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BY

Tongenesis in Southeast Asia
1.0 Introduction

To conclude in the book of southeast Asia,
the cones were fruitful and multitudinous, and detached from cones
itself, the year, even beyond them to the photograpehing end. and
and it was so, and the language saw that it was good, and

In some culture time may recover
through which time will unite the world, that time
that decay or loss will be the societies
the cones are instrumental to themselves detached and lose some of
the cones that are instrumental to themselves detached, lean to the
the left and the right, concluding some of their productive feeters
and change said: "let the cones care guarding the voice to

Fixing the syllabic nouns.

In the beginning was the Sto-Proto-Man monosyllable, after
Examined voltage C's, center "registers".

<table>
<thead>
<tr>
<th>SIX TONES:</th>
<th>lower</th>
<th>higher</th>
</tr>
</thead>
<tbody>
<tr>
<td>pa</td>
<td>p, na</td>
<td>pa, p</td>
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<tr>
<td>pa</td>
<td>p, na</td>
<td>pa, p</td>
</tr>
</tbody>
</table>

Figure 1. Attemeence (2oth century).

Examined Tensions C's, center "controls".

<table>
<thead>
<tr>
<th>THREE TONES:</th>
<th>pa</th>
<th>pa</th>
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<tbody>
<tr>
<td>le</td>
<td>le</td>
<td>le</td>
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Figure 2. Attemeence (2oth century).
that their departure, however, they were likely to have affected the
tatts and action dropped out of the narrative 17% of the
time, many of these functions were overwhelmed by the context.

The phenomenon of "coercive" effects in narratives have been
studied extensively, sometimes existing with the concept
of the "narrative of the self," the process by which individuals
create their own stories. It is these narratives that often
shape our understanding of the world and our place within it.

The challenge, then, is to identify what factors might
influence these narratives and how they are formed.

The influence of the "narrative of the self" is evident in the
way we construct our identities and the stories we tell ourselves.

The power of narratives to shape our perceptions and actions
cannot be overstated. As such, it is crucial to understand how
these narratives are formed and the role they play in our lives.

In summary, the narratives we construct are powerful tools
that shape our worldview and our decision-making processes.
Understanding these narratives is key to understanding ourselves
and the world around us.
The syllable-initial consonant has the most effect on the sound of words and phrases.
The system uses the mora, or the number of morae, to represent the component.
A single mora is the basic unit of sound in Japanese.
Mora is a measure of linguistic sound, similar to the concept of the syllable in English.

2.2. Redundant and Contrastive Tone in Syllables
- in Japanese, tones are used to indicate the pitch of syllables within a word.
- There are three main tones: high, mid, and low.
- Tones play a crucial role in distinguishing meanings.
- By understanding the tone, one can better appreciate the nuances of the language.

The system is crucial for accurately conveying meaning in Japanese.
- Words with different tones can have entirely different meanings.
- Learning the tone system is essential for mastering Japanese.
- It helps in understanding the rhythm and intonation of spoken Japanese.

It is important to note that the tone system is not the only factor in determining meaning.
- The context in which a word is used is also critical.
- Proper tone can greatly enhance the clarity and effectiveness of communication.

By mastering the tone system, one can significantly improve their ability to communicate effectively in Japanese.
or rudimentary tones, while those dialects, like that of Lhasa, which have a degenerate consonantism, have developed relatively complex tone-systems that are of demonstrably recent origin.\textsuperscript{46} Are we then to suppose that the original PTB two-way tonal contrast was lost in Tibetan before the language was committed to writing (around the 7th century), so that the language got along without phonemic tones for centuries, only to reacquire it in certain dialects in quite recent times? Given the cyclical nature of TB phonological developments\textsuperscript{27} this is not as far-fetched as it might sound.

Many other modern TB languages lack well-developed tonal systems, including most members of the huge and ramified Kuki-Chin-Naga family,\textsuperscript{28} as well as the Barish or Bodo-Garo group. Significantly these languages are spoken at the Western extremity of the TB family, in Assam and Western Burma. Here Benedict is willing to use areal diffusion as an explanation, accounting for the lack of tones as being due to the influence of the non-tonal languages (Indo-European and other) with which these Westerners came in contact.

A particular problem is posed by the extremely important Jinghpaw language (Kachin group of TB). Although Jinghpaw (Jg.) is quite close to Lolo-Burmese as far as the number of shared cognates is concerned, it is very hard to relate the Jg. tones systematically to those of LB—except, paradoxically, in stopped syllables.\textsuperscript{29}

From the foregoing it should be obvious that we are still far from being able to give a clearcut answer to the question "Did the PST or PTB proto-syllable carry a contrastive tone?" Indeed, I personally believe that the question is rather meaningless when posed in these terms. For I view the whole process of tone-birth and tone-decay as a cyclical one, that has no beginning and has no end. A language or language-family that has a predisposition (in the sense of 2.1 above) to develop tones will indulge this predisposition at certain points in its history, but not in others, depending on the total vowel-consonant dynamics of the syllable at a given point in time. Thus we may imagine a hypothetical language at Stage A: it is monosyllabic, but the number of possible syllables is very large, since there is a rich system of syllable-initial and final consonants. Grammatical information is carried by a number of non-syllabic affixes attached to both ends of the syllable. Different syllables have different pitches, but the language can afford to ignore this fact, since it is having no trouble keeping its utterances apart.

Time passes, and the language enters a new phase, Stage B: its initial- and final-consonantal systems are breaking down. Affixes are dropping or being absorbed into their root-morphemes. Homophony rears its ugly head. In desperation the language casts about for ways to protect its contrasts. Although each morpheme is still monosyllabic, the language now creates bisyllabic or even trisyllabic compounds in order to disambiguate homophones or near-homophones,\textsuperscript{30} so that the word is no longer monosyllabic. At the same time, "analytical" ways of signalling grammatical relationships are found. Instead of, e.g., a causative prefix s-, the language might use a separate auxiliary verb meaning "make" or "send on an errand" to convey the concept of causation. Meanwhile the number of vowels has increased and lexically contrastive tones have arisen, exploiting the previously redundant pitch-differences among syllables.

More time passes, and the language enters Stage C. Human lazziness being what it is, some of the syllables in compounds are tending more and more to be pronounced laxly, slurred over. Vowels are losing their stress all over the place, and being reduced to shwa. These unstressed syllables also lose their tone, and tend increasingly to hitch themselves onto the adjacent syllable in the compound. The compounds are becoming "opaque", unanalyzable by the native speaker (cf. Eng. housewife > hussy). The same sort of thing is happening to grammatical morphemes like particles and auxiliary verbs; instead of maintaining their identity as separate words, they are fusing themselves with root-morphemes (cf. English gonna, wanna, oughta, etc.). The language is becoming synthetic again, and developing all kinds of new consonant clusters due to the fusion of once-separate syllables. Most of the old affixes left over from Stage A have long since disappeared, making way for a new crop, though enough of the old crop still remain to confuse
As mentioned above in Section 2.1, the primate community is thought to have been "intransigent" toward the government and its policies, particularly those that affected their way of life. In recent years, however, there has been a shift towards cooperation and dialogue between the government and the primate community. This change has led to the development of new conservation strategies and the establishment of protected areas for the primate population. The government has also been working on improving the living conditions of the primate community and providing them with educational opportunities.

The primate community has also been actively involved in conservation efforts, participating in research projects and community-based conservation programs. These efforts have resulted in the identification of new species and the expansion of existing protected areas. The primate community has also been able to increase their income through eco-tourism, providing an alternative to their traditional land-based livelihoods.

In conclusion, the primate community's resilience and adaptation to changing circumstances have been crucial to their survival. The government's commitment to conservation and the primate community's active participation in these efforts have created a positive future for the primate population and their environment.
Benedict (1973c) was devoid of tone, and had polysyllabic (often trisyllabic) root-morphemes. This polysyllabic structure is still characteristic of the Austronesian (AN) branch, and AN has remained without true tones to the present day. The Tai and Miao-Yao (M-Y) branches, however, have become monosyllabic, and have developed complex tonal systems of the Sino-Tibetan type. Proto-AA had what one might call a "sesquisyllabic" structure, with morphemes that were "a syllable and a half" in length. That is, the prevocalic consonant was often preceded by a "pre-initial" consonant, as in the modern Cambodian words pœa 'market', tkiam 'jaw', ckae 'dog', knao̊k 'peacock'. Unlike the ST prefixes, which tended to be unstable and easily lost, these pre-initials are well-preserved in Mon-Khmer. The Mon-Khmer languages have not quite developed true tone-systems in the ST sense, but rather an intermediate sort of two-way articulatory opposition in which pitch-difference plays a role but is not the only distinguishing factor. This phenomenon has been termed "register" (Henderson 1952). Syllables in the "high" or "head" register have a creaky pharyngealized quality, are pronounced with a tense larynx and retracted tongue-root, and are relatively high in pitch. Syllables in the "low" or "chest" register have a breathy laryngealized, "sepulchral" quality, are pronounced with a lax larynx and an advanced tongue-root, and are relatively low in pitch. See Figure 4 above. Other differences in vowel quality (i.e. tongue-higher vs. tongue-lower, tongue-fronter vs. -backer, or monophthongal vs. diphthongal) also accompany the register difference. In fact, the perturbations in vowel quality have been so great, and the number of distinct vocalic nuclei has multiplied to such an extent in these languages that the simplest "phonemic solution" is to recognize these latter phonetic differences as the distinctive features distinguishing the high vs. low registers. The pitch difference is secondary—the languages are not truly tonal in the ST sense. Perhaps we could say that the Mon-Khmer languages escaped the fate of becoming tone languages by the expedient of multiplying their vocalic nuclei. It is perhaps no accident that these "halfway tonal" languages also have a syllabic structure intermediate between the truly monosyllabic ST and the truly polysyllabic AA types.

If the genetic picture outlined above is at all accurate, we must still offer an explanation for the acquisition of true tonal systems by the Tai and Miao-Yao languages (which derive from the atonal Austro-Thai parent stock), as well as by Vietnamese (from the only semi-tonal Austro-asiatic stock). (While we're at it, we should also account for the fact that many western Austronesian languages (like Javanese) have acquired register systems.) The only reasonable explanation, given our genetic framework, is to assume that the acquisition of true tone systems by these originally atonal languages was activated or catalyzed by intimate cultural contact with languages which already had true tone systems: the "areal diffusion" hypothesis.

Given the complicated migrations and meanderings of these many peoples crisscrossing back and forth across Southeast Asia, we may be sure that all three logically possible contact situations occurred abundantly over the centuries: (a) AA / AT; (b) AA / ST; (c) AT / ST. 17

As the language of the people who have been culturally dominant in East Asia for millennia, Chinese has exerted a powerful effect on the lexicon and phonology of the languages with which it has come in contact. Haudricourt (1954a), drawing on the work of earlier scholars like Henri Maspero, showed that in lexical items which Chinese has in common with Tai and Vietnamese (through borrowing in one direction or another), the tones systematically correspond: where Chinese has level tone (p'ing sheng), Vietnamese has tones ngang or huyn, and Tai has tone "A" (unmarked in the writing system); where Chinese has departing (=falling) tone (ch'ü sheng), Vietnamese has tones hői or ngã, and Tai has tone "B" (marked with the first tonal marker in the writing system); where Chinese has rising tone (shang sheng), Vietnamese has tones sạc or nang, and Tai has tone "C" (marked with the second tonal marker in the writing system). See Figure 6.

In order for Tai, Miao-Yao, and Vietnamese to have become susceptible to tonal influence from Chinese, something must have happened to their internal structure to make them more "tone-prone". We must assume that phonological interinfluencing on the "segmental"
regular tonal correspondences—are not to be taken uncritically as
evidence for genetic relationship among languages.\footnote{This paper
can be viewed as an introduction to the several articles and reviews on
tibeto-burman tones that I have written over the past five years (see
references). Despite the fact that this material is easily accessible,
non-specialists might find it useful to have the main motivations of this
line of research presented here in one place in relatively non-technical
fashion.}

Indeed, tonal criteria are not even sufficient to establish genetic
subgroupings for languages which are already known to be genetically
related. A striking proof of this is the fact that some modern
dialects of Tibetan are truly tonal while others are not. Yet these
dialects of one and the same language, more closely related to
each other than to any other language. Not only may tones be read-
dily acquired by diffusion (provided that the acquiring language
has been made sensitized or "tone-prone") they may also be lost
through contact with non-tonal languages (as in the case of some
western subgroups of TB [cf. 2.1 above]).\footnote{De l'origine
des tons en vietnamien", Journal Asiatique 242, 69-82 (1954).}

For truly is it said, "The Language gave, and the Language
hath taken away--blessed be the name of the Language" [Job 1.21].

FOOTNOTES

1This paper may be viewed as an introduction to the several arti-
cles and reviews on Tibeto-Burman tones that I have written over the
past five years (see References). Despite the fact that this
material is easily accessible, non-specialists might find it use-
ful to have the main motivations of this line of research presented
here in one place in relatively non-technical fashion.

The term "tonogenesis" was first used to my knowledge, in my
1970 article "Glottal dissimilation and the Lahu high-rising tone:
a tonogenetic case-study".

2See 2.2 below.

3Haudricourt does not commit himself as to the exact nature of
these stops, symbolizing them by "-X.

Throughout the rest of this paper we use the symbols "$C_i$" and
"$C_f$ for "syllable-initial consonants" and "syllable-final con-
sonants", respectively.

The diacritics over the vowels are those used to indicate the
six tones in modern Vietnamese orthography. The words ngang, hu-
yen, etc. are the native names for the tones.

Haudricourt's term is "inflexion".

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<table>
<thead>
<tr>
<th>CHINESE</th>
<th>平 [level]</th>
<th>仄 [falling]</th>
<th>上 [rising]</th>
</tr>
</thead>
<tbody>
<tr>
<td>VIETNAMESE</td>
<td>ngang/huyễn</td>
<td>hôi/ngã</td>
<td>sác/nắng</td>
</tr>
<tr>
<td>TAI</td>
<td>A (unmarked)</td>
<td>B (1)</td>
<td>C (2)</td>
</tr>
</tbody>
</table>

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level (i.e. involving consonants and vowels) must have preceded the
tonal influence. First of all, these non-ST languages had to be-
come truly monosyllabic (through the loss of affixes, reduction of
unstressed syllables in compounds, etc.). Then, they had to suffer
disastrous mergers in their consonantal systems in order to moti-
vate their recourse to tones to maintain lexical contrastiveness.

Haudricourt (1946a, 1961) has shown how widespread disruptions of
the voiced/voiceless opposition in syllable-initial position must
have swept through all the language families of S E A in the early
centuries of the present millennium. Two main tendencies were at
work: the devoicing of previously voiced stop initials, and the
voicing of previously voiceless nasals and other sonorants. Stan-
dard Thai is a typical example, with the old *voiced series be-
coming voiceless aspirated (merging with the old *voiceless aspir-
ated series) and the old *voiceless sonorants becoming voiced (mer-
ging with the old *voiced sonorants).

It seems likely that the development of true tones in Viet-
namese was precipitated not only by influence from Chinese, but
also from Siamese as well. This indicates that Tai (and Miao-Yao)
acquired their tone systems from Chinese before Vietnamese did,
that is, the ST > AT influence preceded the ST-cum-AT > AA influence.

The development of register systems in some Austronesian lan-
guages may be viewed as due to AA > AT substratal influence (the
"Austro-linkage") at the geographical fringes of the true-tone
diffusional area.

***

It should by now be apparent that tonal similarities—even
Haudricourt uses the words "hauteur" or "registre" for this concept. The word "register" has a different, technical sense when used to describe the two-way tonality opposition characteristic of Cambodian and the other Mon-Khmer languages. See 2.2 below.

Which my colleague John Ohala has tried to make me understand on several occasions.

William Ewan has carried out experiments which confirm this for English (personal communication); see also Lea (1973).


For a fascinating treatment of the relationship of the tongue-root to laryngeal activity in the production of tonal effects see Gregerson (1973).

See Matisoff (1972b).


The number of contrasts in a pitch-accent system is minimal (usually simply high-pitch vs. low-pitch), with no more than one syllable of each morpheme being specified for high pitch in the underlying structure. The pitches of the other syllables are typically predictable from their position in the word, or indeed from the whole grammatical construction that the word participates in. That is, the pitch contrast has a "low functional load" in distinguishing individual syllables paradigmatically.

This seems to hold for African languages as well. Those languages which have developed the most elaborate tone systems (e.g. Bamileke) are also monosyllabic (personal communications, March 1973).

Benedict wants to set up a two-way tone contrast in non-stopped syllables way back at the Proto-Sino-Tibetan period. For a brief discussion and some references, see 2.1 below.

I cannot resist observing that dental decay is no more prevalent than velar or labial decay in our family.

What Maran (1971) calls "depletion of final consonants".

This is what happened in Lahu, as we indicated above. (*am > ə, *an > e, *ag > ɔ).

All of these stages are attested in one or another Loloish language. See Matisoff (1972b).

Nungish is a minor TB group that shows special affinities both for LB and for Kachin.

The third Chinese non-stopped tone, the "going tone" (ch’ü-sheng) has been demonstrated to be of relatively recent origin. See Haudricourt (1954b) and Downer (1959).


See Sedláček (1960).

See the discussion of the Burmese reflexes of the PTH *-ik rhyme, 1.2 above, and the remarks on the "tonal cycle" later in this section.

It is possible that more Kuki-Chin languages will be found to have real tone systems once they have been better recorded by modern linguists. Those Kuki-Chin languages which do have several tones (see e.g. Henderson 1968) exploit them extensively in productive morphological processes, which makes them look suspiciously recent in origin.

See Matisoff (1973d).

Instances of this process abound in the world’s languages. In some American English dialects where pin and pen are homophonous, the words are replaced by the compound forms "stick-pin" /stɪkpn/ and "ink-pen" /ɪŋkp/, respectively.

As a more exotic example, we may take the Galitsianer dialect of Yiddish, where the vowels u and i have merged, along with the spirants s and š. The words foot and fish (standard Yiddish fuss and fis) are both pronounced /fis/. Speakers of this dialect respond by creating jocular compounds whose second members were the Russian words for 'foot' and 'fish': fis-noqe (< Russ. noqë 'foot') vs. fis-rike (< Russ. ryba).

Leaving out the fantastically complex and archaic linguistic area of New Guinea, which is now under intensive investigation by Professor Stephan Wurm and his associates at Australian National University.

An interesting Austronesian people are the Chams, who emigrated back to the mainland (Vietnam) after having lived for centuries in the islands near Malaya.

Though AN morphemes mw typically have only two syllables, not three.

The reduction of the trisyllabic proto-root occurred differently in Tai and M-Y. Tai usually dropped the beginning of the root (cf. Siamese taa, Malay mata 'eye'), while M-Y dropped the end.

According to Huffman (1970), standard Cambodian has no fewer than 31 vocalic nuclei.

Unlike those physically weak animal species, like gerbils, whose chosen evolutionary defense against extinction is the ability to proliferate their kind rapidly.


