialect of Zhuan." *MZYW* 1:17.

Sarawit, Mary E. 1979. "Syllabic m in two Yoong dialects." STMK. Bangkok. p. 169.

Received: 2 March 2000

Institute of Oriental Studies
Academy of Sciences, Moscow
RUSSIA