

CONFRONTING THE UNKNOWN:¹

TONAL SPLITS AND THE GENEALOGY OF TAI-KADAI

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As a young man I lived for many years in a small town high up in the Cascade Mountains, just a short distance east of Seattle. On weekends I used to do a lot of hiking in the high mountains. Nowadays I understand everybody does this, but in those days it was a rather unusual hobby. Like ancient Southeast Asia, the area was then much more sparsely populated than now. Sometimes we went in groups, sometimes I went alone. And sometimes when I was alone I liked to strike off into areas which had not, so far as the maps showed, been explored. I still recall the thrill I used to feel from time to time at the thought that I might well be the first human being, from the beginning of time, to have stood on that particular spot. Sometimes I got lost, which served me right, and then my strategy always was to head downhill, trusting that eventually I would come out at a road or a house or at least a stream. I remember one evening just at dusk, when I was crashing down a gully in hopes of finding my way out of the woods before nightfall, I came face to face with a grizzly bear which I still remember vividly as being in size somewhat larger than Mount Rainier. Fortunately the bear was as startled as I was, and headed off in one direction while I made haste in the other.

I remember once finding myself in a mountain meadow high above timber line, with a clear view of Mount Baker to the north. It must have been springtime, because there were a great many alpine flowers blooming. One's joy in the crystalline purity and freshness of that scene is matched in my experience only by one's joy in the beauty and balance and subtlety of the newly analyzed tone system of a previously undescribed Tai dialect. One of these plants was a little thing exactly like an English daisy, with bright yellow flowers. I carefully dug it up and took it home and tried to look it up, but it wasn't in any of the books then available. I felt sure that I had made a discovery, but before I had time to get in touch with someone at the university, or someone at the state capital at Olympia, the poor thing withered away to nothing. I have always intended in later years to look into more recent books on the flora of the Pacific Northwest to see if anyone else ever found this plant and named it.

There is a place in the extreme north of Thailand where the Mekong River forms the northern border of the country, where one can sit on the banks of the great river and gaze off toward the northwest at a lofty mountain range. Through the years I used to find myself drawn back again and again to this

¹ This is a slightly curtailed version of an after-dinner talk given at the XVIth International Conference on Sino-Tibetan Languages and Linguistics, University of Washington, 16 September 1983.

spot, where I would dream of unknown Shangri-Las inhabited by God knows what strange peoples, speaking fascinating undescribed languages. Of course these areas and their languages were no doubt well known to others, but not to me.

No more reminiscences, I promise you. My point is that, as I realize now, I have always been fascinated by the unknown. I think this is probably also true of every one of you, and each of you could probably come up with better anecdotes than mine about your experiences in confronting the unknown. I think this fascination with the unknown is what distinguishes us Sino-Tibetanists from lesser mortals. Many people, perhaps most, don't like the unknown. They fear it, try to avoid thinking about it, or pretend that it doesn't exist.

What else could account for our persistence in pursuing our Sino-Tibetan studies? Lord knows it isn't the prospect of fame or riches. Most of us find that in our own institutions we are tolerated as relatively harmless crackpots who seem to know a great deal about very little, and if we gain academic advancement or rewards these are usually not for our Sino-Tibetan studies, but rather for more socially redeeming activities such as teaching language courses or serving on stupid committees. Our spouses and families and close friends tend to resign themselves to our Sino-Tibetan pursuits because they find that these activities keep us from worse mischief, and they become even more reconciled when they see us going for our meetings to such exotic places as Seattle, Peking, Gainesville, Charlottesville, Paris, and so on. Of course when they actually meet our Sino-Tibetan colleagues in the flesh, they see that they are the wittiest, the most glamorous, and the best-looking people on earth, and this also helps.

So I am suggesting that what keeps us going so enthusiastically year after year, indeed for a lifetime---for who ever heard of a reformed or rehabilitated Sino-Tibetanist?---what gives us strength to endure the disapproval, or at best, reluctant tolerance directed at us by our associates and our families, is this obsession with confronting and penetrating the unknown, with trying to find out things that no one ever knew before, or to make sense of things that have not been understood.

I would like to talk about two areas of Sino-Tibetan studies about which we know very little, where what we do know suggests that there is a great deal more to be learned or to be understood. Each of these two general topics is of the sort that have often kept me lying awake nights speculating, and perhaps some of you as well. Each of the two subsumes a variety of problems, some of which, as we will see, seem likely to be soluble if we were to get the right people together and have them combine their knowledge and undertake a cooperative investigation. Other problems seem unlikely to be resolved except in the fullness of time as we gradually come to know more and more about the linguistic history of our area.

The first of these two general topics is the great wave of tonal splits that swept across Southeast Asia and the Far East some centuries ago, surely one of the most drastic and extensive sets of sound changes ever to have occurred anywhere. Virtually everyone here, perhaps indeed everyone, is a student of languages that underwent these changes.

What usually happened, as you all know, is that an earlier system of, say, three contrasting tones, changed into a system of six or so. The splits are generally believed to have come about in this way: At first an allophonic

pitch difference arose, conditioned by the phonetic nature of the initial consonant of the syllable, so that, for example, a particular tone came to be pronounced with a lower pitch after a voiced initial than after a voiceless one. At this stage the difference was automatic, probably not noticed by speakers or listeners. But then changes occurred in initial consonants. Sometimes previously voiced consonants became voiceless, or vice versa. And sometimes these changes in initial consonants had the result that the previously allophonic, noncontrastive pitch variants of what had been a single tone became contrastive. For example, a language perhaps had at the earlier stage syllables like paa with higher pitch and baa with lower pitch. If the voiced b changed to a voiceless p, then the two syllables came to be distinguished only by the pitch difference, so that now there were two contrasting tones where there had previously been only one, with allophonic variants but no contrasts.

The first question about this wave of tonal splits is its geographical extent. So far as I know, this has never been determined. To start with Southeast Asia, every known language or dialect of the Tai family underwent such tonal splits, from Assam in the west all the way across to the extreme northeast of Vietnam in the east, and including all the Tai dialects spoken across the southern part of China. To the west, I understand that the Tibeto-Burman group was affected. But did this include all languages and dialects of the Tibeto-Burman group? If not, which were not affected, and where are they located? Other tonal languages in Southeast Asia were affected, including Vietnamese and the languages of the Miao-Yao family. The non-tonal Mon-Khmer languages underwent a similar set of changes, making splits in vocalic nuclei conditioned by the phonetic nature of the preceding consonant, and sometimes even developing two registers of voice quality. This happened in the two major languages of the group, Khmer or Cambodian and Mon, but how about all the many small islands of Mon-Khmer speech scattered throughout many countries of Southeast Asia? Were they also affected? All of them? And what were the western limits of these splits in Austro-Asiatic?

Chinese was affected, but all dialects and all Chinese-speaking areas? Small minority languages in southern China, outside of but related to Tai, are generally assumed to have been affected, such as Kam, Mak, Sui, T'en, Li, Be, etc., but are we sure that all of them without exception underwent these splits?

This question of the geographical extent of this great wave of tonal splits could, I believe, be solved by combining all the knowledge available among the participants in this conference. If we were to stop at this point and ask around, we could probably get a detailed and accurate picture right now, but then I would never get a chance to finish my talk, and of course we don't want that to happen, do we? At one point as I was thinking about all these matters it occurred to me that this would make a good subject for a paper for next year's Sino-Tibetan conference, in which you would do all the work and I would get the credit. That is, in the next few months I would undertake to write to each of you asking you to furnish what information you could on the languages you work on, and then I would piece it all together for a paper for the next conference, but as many of you know I am finding it increasingly difficult these days to cope with my mail, so I won't undertake this project. Anyone else is welcome to do so.

So the question of the geographical extent of this great wave of tonal

splits is probably soluble, if we could get a cooperative investigation organized. A more difficult question is that of date. It is sometimes said that this wave of changes occurred in the Tai languages about a thousand years ago, or about 1000 A.D., but that Central Thailand was an exception, and was affected later.

It is certainly true that these changes occurred late in Central Thailand, perhaps much later than anyone has imagined. The changes certainly had not occurred at the time of the earliest inscriptions in Thailand, which date from the end of the 13th century. Moreover, there seems to be no doubt that the poetic works from the earliest part of the period of the old capital at Ayutthaya, which was founded in 1350, were composed in the earlier three-tone language. And the great mass of loanwords into Siamese from Cambodian clearly predate both the tonal splits in Siamese and the similar vowel-splits in Cambodian, and it seems not unreasonable to assume that these borrowings date from a time after the final conquest of the Cambodian capital at Angkor, when the Siamese are believed to have imported great numbers of scholars, teachers, and books from the conquered Cambodian capital. This would bring us to some time after the middle of the 15th century for the date of the tonal splits in Central Thailand, which seems very late indeed. On the other hand, European travelers who visited Thailand in the 17th century describe the Siamese alphabet, with indications of the pronunciation of the consonant letters which show clearly that the consonant changes involved with the tonal splits had by then already occurred. These facts and arguments, if correct, place the date of the tonal splits in Central Thailand some time in the two-hundred-year period between the middle of the 15th and the middle of the 17th centuries, barely the day before yesterday.

Careful study of inscriptions and other older literary records where available, for example in Thailand, Laos, and Cambodia, and to a lesser extent in other countries, will no doubt eventually provide further clues as to the dates of these tonal changes in each language in Southeast Asia. No doubt the situation in China, of which I am blissfully and totally ignorant, is more hopeful. Vietnamese may also be more accessible to investigation along these lines; I don't know enough about Vietnamese to say. For most of Southeast Asia one has the feeling that it would be discouraging, perhaps even futile, to set out deliberately to investigate this question, because there is so much material to be looked at without having a very clear idea of what one is looking for, since evidence for the date of the tonal splits may show up in unexpected sources and forms. Rather, it seems likely that for the resolution of this question as to the date of the tonal splits we will simply have to watch and wait for enlightenment as our detailed historical and philological knowledge of each language is deepened and broadened.

A related question is where these tonal splits started and how they spread. It may be that this question will not be answered until we know the date of the splits in each area. On the other hand, it is conceivable that careful study of the modern tonal systems by scholars highly skilled in phonetic and phonological fact and theory will throw light on this question, without waiting for historical evidence to come to light. Indeed, we already have some bits and pieces of speculation about all this here and there in the literature. There is also perhaps the same possibility of help from synchronic studies in the case of another question, whether within a single language all the splits occurred at once, or some splits occurred earlier and others later. Here again there has also been some speculation regarding some changes in some

of the languages.

There is another question regarding the tonal splits in the Tai languages which I raised years ago at a Sino-Tibetan conference at Cornell University, and to which I have yet found no answer. In many Tai languages there was a simple split conditioned by the voiced or voiceless nature of the initial consonant, giving in many cases six contrasting tones instead of the earlier three. But in many other Tai languages and dialects the situation is more complicated. A single earlier tone was often split into two or even three tones on the basis of other conditioning phonetic features of the initial consonants than the simple voiced-voiceless contrast. If one charts these facts he ends up with four categories of initial consonants: 1st, voiceless friction sounds like such fricatives as s, f, x, aspirated voiceless stops such as ph, th, kh, and voiceless or preaspirated sonorants such as l, m, or hl, hm; 2nd, voiceless unaspirated stops such as p, t, k; 3rd, preglottalized sounds, including simple glottal stop; and 4th, voiced consonants. The puzzling thing about this chart is that these four categories have to be listed in exactly this order, because in any one dialect the splitting of any one earlier tone was always such that each resulting tone involved always contiguous categories of initial consonants in our chart. That is, one never finds the same new tone associated with, say, consonants of the first or second category, and also the fourth, skipping the third. I have therefore called this a phonological spectrum, because the inflexibility of this ordering is like that of the colors of the rainbow, where for example one never sees orange over among the blues. The puzzle of this inflexible order seems to me to be one of interest to general phonetic and phonological theory, but so far no one has been able to suggest an explanation for it. At the Paris Sino-Tibetan conference a few years ago I presented a paper in which I reconstructed a series of six additional initial consonants for Proto-Tai, three stops and three spirants, which would have to form a fifth category in our chart of initial consonant types, contiguous with the fourth category, the voiced sounds, because in Tai languages of the Northern branch they behaved like voiced initials, and also with the first category, the voiceless friction sounds, because in all other Tai languages they behaved like these, so that our chart becomes a closed loop, just as in the color spectrum infra-red at one end meets ultra-violet at the other.

In Chinese, I understand, some dialects underwent splits conditioned by more complicated phonetic features of the initial consonants than the simple voiced-voiceless distinction. But I have never heard it suggested that in Chinese, or in any other tonal languages in the area, the conditioning features involved the rigid ordering of phonetic features of initial consonants that we find in Tai. This is surprising, because the fact that the Tai languages invariably adhered to this principle of a fixed order of phonetic features in making their tonal splits, even though the splits occurred very late, long after the Tai family had broken up into its various branches and subbranches, indeed after the various Tai languages and dialects were pretty much in place in their present locations, seems to imply that we have here a general phonetic or phonological principle that has nothing to do with the fact that these Tai languages are genetically related to each other. So if all Tai dialects adhere to this principle not because they are genetically members of the Tai group but because the principle is a general phonetic or phonological one, why don't we find the same principle at work outside the Tai family? Of course everyone recognizes that the Tai languages are superior in many respects, but it's hard even for me, with my pro-Tai bias, to believe that only the Tai languages were

capable of observing so elegant and systematic a set of principles in making their tonal splits, while everyone else either stuck to the simple voiced-voiceless routine or else, if they deviated at all, did so in some sloppy, slipshod, haphazard or ad-hoc manner.

I wish to say just one more thing about this subject, the possibility that there may be Chinese dialects that obeyed this principle of an ordered series of phonetic features of initial consonants in making tonal splits. I do so with fear and trembling, because I know nothing about Chinese, and you may reasonably charge that this is a case of a youngster trying to teach his grandmother how to suck eggs. What I have in mind is this. A number of times through the years as I have sat listening to some of you, and others, describe the tonal splits in some Chinese dialect or other, I have sometimes heard allegedly irregular examples cited as evidence for the anti-neogrammarian theory of sound change, or sound change one word at a time. It has sometimes looked to me as if the allegedly irregular words tended to cluster around a single earlier tone and a particular category of initials, suggesting that the author has made a mistake in assuming a simple voiced-voiceless distinction as the conditioning factor, so that a regular change may have been involved after all, with more complicated Tai-like conditioning features in the initial consonants. You may now shoot me for my impertinence and irreverence if you wish, but even if you do, I make as my dying request a plea that these cases be re-examined for the possibility that a Tai-like ordered series of consonant features may be involved.

So these are the problems relating to the tonal splits that seem to me to be most challenging and tantalizing, the geographical extent of the splits, the dates, and the questions about the conditioning features in the initial consonants.

The other topic that I wish to talk about is the earlier three-tone system in Tai and other language families of Southeast Asia and the Far East.

So far as Tai is concerned, it is generally agreed that the proto-language had three contrasting tones on syllables ending in voiced sounds, that is, vowels, diphthongs, and nasals. There were also other syllables ending in one of the three voiceless stops p, t, or k, in which there was in Proto-Tai no tonal distinction. No one knows the date of Proto-Tai unity. It certainly must have been during the first millenium of the common era, perhaps around the middle of the first millenium or somewhat earlier. Some have suggested that it may even have been somewhat later. This three-tone system appears to have persisted long after the dispersal of the family, until the tonal splits occurred in the various dialects long after they had scattered to their present locations, perhaps, as we have seen earlier, as late as the middle of the second millenium.

Of the three tones, the one called the A tone was by far the most common; it occurred on at least as many words as the B and C tones combined, or perhaps more. This suggests that the A tone was somehow the normal, unmarked tone. Some of us have suggested that the other two tones were marked by special features, in the case of the B tone perhaps breathy voice or a syllable-final h, in the case of the C tone perhaps glottal constriction or a syllable-final glottal stop. In view of the long period during which this three-tone system survived, and the vastness of the geographical area over which the dialects were finally dispersed, it seems likely that these tones, while maintaining the

original system of a three-way contrast, would have developed phonetic differences from place to place in the course of the long period of perhaps a thousand years between the time of Proto-Tai unity and the time of the tonal splits.

Now we are told that both Chinese and the Miao-Yao languages also had in earlier times three-tone systems. I am assuming that there was considerable chronological overlap in the three-tone stages of these three groups, Tai, Chinese, and Miao-Yao. If I am wrong about this, everything I am about to say will have to be disregarded, and we will see to it that Rosemary erases the next eighteen minutes.

So a number of questions arise. Did the similarities go beyond the mere fact that the number of tones was three in each group? Did, for example, the A-tone in other groups, as in Tai, occur on far more words than the other two tones? And did the other languages show the special phonetic features in the other two tones that have been suggested for Tai?

Were there other groups in the area besides these three that had three-tone systems at more or less the same period? We have mentioned in another connection the group of languages in southeastern China that seem to be related somehow to Tai, that is, Mak, Sui, Kam, Li, Be, and others. These are sometimes called the Kadai languages, but I have always avoided this term for two reasons, first because the term Kadai has been used by various scholars in different senses, and second, because the term is associated with a linguistic theology which I eschew. What little work has been attempted at comparing these languages with each other and with Tai has usually been based on the assumption that they also had in earlier times a three-tone system similar to that of Proto-Tai, and that they later underwent tonal splits conditioned by the voiced-voiceless distinction in initials. I have sometimes wondered whether the great difficulty that has been encountered in the comparative study of these languages, and the lack of any real progress, may be due to errors in either or both of these assumptions. Could it be that some or all of these languages had in earlier times two tones, or four, or some other number than three, and that the conditioning factors in the splits were sometimes, as in Tai, something other than the simple voiced-voiceless distinction?

Be that as it may, we are left with a picture of a number of language groups in this area, assuming that the location of Proto-Tai at the time of unity was in southeastern China, which shared in at least a general way remarkably similar tonal systems. They shared other phonological features as well, for instance a severe limitation on the number of permitted syllable-final consonants. And of course they agreed in favoring monosyllabic morphemes or words.

Scholars have identified a great number of words shared by Chinese and Tai, and assumed that these must be due either to common genetic inheritance or to borrowing from one group by the other. Most of these shared Chinese and Tai words agree in their tones in the earlier period, allowing for the unfortunate but unavoidable and uncorrectable accident that what is called the B tone in Chinese corresponds to the C tone in Tai and vice versa. This is, of course, an accident not in the languages but in the history of scholarship, which has quite correctly followed a different firmly established traditional ordering in each case, neither of which could be changed merely to suit the convenience of us Sino-Tibetanists. When people speak of Tai and Chinese tones corresponding

in this way, or, in the case of exceptions, failing to correspond, all that is meant is that these shared words fall into this pattern of tonal agreement, Chinese A-tone words having the A tone in Tai, Chinese B-tone words having the C tone in Tai, and Chinese C-tone words having the B tone in Tai.

I am suggesting that at one time, and perhaps over a fairly long period, a number of linguistic groups in this area shared a tonal system that varied rather little from group to group, so that there may have existed a kind of primordial tonal soup. If so, borrowing from one group to another with fairly regular tonal agreement would surely have been greatly facilitated.

If a number of linguistic groups in the area shared similar tonal systems, as well as the feature of monosyllabic morphemes and the severe limitation on permitted syllable-final consonants, how did this situation come about? How was it that these groups, regardless of earlier genetic connections, ended up in this condition? Surely there must at one time have been tremendous pressure from one group to another to have brought about this remarkable degree of conformity to a linguistic type which is, after all, unusual among languages of the world. The wave of changes necessary to result in this typological conformity must have been even more drastic, even cataclysmic, than the much later wave of tonal splits discussed earlier.

Presumably it has to be assumed that at an earlier period, before all these language groups underwent this typological merger or convergence into the monosyllabic tonal type, each group was of some other phonological type, with perhaps morphemes and words of more than one syllable, more permitted syllable-final consonants, and no tones or different types of tonal systems. For the linguistic historian involved in trying to push back his reconstructions as far as possible, this period of transition from earlier types to the monosyllabic tonal type seems to me to constitute a kind of impenetrable iron curtain or wall.

In Tai studies we have been fairly successful in reconstructing the entire phonological system for earlier stages, including Proto-Tai, thus accounting for the past history of each sound as part of the system. This kind of systematic reconstruction has the benefit, of course, of bestowing greater certainty on our individual etymological comparisons.

So the question is, how far back can we push our reconstructions before we come up against this iron curtain? All our work on comparative Tai would, at first glance, seem to lie this side of the iron wall. But suggestions that have been put forward by some would imply that this is not necessarily the case. Proto-Tai has been rather thoroughly reconstructed except for the vowel system, which still presents difficulties. At least two rather different vowel systems have been reconstructed for Proto-Tai, neither of which I find totally convincing. It has been suggested by at least one distinguished scholar that the inconsistencies and irregularities in vowels between various branches of Tai are due to prior syllables at an earlier stage which were lost, but which left their traces in the vowels of the later monosyllabic forms. This would be a case of going behind the iron curtain to seek explanations for forms found on this side.

Another question involving this iron curtain is that of the relationship of Tai to the so-called Kadai languages, that is, Mak, Sui, Kam, Be, etc. We don't know yet whether these Kadai languages constitute a single genetic group

or more than one, to say nothing of the exact nature of their relationship to Tai. An interesting question is whether the whole story of Kadai-Tai relationship lies this side of the iron curtain or behind it. That is, was the single parent language from which both the Tai and the Kadai groups developed subsequent or prior to the time of the iron curtain?

Digressing for a moment, I say nothing about the seriousness of this iron curtain problem for the student of other language groups such as Chinese or Tibeto-Burman, out of ignorance. Some of you who work in these other fields would know whether you also have an iron curtain problem or not, and if so how serious it is. Vietnamese is an interesting case. If, as reliable authorities tell us, Vietnamese, or rather the Viet-Muong group, is genetically related to Mon-Khmer, then it would be logical to infer that there is no problem of an iron curtain for those who try to work out the details of the comparisons and reconstructions involved in the relationship of Viet-Muong to Mon-Khmer.

But to return to Tai and the so-called Kadai group, we find that scholars are of two persuasions. Everyone seems to have definitely and incurably one preference or another, with no one belonging to an AC-DC or ambidextrous school. One school, which includes myself, prefers to work exclusively this side of the iron curtain, encouraged by past successes in reconstructing entire phonological systems. Others prefer to disregard the iron curtain, moving back and forth through it as if it were a mere wisp of fog or mist, constantly pointing out alleged etymological connections between monosyllabic words in Tai and words of more than one syllable in other language groups. It may be that even for those of us who belong to the first more rigid group it may ultimately be necessary to admit that the other bolder spirits of the second school may turn out not to have entirely misspent their lives. For it may be that some day, when we who attempt to reconstruct entire systems this side of the iron curtain have spent our bolt, and find that we have done all we can within this limitation, it may turn out that our earliest reconstructed systems this side of the iron wall may then be found to be comparable to other entire phonological systems in other non-monosyllabic and perhaps non-tonal groups, and the rash etymologies which our bolder brethren have prematurely proposed may then suggest the directions in which to seek to make sounder, more systematic connections between our monosyllabic groups and other groups outside our area.