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Critical Concepts in Linguistics

Edited by
Randy J. LaPolla

Volume IV
Tibeto-Burman

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INTRODUCTION TO VOLUME IV

Tibeto-Burman

This volume of the set is devoted to articles about the Tibeto-Burman branch of the Sino-Tibetan family, which includes everything in the family aside from the Sinitic (Chinese) varieties (see Volume I on the relationships within the family). The major languages with extant old texts are Tibetan, Burmese, Tangut (Xīxià), and Newar, and much of the literature is about these older languages, though there are hundreds of languages and dialects within the family spread across Southwest China, Myanmar, Northeast India, Thailand, Bangladesh, and northern Vietnam.

Our first two papers, Chapters 54 and 55, are classics that concern the verbal morphology of Old Tibetan. Fang-Kuei Li's 1933 article "Certain phonetic influences of the Tibetan prefixes upon the root initials" starts us off. It is the first rigorous application of the method of internal reconstruction to any Sino-Tibetan language. In the paper, Prof. Li disagrees with Conrady's earlier (1896) analysis (also followed by Wolfenden 1929) taking the *b-* prefixed forms in the Tibetan verb paradigms as the basic form, arguing instead that the prefixless forms should be taken as basic and showing how the different initials found in the paradigms are due to the influence of the different prefixes. Prof. Li shows that the voiceless unaspirated forms in the paradigms are secondary, so there is only a voiced-voiceless aspirated contrast at base, and he also argues that the voiced vs. voiceless aspirated contrast cannot be shown to consistently mark transitive vs. intransitive, as had been posited by Conrady. He also argues against the analysis of certain forms as passive. He gives several examples of word families and the derivations of the different members of each word family.

Following this, W. South Coblin, who was trained by Prof. Li and also worked closely with him on key Tibetan texts (e.g. Li & Coblin 1987), continues where Prof. Li had left off in his "Notes on Tibetan verbal morphology" (Coblin 1976). In this article Prof. Coblin applies the results of Prof. Li's internal reconstruction to Tibetan verb paradigms that consist of four forms (present, perfect, future, imperative). He also builds on the work presented in Simon (1929), Shafer (1950–1951), Durr (1950), Uray's (1953) critique of the work of Shafer and Durr, Nishida (1958), and Chang (1971). He adopts or refines a number of rules proposed in these earlier works and also posits a number of cluster simplification and vowel assimilation rules that allow him to explain all but a few of the 266 verb paradigms he

considers. Hill (2011: 446) summarizes the patterns of cluster simplification that Prof. Coblin pointed out as “Coblin’s Law”: “Prefixes are lost when the resulting cluster is not phonotactically possible”.

As mentioned in the discussion of word families in Sinitic in Volume III, the discussion of word families in Sino-Tibetan started with Wolfenden’s 1928 article on word families in Tibetan in which the prefix *m-* is involved in some of the forms. He also extended the scope of this work on word families to look at cross-linguistic word families in his 1937 article comparing Tibetan, Kachin, and Chinese forms, as well as in his 1929 magnum opus. Another scholar very much involved in this work was Walter Simon (e.g. 1929, 1941, 1942, 1949, 1971, 1977, 1980). In carrying out the earlier work on word families the scholars were often quite conservative in terms of what alternations they would allow in their word families, but later expanded the work to include more possible variants.¹ The short paper presented here in Chapter 56, Simon (1977), “Alternation of final vowel with final dental nasal or plosive in Tibetan”, is still rather conservative in terms of the variants included, but that may be simply a matter of what the paper is trying to show: in their Addenda to the 1929 reprint of Jäschke’s 1881 dictionary of Tibetan, A. H. Francke and Walter Simon had mentioned a pattern of variation such that they found “a final vowel in the case of verbs, a dental nasal in the case of adjectives, and a dental (voiced) plosive in the case of nouns” (Simon 1977: 51). This article presents a large amount of data showing such word families and concludes (p. 57) that in fact the pattern mentioned “is merely one of several possible patterns”.

The next article, Chapter 57, is a short but important one by Robbins Burling, “The addition of final stops in the history of Maru (Tibeto-Burman)” (1966). Prof. Burling has a very large number of publications in several different areas of anthropology and linguistics, and he has made major contributions to Tibeto-Burman studies, including his early *Garó grammar* (1961), “Proto-Bodo” (1959), “The ‘Sal’ languages” (1983; see Chapter 10 in Volume I), his overview of genetic relations in Northeast India (2003, now updated as Post and Burling 2017), and his more recent trilogy on Garó (2004), among others.² The paper we present here argues that when we do comparative reconstruction, we can’t always take the more complex form as the historically prior one. In this case, when comparing Maru words with final consonants with cognates in related languages that do not have final consonants, we find that the Maru words are innovative, and he identifies the conditions on the appearance of the final consonant. This finding is also relevant to efforts to determine the reasons for the variants in word families, as we might also be tempted to see the stop finals as suffixes if we didn’t have good knowledge of the development of the language.

Our next topic is the phenomenon of “pronominalization”, first discussed by Brian Hodgson in his description of Dhimál in Hodgson (1847). This refers to the typological feature of having copies of the free personal pronouns of the language appearing after the verb, either as a suffix or as a free form. What he was referring to was not cognate forms shared across languages, but the unique pronouns of the

individual languages appearing after the verb or suffixed to the verb, as in the case of Dhimál, for which he gives *Ká khika* (1sg), *Ná khina* (2sg), and *Wá khiwa* (3sg), *Kyéł khi kyel* (1pl), *Nyel khi nyel* (2pl), and *Ubal khi* (3pl) for the present tense indicative auxiliary, and says of the suffixed forms, “Is this inflection, after all, nothing more than the reduplicated pronoun, added to the root, after the manner of the plural?” (1847: 120). Hodgson divided the “Himalayan races”, as he called them, into two groups based on whether they spoke what he called “simple or non-pronominalized” languages or “complex or pronominalized” languages (1880: 105). That is, he wasn’t dividing the languages by the manifestation of some cognate features or shared innovations, but dividing the people based on the typological nature of their language as simple or complex, and he judged their intellectual and cultural levels accordingly. That this was a typological rather than cognate feature was also understood by Eugénie J. A. Henderson when she wrote her article “Colloquial Chin as a pronominalized language” (1957), which we present here in Chapter 58. Kuki-Chin had already been recognized as having a prefixal paradigm, though it was analyzed in the *Linguistic Survey of India* (Konow 1904) as nominal prefixing and not a system of pronominalization;³ but based on Hodgson’s work Henderson created a list of typological features that a language should have to be considered a pronominalized language and, on the basis of that list, argues that, like Dhimál, colloquial Tiddim Chin could also be considered a pronominalized language as it also showed a pattern of suffixing (different from the Dhimál pronouns) to the verb. And so she argues that more languages than Hodgson had originally assumed manifest this typological phenomenon and thus the phenomenon (not the forms—she did no comparison of forms—but the use of the pronouns of the individual languages for marking person on the verb) might be a general Tibeto-Burman typological trait.

The following paper, Chapter 59, still on this topic, is “Pronominal verb morphology in Tibeto-Burman” by Jim Bauman (1974; see also Bauman 1975). In this article Bauman’s main goal was to argue against the idea current at the time that the systems found in the pronominalized languages were the result of contact with the Munda language. In this he was successful, as that idea was no longer current after Bauman’s article appeared. To replace that hypothesis with another possible origin for the system, he argues that it is possible that the patterns found were due to native development. He compares some of the systems described up to that point to show commonalities, but does not try to reconstruct a paradigm to Proto-Tibeto-Burman. In the article it seems he is only considering the possibility that there was just one ancestral system, and is not considering the possibility that different systems were innovated more than once, even given the obvious historical transparency of the Dhimál suffixes as clearly copies of the Dhimál free pronouns and their lack of similarity to forms in other languages. In trying to make his case that the languages that currently do not manifest any trace of “pronominalization” must have had such systems in the past but lost the pattern, he also looks at the free pronouns and compares them with the affixes and finds commonalities, showing that there was a clear grammaticalization relationship

between some of them (i.e. that the suffixes derive from the pronouns or obvious sources such as the number “two” for duals) but does not see this as a problem for assuming a deep history for the forms. Based on this he also argues for reconstructing an inclusive/exclusive distinction to Proto-Tibeto-Burman, but LaPolla (2005), based on a much larger sample of languages, shows that the inclusive forms are clearly innovative and largely language-specific. In a later article, Bauman (1979) also argues that the patterns found in the systems of the pronominalized languages represented an ergative pattern.

Our next article, Chapter 60, LaPolla (1992a), “On the dating and nature of verb agreement in Tibeto-Burman” is a response to the assumptions of Bauman’s work and those who tried to build on it by reconstructing a single paradigm of verbal suffixes that were said to pattern in a split-ergative way to Proto-Tibeto-Burman or even Proto-Sino-Tibetan. LaPolla (1992a) argues 1) that there is not enough evidence to allow us to assume a system already existed in Proto-Tibeto-Burman (never mind Proto-Sino-Tibetan) and was lost in all of the languages with old documentary evidence except for Tangut; 2) that the Tangut system is clearly a Tangut-specific grammaticalization of the Tangut free pronouns into suffixes (just as happened in Dhimal, but with different forms);⁴ 3) that since the systems found are transparent grammaticalizations like this, then from a methodological point of view, we should not reconstruct them to the deepest level proto-language of the entire family; 4) that the languages that manifest what might be considered to be cognate systems have a very limited geographic distribution, along a known migration route, so might be due to a single shared innovation later than Proto-Tibeto-Burman; and 5) that the pattern manifested in Tangut and other languages used to argue for a split-ergative pattern actually is a hierarchical pattern, not a split-ergative pattern.

This was followed up in Chapter 61, LaPolla (1994b), “Parallel grammaticalizations in Tibeto-Burman languages: evidence of Sapir’s ‘drift’”, where it was shown that there are many types of parallel grammaticalizations in Tibeto-Burman (and even Sino-Tibetan)—i.e. functionally and even structurally similar constructions built of unique (often non-cognate) forms in the different languages—and pronominalization is one of them. It is shown that quite a few other languages manifest obvious pronominalization patterns similar to that of Dhimal, where unstressed copies of the pronouns unique to that language become prefixes or suffixes on the verb (see also LaPolla 2001).⁵ This is not to deny that some languages share a particular cognate system, but that the system that some people are trying to say was part of Proto-Tibeto-Burman was actually only one of many that grammaticalized in the family, and so represents a shared innovation among those languages and thus can be used as evidence for seeing those languages as a separate subgroup within Tibeto-Burman (see LaPolla 2017, 2013 for discussion). Other patterns discussed in LaPolla (1994b) are the parallel development of non-cognate agentive marking, anti-agentive marking,⁶ direction marking, causative marking, and sets of existential verbs in which the type of referent determines the use of the particular existential verb.

Further evidence of parallel innovation of person-marking systems is presented in our next article, Chapter 62, by Tej R. Kansakar, “Verb agreement in Classical Newar and Modern Newar dialects” (1999). In this very polite but well-argued article, Prof. Kansakar evaluates some of the opinions that have been expressed about Classical Newar and various Newar dialects in terms of the origin and dating of the so-called conjunct/disjunct marking (see Chapter 63, DeLancey 1992, for more on this phenomenon), and the person marking found in the Dolakha and Pahari dialects of Newar. Comparing the forms and discussing different historical possibilities, Prof. Kansakar argues against reconstructing either type of morphology to Proto-Newar, suggesting that as the Dolakha and Pahari dialects are surrounded by Kiranti languages, the patterns found in those varieties (which do not appear to be cognate with each other) might be due to contact.

The discussion of parallel innovations of morphology in Tibeto-Burman leads us to Scott DeLancey’s 1992 article (Chapter 63) looking at the historical development of the so-called conjunct/disjunct forms in Tibetan varieties, Newar, and Akha: “The historical status of the conjunct/disjunct pattern in Tibeto-Burman”. To quote from Prof. DeLancey’s abstract:

Several Tibeto-Burman languages show a peculiar pattern of distribution of copulas and/or finite verb forms, in which one set occurs with first person subjects in statements, second person subjects in questions, and in complement clauses of *verba dicendi* when the complement and main clause subjects are coreferential, and another set in all other contexts. When the evidence for and against reconstructing the system at the branch or family level is assessed, it appears that this “conjunct/disjunct” pattern is a recent secondary innovation in all of the languages in which it is found.

(p. 39)

The term “conjunct-disjunct” for this phenomenon was originated by Austin Hale in his well-known article on this phenomenon in Newar (Hale 1980), trying to discuss all of the patterns found as syntactic patterns, based on a Generative Semantics-style analysis, with covert speech act frames for all utterances. But this name (and presenting it as a syntactic phenomenon) has been criticized by others working on this phenomenon, which is now seen as part of evidential marking systems, such as Jackson T.-S. Sun (e.g. 1993, footnote 15) and Nicolas Tournadre (e.g. 1991, footnote 14, 2008; see Tournadre and LaPolla 2014 for a more comprehensive discussion of this phenomenon, now often referred to as egophoricity, incorporated into a theory of evidential marking). Also, in the earlier literature, such as Brian Hodgson’s work (e.g. 1847), the terms conjunct and disjunct referred to bound and free forms, respectively; e.g. free pronouns vs. affixed pronouns.

The last three articles are about three important aspects of Tibeto-Burman linguistics, though don’t form a single topic like the earlier articles. The first is Chapter 64, a seminal article on nominalization and its role in various structures,

particularly clausal modifying constructions, by James A. Matisoff: “Lahu nominalization, relativization, and genitivization” (1972). Prof. Matisoff shows the different nominalization constructions used in Lahu, in particular those built with the particle *ve*, including what is now often referred to as “stand-alone nominalization”, where a nominalized clause is used as an utterance by itself. He also shows how the same pattern of nominalization is found in several other Tibeto-Burman languages and Mandarin Chinese. Over the years, this article spawned a large number of articles showing similar constructions in Tibeto-Burman and Sinitic languages, and several edited volumes and special issues of journals on the topic (see, e.g., *Linguistics of the Tibeto-Burman Area* 31.2 2008, *Language and Linguistics* 9.4 2008, and Yap et al. 2011). The article was also intended to counter the idea current among generativists at the time that one could learn everything about languages from just studying English and that linguistic fieldwork was not necessary.

The next article, Chapter 65, is a classic and well-known article by Alton L. Becker on the classifier system of Burmese: “A linguistic image of nature: the Burmese numerative classifier system” (1975). It is stated in the article that it was inspired by Robbins Burling’s 1965 article on Burmese classifiers, which ended with the suggestion that someone should try to make sense of the forms listed, and also Hla Pe’s 1967 article on Burmese classifiers. The article shows that the classifier system is not random, and not straightforwardly based on size or shape, but based on the Burmese worldview. Too little of this sort of work has been done due to the influence of Structuralism, which champions the analysis of forms divorced from context and culture, even though it has been argued that all conventionalized aspects of language necessarily reflect the cognitive and cultural conceptions of the speakers (e.g. LaPolla 2015). See also Adams and Conklin (1973) for a more comprehensive cross-linguistic discussion of classifier semantics.

Chapter 66, our last article in the volume, and the four-volume set as a whole, is another classic article, this time on the origin of tones in Southeast Asian languages, by James A. Matisoff: “Tonogenesis in Southeast Asia” (1973). Prof. Matisoff discusses the relationship between monosyllabicity and the development of tones,⁷ how interrelated the different elements of the syllable are in terms of influencing each other historically, and how changes in the consonants can lead to the development of tones. Although he discusses Paul K. Benedict’s (1972a, 1972b, 1973) view that Proto-Sino-Tibetan had at least two tones in non-stopped syllables,⁸ he is non-committal and argues that tone can be seen as a cyclical feature historically. As always, Prof. Matisoff’s writing is in an informal style (which he says he learned from Yuen-Ren Chao) and shows his good sense of humour: the tongue-in-cheek preface to the article is worth the price of admission alone!

Notes

- 1 LaPolla (1994a) was a reaction to some scholars who posited excessively loose associations, as it argued that for word family relations (i.e. irregular correspondences) to be recognized, there must be regular correspondence in the majority of the parts of the form;

- e.g. if we want to say that two forms with different finals form a word family, then all but the finals should be regular, as assumed in Simon’s article presented here.
- 2 See the full list of his publications and fieldwork, and papers about his contributions, in Post, Morey and DeLancey (2015).
- 3 Hodgson (1856) had arbitrarily limited the characterization of pronominalization to nominal prefixing and verbal suffixing of pronouns, and so Konow did not include languages with prefixes only in the pronominalized category; he also considered the verbs in Tibeto-Burman languages to be nouns, and so the prefixed forms were seen as possessive forms used as if they were clauses—e.g. ‘my going’ used as ‘I am going’ (1904: 16–18).
- 4 Later research by Gong (2001; see also Gong 2003) showed that there are actually two parts to the Tangut system: the suffixes, which follow a hierarchical pattern, and changes in the verb root, which occur when the action is direct; i.e. when the first or second person is the actor of the clause. He did not discuss a possible origin for the change in the verb root, though the *-u* direct action suffix that Ebert (1987, 1990) talks about as a common feature of related systems is a very likely possibility.
- 5 As argued by Bauman (1974), the difference between the system being prefixal or suffixal is not important; it is still the same phenomenon of pronouns becoming cliticized to the verbs.
- 6 See LaPolla (1992b) for a more complete discussion of anti-agentive marking, LaPolla (1995a) for a more complete discussion of agentive marking, and LaPolla (1995b) for discussion of the paths of development of these two types of marking (among others). LaPolla (2004) gives a summary of much of this research.
- 7 See also Mazaudon (1977) on tonal development and DeLancey (1985) on the cyclical nature of the grammaticalization of morphology.
- 8 Benedict had based this view on his earlier assumption that Karen was a separate branch outside the rest of Tibeto-Burman, and also on the assumption that the Chinese tones go back to the proto stage, but Benedict later (see Benedict 1976, Chapter 6 in Volume I) realized Karen should be within Tibeto-Burman proper, as word order is not a proper criterion for determining genetic affiliation, and we now understand Chinese tones to have been secondary, in the case of the *shāng* and *qù* tones derived from segmental suffixes, with the *píng* tone being the contrasting unaffixed forms (see the discussion of Downer 1959, Mei 1970, and Pulleyblank’s work in Volume III, Chapters 39 and 40).

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CERTAIN PHONETIC INFLUENCES OF THE TIBETAN PREFIXES UPON THE ROOT INITIALS

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If one reads any Tibetan grammar, one is impressed in the very beginning by the definite rules which govern the prefixes, i. e. certain prefixes appear only before certain definite types of initials and do not appear before others. The native grammarians are equally sensitive of these and form rigid statements about them,¹ which we may summarize as follows:

<i>r-</i> (<i>ra-mgo</i>)	appears before	11 consonants:	<i>k, t, ts, g, d, b, dz, ñ, n, ñ, m.</i>
<i>l-</i> (<i>la-mgo</i>)	„ „	10 „	<i>k, t, p, ts, g, d, b, dz, ñ, h.</i>
<i>s-</i> (<i>sa-mgo</i>)	„ „	11 „	<i>k, t, p, ts, g, d, b, ñ, n, ñ, m.</i>
<i>b-</i> (<i>sñon-qtzug</i>)	„ „	10 „	<i>k, t, ts, ts, s, g, d, z, z.</i>
<i>g-</i> („)	„ „	11 „	<i>t, ts, ts, s, s, d, z, z, y, ñ, n.</i>
<i>d-</i> („)	„ „	6 „	<i>k, p, g, b, ñ, m.</i>
<i>q-</i> („)	„ „	10 „	<i>g, d, b, dz, dz, kh, th, ph, tsh, tsh.</i>
<i>m-</i> („)	„ „	11 „	<i>g, d, dz, dz, kh, th, tsh, tsh, ñ, ñ, n.</i>

Such dictates of euphony as formulated by the native grammarians more or less according to their system of writing seems at once inadequate in the light of modern linguistics. As a matter of fact, the *s* in *sl-* and *sr-* is also undoubtedly a prefix although it is considered by the natives as having an initial *s-* with a *ra-btags* and a *la-btags*; on the other hand, I believe, *lh-*, in some cases at least, is not to be considered as a prefix *l* followed by an *h*, but rather as a simple consonant. Furthermore, *s-*, *s'-* in some cases are not simple initials but represent a combination of prefix plus initial. The details of these will have to follow, but it is evident that these euphonic phenomena will have to be interpreted in more scientific terms, before any serious phonological study can be pursued.

When a prefix is said not to be able to stand before a certain initial, it is necessary to examine what this statement exactly means. It may mean, I believe, any one of the following three things. Firstly, a prefix may not be able to exist before a certain consonant because of the dissimilatory tendency of similarly articulated sounds; thus, prefix *b-* cannot stand before labial initials, prefix *g-* cannot stand before guttural initials, prefix *d-* cannot stand before dental plosives, fricatives, and affricatives etc. This not only applies to the prefix placed immediately before the initial but also when it is separated by another interposed prefix. Thus, in verbs like *s-kum-pa*, *b-s-kums*, *b-s-kum*, *s-kums* "to contract, to draw in (the legs)", we find a regular *b-* prefix in the perfect and in the future form, but in roots with a labial initial this prefix regularly disappears, thus: *s-pon-ba*, *s-pans*, *s-pan*, *s-pons* "to give up, to renounce". Forms like *b-s-pans*, *b-s-pan* cannot exist because *b-* is dissimilated by the following initial *p-*.

Secondly, a prefix may influence the following initial, so as to modify its manner of articulation in a definite way. This kind of phonetic influence takes place irrespective of the function of the prefix and the meaning of the root, and the result of this is that certain initials will not be found after certain prefixes. What I believe to be obvious examples of this is that in Tibetan after prefixes *s-*, *b-*, *g-*, *d-*, are not found aspirated consonants and after *q-* are not found spirants. In other words, aspirated consonants after *s-*, *b-*, *d-*, *g-*, and spirants after *q-* are changed into other sounds. The details of these will have to be given later, but Tibetan, so far as I can see, is particularly rich in this sort of phonetic change; and I propose to make a special study of this in the present paper.

There is of course a third possibility, namely, the following initial may influence the prefix in a definite way, so that before certain initials only certain prefixes are allowed. This is particularly evident in Lhota Naga where an old prefix *me-* is differentiated into *n-* and *m-* according to the following initial.² In classical Tibetan, however, I do not find definite traces of this type, except possibly prefixes *d-* and *g-* whose notorious compensatory behavior has made many people suspect them of a single origin.

It is indeed strange that while various functions of the Tibetan prefixes have been from the very beginning zealously studied, the purely mechanical phonetic reactions which must certainly have taken place between the prefix consonant and the root initial have remained so far untouched and that grammars seem to be simply satisfied with the euphonic statements of the native grammarians, more or less modified, without further inquiry. Conrady's pioneer work, *Eine Indochinesische Causativ-Denominativ-Bildung*, 1896, is chiefly interested in the functions of the prefixes, but he advocates a theory that the quality of the initial, i.e. tenuis, media or aspirata, is associated with definite grammatical functions in Tibetan³— a theory which has greatly influenced his work. Before pronouncing whether this theory is to what extent correct, I believe that Conrady might have materially improved his work by trying to find out what the initials of the verbs he deals with really are, minus the influence of the prefixes. For in verbs like *q-dud-pa*, *b-tud*, *g-dud*, *dud* or *thud*, "to bend down, to bow," *q-debs-pa*, *b-tab*, *g-dab*, *thob* "to throw, to strike", etc. where we have all three initials *d-*, *t-*, *th-* appearing in one verb, it is really a problem to determine what

the true initial (or initials) is and under what conditions it is differentiated into *d-*, *t-*, *th-*. Conrady gives *tud-pa*, *tab-pa* as the original stems, evidently considering that the perfect forms with the *b*-prefix are the original stems. Similarly he gives *krol-ba* as the original stem for *akhrol-ba*, *p. f. d-krol*. Instead of deriving the other forms from his reconstructed stem and showing how the initials may be influenced by the prefixes, he concludes by saying that these roots are contaminated forms and really 'unvereinbar',⁴ thus completely ignoring the possibility that these different initials may be due to the mechanical working of the prefixes.

Wolfenden recently studies the Tibetan prefixes from an entirely different point of view in his most stimulating book *Outlines of Tibeto-Burman Linguistic Morphology*. He is mainly interested in tracing the functions of the prefixes and their later adaptations and leaves out entirely the problem of their phonetic influences. However, in agreement with Conrady, he maintains that the perfect form in *b*- with a following surd is nearer the original than the form with *a*- and an aspirated initial.⁵ Whether this viewpoint is acceptable or not we shall later see, but it seems certain and is generally felt that in the so-called three or four-rooted verbs presenting various types of initials, some form (or forms) of the initial must be original and the others secondarily developed. It is quite possible that a functional interchange of consonants might have been operating in these cases, but it seems to me that a clearer understanding of such forces can only be obtained by first realizing what mechanical influences the prefix and the root-initial may possess for each other. In the following pages I shall study the various combinations of prefixes and initials and try to show what the original form may be.

Prefix *s-*

1. *sk-* < *s-kh-*

- s-kam-pa* 'to long for': *kham* 'appetite'
s-kor-ba, *b-s-kor* 'to surround': *kho-ra* 'circumference' *khor-mo-yug* 'continually'
s-kol-ba, *b-s-kol* 'to boil': *khol-pa* 'boiled, bubbling', *khol-ma* 'anything boiled'
s-kyogs-pa 'to turn (the neck)': *khyog-po* 'curved, bent'
s-kyor 'the hollow of the hand filled with a fluid': *khyor* 'a handful'
s-kyes, *s-kyas-ma*, *s-kyos-ma* 'a present': *khyos-ma* 'a present'

It is well to remember here the fundamental principle formulated by Conrady that the prefixed forms of the Tibetan written language are derived from the prefixless forms (op. cit. p. 3). The prefixless simple nouns (or adj.) as quoted above are beyond the slightest doubt original forms and therefore present the initial in the original state, namely *kh-*. The derivatives with the *s-* prefix present without exception an unaspirated *k-*. The reason for such a change is simple: the *s-* deprives the following aspirated initial of its aspiration. For this reason we find no aspirates after *s-* in Tibetan. An excellent example of this force of *s-* can be found

in English, cf. *tone* and *cope* pronounced [t'oun] and [k'oup] but *stone* and *scope* pronounced [stoun] and [skoup].

Conrady's explanation that the aspirated consonants are derived from prefix *s-* with an unaspirated surd or sonant seems to me to have put the cart before the horse, for in that case we cannot understand why in Tibetan we have *sk-* side by side with *kh-*, etc. If *sk-*, etc. has become *kh-*, etc., in classical Tibetan we shall have no *sk-* at all. On the other hand, some dialectical forms in *kh-* versus Tib. *sk-* as cited by Conrady are definite proofs that Tib. *sk-* comes from *s-kh-* and that the dialectical *kh-* comes from a prefixless form and is therefore original. For instance, *kham* is thought to be the provincial (Wt.) pronunciation for *r-kam*, *s-kam*, but the dialects so far as we can gather from Jäschke seem to have regularly the pronunciation *k-* for *sk-*, *rk-*, never *kh-*. According to our theory, *kham* represents the original form, and *s-kam* is a derivative coming from *s-kham*. The examples can be readily multiplied if we recognize such intransitive verbs like *a-khum-pa*, *khums* 'to shrink', *a-khol-ba*, *khol* 'to boil, intr.', etc. as possessing an original *kh*. The prefixless perfect forms as well as the present forms with *a-* present alike an aspirated surd, and there is no reason to think that this is not their original initial, but the *s-* derivatives have all *k-*:

- s-kum-pa*, *b-s-kums*, *b-s-kum*, *s-kums* 'to contract': *a-khum-pa*, *khums* 'to shrink'
s-kol, *b-s-kol* 'to boil, tr.': *a-khol-ba*, *khol* 'to boil, intr.'
s-kyur-ba, *b-s-kyur* 'to throw, to cast off': *a-khyur-ba* 'to be separated'
s-kur-ba, *b-s-kur* 'to send, to transmit': *a-khur-ba*, *khur* 'to carry, to convey';
khur 'burden'
s-koñ-ba, *b-s-kañs*, *b-s-kañ*, *s-koñs* 'to fulfill': *a-kheñs-pa*, *kheñs* 'to be full'
s-kyil-ba, *b-s-kyil* 'to bend': *a-khyil-ba* 'to wind, to twist, intr.'
s-kyom-pa, *b-s-kyoms*, *b-s-kyom*, *s-kyoms* 'to shake, agitate': *a-khyom-pa*
a-khyoms 'to rock, to reel, intr.'
s-kyel-ba, *b-s-kyal*, — *s-kyol* 'to conduct, to accompany': *a-khyol-ba*, *khyol*
'to be carried, to be brought somewhere'

Similarly the origin of many combinations of *s+* unaspirated surd can be proved to come from an *s-* with an aspirated surd.

2. *st-* < *s-th-*

- s-tuñ-ba*, *b-s-tuñs*, *b-s-tuñ*, *s-tuñs* 'to shorten': *thuñ-ba* 'short'
s-tod 'the upper, higher part', *s-tod*, *b-s-tod* 'to exalt': *thod* 'a head-ornament; over, above the door'
s-tim-pa, *b-s-tims*, *b-s-tim*, *s-tims* 'to penetrate, to be absorbed': *thim-pa* 'to disappear by being absorbed', also *a-thim-pa*
s-tob-pa, *b-s-tab*, *b-s-tob*, *s-tob* 'to force to accept, to feed': *thob-pa* 'to get, to obtain'
s-tun-pa, *b-s-tun* 'to agree': *a-thun-pa*, *m-thun-pa* 'to agree'

s-tugs-pa 'thick, thickness': *a-thug-pa*, *m-thug-pa* 'thick'
s-ton-pa, *b-s-tan-pa* 'to show': *a-thon-pa*, *thon*, —, *thon* 'to come out, to step forth (from the crowd)'

3. *sp-<s-ph-*

s-puñ-ba, *s-puñs* 'to heap, to accumulate': *phuñ-po* 'a heap'
s-poñ-ba, *s-pañs*, *s-pañ*, *s-poñs* 'to give up, to renounce': *phoñs-pa* 'poor, needy', *a-phoñs-pa*, *a-phoñs* or *phoñs* 'to be poor, to be deprived of'
s-pra-ba, *s-pras*, —, *spros* 'to adorn': *phra* 'ornament, jewel'
s-phrin-ba, *s-prin̄s* 'to send a message, to give information': *phrin*, *a-phrin* 'news'
s-pañs, 'height': *a-phañ*, *a-phañs* 'height'
s-por-ba, *s-par-ba* 'to lift up': *a-phar-ba* 'to leap, to be raised'
s-pur-ba 'to make fly, to scare up': *a-phur-ba*, *phur* 'to fly'
s-pel-ba 'to increase': *a-phel-ba*, *phel* 'to increase, intr.'
s-po-ba, *s-pos*, —, *s-pos* 'to change, tr.': *a-pho-ba*, *a-phos*, *a-phos* 'to change place, to migrate'
s-pyañ-ba 'to make hang down': *a-phyañ-ba*, *a-phyañs* 'to hang down'
s-prul-ba 'to juggle': *a-phrul-ba* 'juggery'
s-pro-ba, *s-pros* 'to make go out': *a-phro-ba*, *a-phors* 'to emanate'
s-prod-pa, *s-prad-pa*, 'to deliver': *a-phrod-pa*, *phrod* 'to be delivered'

4. *sl-<s-lh-*

s-lad-pa, *b-s-lad* 'to mix, to adulterate': *lhad* 'an alloy'
s-lan-pa 'to mend': *lhan* 'together', *lhan-pa* 'a patch'
s-le-ba, *lhas* 'to braid': *lhas lhas-ma* 'a braid', *lhe-ba* 'to braid'

These simple nouns in *lh-* in contrast with their derivatives with *sl-* undoubtedly show that we are dealing with roots with an original initial *lh-* and that the development into *sl-* is exactly parallel to the preceding types, *sk-*: *kh-*, *st-*: *th-*, *sp-*: *ph-*. In fact *lh-* has to be treated as a simple consonant, which may be defined as a voiceless or whispered *l* in contrast to the voiced *l*.⁶ This pronunciation is kept at least in Eastern Tibet according to Jäschke. The reason why the Tibetans have written it as an *h-* with a *la-mgo* is probably, because they had no good equivalent for it when they first borrowed their alphabet from the Indians and the *lh-* is probably as good as any that came close in expressing it. Furthermore, the perfect root of the Tibetan verb often appears in a prefixless form, and here *lhas*, the perfect of *s-le-ba*, clearly indicates that we have here a simple prefixless initial *lh-*.

On the other hand, *sl-* can equally well be derived from *s-l-*:

s-log-pa, *slogs*, *b-s-log* 'to turn round, about': *log-pa* 'to return'⁷
s-loñ-ba, *s-lañ-ba*, *b-s-loñs*, *b-s-lañ*, *s-loñs* 'to cause to rise': *lañ-ba lañs*, — *loñs* 'to rise'⁷
s-lob-pa, *b-s-labs*, *b-s-lab*, *slobs* 'to learn, to teach': *lob-pa*, *lobs* 'to learn'

5. *s-<s-tsh-*

sañ-ba, (*b*)-*sañs* (*b*)-*sañ* 'to cleanse': *tshañs-pa* 'purified', *a-tshañ-ba*, *tshañs*, *b-tsañ* 'to make clean'
sad-pa 'to test, examine': *tshad*, *tshod* 'measure, the right measure', *tshod l-ta-ba* 'to try, to prove'
sig-pa 'to hitch up, as porters do with a load on their back': *tshigs* 'member between two joint, joint'
sib-bu 'a sort of small pox, measles': *tshibs* 'measles'
sim-pa 'to be well, well off': *tshim-pa* 'to be content, adj. contented'
sog-pa, *b-sags*, *b-sag*, *sogs* 'to gather, to heap up': *tshogs* 'an assemblage, accumulation', *a-tshogs-pa*, *tshogs* 'to assemble'

6. *ś-<s-tśh-*

śad 'the mark of punctuation (<a cutter)': *tśhad-po* 'rent, torn, a limited time', *a-tśhad-pa*, *tśhad* 'to be cut'
śam, *g-śam* 'the lower part of a thing': *tśham la a-bebs-pa* 'to throw down, to cause to lie down'
śas 'part': *tśha* 'part, portion'
śom-pa, *bśoms* or *b-śams*, *b-śam*, *b-śoms* 'to prepare, to make ready': *tśhom-pa* 'to be finished, accomplished'

Prefix *b-*7. *bk-<b-kh-*

b-kal perf. of *a-khal-ba* 'to send things, to charge': *khal* 'burden, load'
b-ku-ba 'to extract, to make an extract of a drug by drawing out the juice': *khu-ba* 'fluid, liquid'
b-kyigs, *b-kyig* perf. and fut. of *a-khyig-pa* 'to bind'
b-krus, *b-kru* perf. and fut. of *a-khrud-pa* 'to wash'
b-kur-ba 'to carry, convey': *a-khur-ba*, *khur* 'to carry'
b-kon perfect of *a-khon-pa* 'to bear a grudge'

The above examples show conclusively that *bk-* is derived from *b-kh-*. But the examples can be readily increased if we take into consideration the following regular type of transitive verbs:

a-gegs-pa, *b-kag*, *d-gag*, *khog* 'to hinder'
a-geñs-pa, *b-lkañ*, *d-gañ*, *khon* 'to fill'
a-gebs-pa, *b-kab*, *d-gab*, *khob* 'to cover'
a-ges-pa, *b-kas*, *d-gas*, *khos* 'to split'
a-gog, *b-kog*, *d-gog*, *khog* 'to take away, to rob'
a-god-pa, *b-kod*, *d-god*, *khod* 'to establish, to build'
a-grems-pa, *b-kram*, *d-gram*, *khroms* 'to put down, to scatter'
a-grol-ba, *b-krol*, *d-grol*, *khrol* 'to liberate'

It has usually been considered that the perfect roots in *bk-* are probably the original,⁸ and from this Conrady built up two causative series of these types: Intr. *g-*: tr. *k-* and *kh-* and Intr. *kh-*: tr. *k-* (op. cit. p. 54). But it seems to me doubtful whether the perfect roots here actually represent an original unaspirated surd initial. There is much to be said for the view held by Francke and Simon that the verb in general falls into two groups, the present and the future forming one group and the perfect and the imperative the other.⁹ The first group has a sonant initial and the second group a surd initial. The problem, however, is to see if we can find out whether the surd initial is aspirated or not. In the first place, the imperative is without a prefix and therefore is likely to present the initial in its original form, uninfluenced by any prefix, and secondly we know that *b-* prefix does not exist before an aspirated consonant which makes us suspect that a loss of aspiration has probably taken place where *b-* stands. But a proof of this is furnished in verbs of this type with a labial initial.

a-bud-pa, phud, ———, phud 'to pull off'
a-bogs-pa, phog, d-bog, phog 'to impart advice'
a-bigs-pa, phigs, d-big, phigs 'to pierce'
a-bebs-pa, phab, d-bab, phob 'to cast down'
a-bul-ba, phul, d-bul, phul 'to offer'

This type is exactly parallel to the preceding type with the exception that the perfect root has no *b-* prefix. The perfect *b-* evidently is dissimilated here on account of the labial initial, but at the same time it presents a very interesting phenomenon, namely, the perfect root shows instead of an unaspirated surd an aspirate as initial. If, as it is generally believed, *bk-* represents an original initial *k-* with a *b-* prefix, we shall not be able to understand why, in the case of labials where the *b-* prefix cannot exist on account of dissimilation, we have aspirates instead of unaspirated surds. A type such as *a-b-* with perfect in *p-* simply does not exist in Tibetan.¹⁰ It is evident, then, that in the type *a-g-*, *b-k-*, *d-g*, *kh-* as well as in the type *a-b-*, *ph-*, *d-b-*, *ph-* we are really dealing with two stem forms, *g-*: *kh-* and *b-*: *ph-*; the present and the future have a sonant initial, the perfect and the imperative an aspirated surd. I may remark also that this interchange of initials belongs primarily to be transitive verbs, and rarely occurs in the neuter or intransitive verbs.

Of the types of present and perfect roots, Francke and Simon (pp. 144-145) give *a-g-*: *kh-* as a separate type, but, among the examples given, 13 out of 14 all have labial initials, with a single exception *a-dul-ba, thul* 'to conquer' which has also a perfect *b-tul*. As a matter of fact a type *a-g-*: *kh-* does not exist by itself, and *a-b-*: *ph-* type is but a variant of their type I, *a-g-*: *b-k-*, with the *b-* prefix dissimilated. To be more exact, we may speak only of an original type *a-g-*: *b-kh-* which gives *a-g-*: *b-k-* or *a-b-*: *ph-* according to whether the *b-* is dissimilated or not. The perfect *thul* may be from an accidental dropping of *b-* and is clearly exceptional, but even there the initial is *th-*, not *t-*.

8. *bt-<b-th-*

b-tug-pa 'to reach': *thug-pa* 'to reach'
b-tub 'fit, practical', *b-tub-pa* 'to be able': *thub-pa* 'to be able to cope with'
b-tum-pa 'to wrap around': *thums* 'covering, a parcel wrapped up'
b-tags, b-tag perf. and fut. of *a-thag-pa* 'to weave': *thags* 'texture, web'
b-tig-pa, b-tigs 'to drop, to let fall in drops': *thigs-pa* 'a drop', *thig-le* 'a spot',
a-thig-pa, a-thigs 'to fall in drops'
b-tus, b-tu, b-tus perf., fut., and imp. of *a-thu-ba* 'to gather': *thus-mi* 'an assemblage of men'

Similar to the type *a-g-*: *b-k-* discussed above which goes back to an original alternation of sonant and aspirate in the verbal initial,¹¹ we have here *a-d-*: *b-t-*,

a-diñ-ba, b-tiñ, g-diñ, thiñs 'to spread on the ground'
a-dud-pa, b-tud, g-dud, dud or *thud* 'to bend down'
a-dul-ba, b-tul or *thul, g-dul, thul* 'to tame, to conquer'
a-degs-pa, b-tegs, g-deg, theg 'to lift, to support', cf. *theg-pa* 'a vehicle; to be able to carry'
a-debs-pa, b-tab, g-tab, thob 'to cast, to throw'
a-dogs-pa, b-tags, g-dags, thogs 'to bind'
a-don-pa, b-ton, g-don, thon 'to cause to go'

9. *btś-<b-tśh-*

b-tśags, bśag perf. and fut. of *a-tśhag-pa* 'to tread'
b-tśaṅs, b-tśaṅ perf. and fut. of *a-tśhaṅ-ba, imp. tśhoṅs* 'to hold, to keep'
b-tśabs, b-tśab perf. and fut. of *a-tśhab-pa* 'to conceal'
b-tśam perf. of *a-tśham-pa* 'to agree'
b-tśas, b-tśa, perf. and fut. of *a-tśha-ba, imp. tśhos* 'to prepare, to bite'
b-tśiṅs, b-tśiṅ perf. and fut. of *a-tśhiṅs-pa, imp. a-tśhiṅs* 'to bind'
b-tśibs, b-tśib perf. and fut. of *a-tśhibs-pa, imp. tśhibs* 'to ascend'
b-tśus, b-tśu perf. and fut. of *a-tśhu-ba, imp. tśhus* 'to scoop water, to irrigate', cf. *tśhu* 'water'
b-tśes, b-tśe perf. and fut. of *a-tśhes-pa, imp tśhes* 'to assure'
b-tśems, b-tśem perf. and fut. of *a-tśhems-pa* 'to chew'
b-tśos, b-tśo perf. and fut. of *a-tśhos, imp. tśhos* 'to prepare, to gnaw off'

It is impossible to agree with Wolfenden and Conrady in considering that the *b-ts-* represents the original initial. The imperative uninfluenced by any prefix shows an aspirate *tśh-* and such simple noun as *tśhu* 'water' possesses also an aspirated initial. There is not the slightest reason to believe that the initial of *tśhu* is secondary while that of its derivative *b-tśus* represents on the contrary the original.

Verbs showing an alternation of *a-dz-*: *b-tś-* (< *btśh-*) like *a-g-*: *b-k-* (< *b-kh-*) are,

a-dzil-ba, b-tśil, gzil 'to expel'
a-dzal-ba, b-tśal, g-žal, a-džol 'to weigh, to repay'
a-dzil-ba, b-tśil, g-žil 'to expel'
a-džug-pa, b-tśug, g-žug, tśhug 'to put in, to cause'¹²
a-džun-pa, b-tśun, g-žun tśhun 'to subdue, to soften', cf. *a-tśhun-pa* 'to be tamed'
a-džum-pa, b-tsum, g-žum 'to shudder, to shrink', cf. *tśhum-pa* 'to shrink, to crouch with fear'
a-džur-ba, b-tśur 'to be entangled'
a-džoms-pa, b-tśom, g-žom, tśhom 'to conquer, to finish', cf. *tśhom-pa* 'to be finished'

The *ž-* in the future forms is probably due to the prefix *g-* which softens the *dž-* into *ž-* as suggested by Simon (*Wortgleichungen* p. 30).

10. *bts-* < *b-tsh-*

b-tsa-ma 'fruit', *b-tsas-ma* 'harvest, wages', *b-tsa-ba, b-tsas* 'to bring forth, to bear': *tsha-bo* 'grand-children'
b-tsags also *tshags, b-tsag* perf. and fut. of *a-tshag-pa*, imp. *tshog* 'to cause to trickle, to sift', cf. *tshag-ma, tshags* 'sieve, filter'
b-tsañ fut. of *a-tshañ-ba*, perf. *tshañs* 'to press into, to stuff'
b-tsir, g-tsir or *b-tsir* perf. and fut. of *a-tshir-ba*, imp. *tshir* 'to press out, to wring'
b-tses, b-tse or *g-tse* perf. and fut. of *a-tshe-ba* 'to hurt, to damage'
b-tsems or *tshems, b-tsem* perf. and fut. of *a-tshem-pa*, imp. *tshems* 'to sew', cf. *tshem-po* 'seam'
b-tsags, b-tsog perf. and fut. of *a-tshog-pa*, imp. *tshog* 'to hew'
b-tsoñs, b-tsoñ perf. and fut. of *a-tshoñ-ba*, imp. *tshoñ* 'to sell', cf. *tshoñ* 'trade'
b-tsos, b-tso perf. and fut. of *a-tshod-pa, a-tshed-pa*, imp. *tshos, tshod* 'to cook vegetables', cf. *tshod-ma* 'vegetables'
b-tsol perf. and fut. of *a-tshol-ba*, imp. *tshol* 'to seek'

Alternation of *a-dz-*: *b-ts-* (< *b-tsh-*):

a-dzugs-pa, b-tsugs, g-zugs, zugs 'to prick into'
a-dzud-pa, b-tsud, ———, tshud 'to put, to lead', cf. *a-tshud-pa, tshud* 'to be put'
a-dzum-pa, b-tsum, g-zum, tshum 'to close one's eyes, mouth'
a-dzog-pa, b-tsogs, b-tsog 'to heap together', cf. *tshogs* 'an assemblage, accumulation', *a-tshogs-pa, tshogs* 'to assemble'

Prefix *g-*

11. *gt-* < *g-th-*

g-tigs-pa 'to fall in drops': *thigs-pa* 'a drop'
g-tibs-pa 'to be gathering of clouds': *a-thibs-pa, thibs* 'to gather of clouds', *thib-pa* 'dark'
g-tim-pa 'to disappear': *thim-pa* and *a-thim-pa* 'to disappear'
g-tug-pa, g-tugs 'to reach': *thug-pa* 'to reach'
g-tub-pa 'to be able': *thub-pa* 'to be able'
g-tubs-pa 'to cut to pieces': *a-thub-pa, a-thubs, g-tub, a-thub* or *b-tub* 'to cut to pieces'
g-tum-pa 'to veil, to wrap up': *thums* 'covering', *a-thum-pa, a-thums* or *b-tums, b-tum, a-thum* or *b-tum* 'to cover'
g-toms-pa 'filled up', *g-tams-pa* 'full': *tham-pa* 'complete, full', *thams-tsad* 'whole, all'
g-tor-ba 'to scatter': *a-thor-ba, b-tor, g-tor, a-thor* 'to be scattered'

12. *g-tś-* < *gtśh-*

g-tśags-pa 'to love': *tśhags-pa* 'to love'
g-tśog-pa, b-tśag, ———, tśhogs 'to break, to split': *a-tśhag-pa tśhags* 'to break, to be broken off', *tśhogs-pa* 'to be broken'
g-tśod-pa, b-tśad, g-tśad, tśhod 'to cut': *tśhod-pa* 'to be cut off', *tśhad-po* 'rent, torn'

13. *gts-* < *g-tsh-*

g-tsag vulg. for *a-tshag-pa* and *a-dzag-pa* 'to filter'
g-tsañ 'clean, cleanness': *tshañs* 'purified', *a-tshañ-ba, tshañs, b-tsañ* 'to make clean'
g-tsir fut. of *a-tshir-ba* 'to press'
g-tse-ba, g-tses fut. and perf. of *a-tshe-ba* 'to hurt'

14. *gž-* < *g-dž-* (see the future roots of the verbs listed under 9.)

15. *gz-* < *g-dz-* (see the future roots of the verbs listed under 10.)

16. *gl-, kl-* < *g-lh-, g-l-*

g-lan-pa, g-lon-pa 'to patch, to mend': *lhan-pa* 'to join; a patch', cf. *s-lan-pa* 'to mend'
k-lon-pa 'to mend', cf. the preceding verb
g-leb-pa 'to make flat': *leb-mo* 'flat', *lhub* 'width', *lhab-lhub* 'wide, flowing'
g-lod-pa 'to loosen, to comfort': *lhod-pa* also *lad-pa* 'loose, easy'
g-lon-pa, g-lan-pa 'to return an answer': *lhon-pa* 'to return, to give back', *lan* 'a return, an answer', cf. *l-don-pa* 'to give back' (§ 27)
g-log-pa, lhog-pa 'a large ulcer or sore'
k-lub-pa, k-lubs 'to cover e.g. the body with ornaments': *lhub-pa* 'to fasten e.g. ornaments to the ear'

Prefix *d-*17. *dk-* < *d-kh-*

d-krol perf. and fut. of *a-khrol-ba*, imp. *khrol* 'to cause to sound, to play musical instruments', cf. *khrol-don* 'a musical instrument'
d-kri-ba, *d-kris* 'to wind up, to wrap a garment round the body'; *a-khri-ba*, *a-khris* 'to wind, to twist oneself'
d-kyu-ba 'to run a race': *a-khyu-ba*, *a-khyus* 'to run'
d-kri-gs-pa 'darkened, dim': *a-khrig-pa* 'to be clouded (of the sky)'
d-krug-pa 'to stir up': *a-khrug-pa*, *a-khrugs* 'to be disturbed'

18. *dp-* < *d-ph-*

d-pyañ-ba 'to suspend, to make hang down': *a-phyañ-ba*, *a-phyañs* 'to hang down'
d-pyo-ba 'to change': *a-pho-ba*, *a-phos* 'to change place'

Prefix *a-*19. *atśh-* < *a-ś-*

a-tśhad-pa, *b-śad*, *b-śad*, *śod* 'to explain, to tell': *śod-pa*, *b-śad* 'to say, to declare'
a-tśhar-ba, *śar* 'to rise, appear': *śar* 'east (<rising sun)', *śar-pa* 'grown up youth (collective noun, probably from the rising generation)'
a-tśhi-ba, *śi* 'to die'
a-tśhigs-pa 'to bind': *śig-ge-ba*, *śig-śig* 'close-bounded'
a-tśhegs-pa, *b-śags*, *b-śag*, *śog* 'to cleave, split': *g-śog-pa* also *b-śog-pa*, *g-śag-pa*, *g-śeg-pa*, *g-śags* or *b-śags*, *g-śag* or *b-śag*, *g-śog* 'to cleave, split'
a-tśhor-ba, *śor* 'to escape'
a-tśhor-ba, *b-śor*, *g-śor* 'to pursue, chase'

This type of verbs with their perfects in *ś-* (intr.) or *b-ś-* (tr.) is fundamentally different from the type *a-tśh-* with their perfects in *tśh-* (intr.) or *b-tś-* (tr.); both the prefixless perfects and the imperatives and their cognates show unquestionably an original *ś-* as initial while the latter type has *tśh-*. This *ś-* must not be thought of as the weakening of *tśh-* (cf. Conrady, op. cit. p. 19); as *tśh-* and *ś-* both can exist as root initials without a prefix, we see no reason why weakening takes place in one verb and not in the other, nor can we assume that *b-ś-* is weakened from *a-tśh-*, for *b-tśh-* gives regularly *btś-* (9). The present forms in *a-tśh-*, then, goes back to *a-ś-*, and as prefix *a-* does not exist before *ś-*, we may safely assume the development *a-ś* > *a-tśh-*.

20. *atsh-* < *a-s-*

a-tsho-ba, *sos*, ———, *sos* 'to live, exist; to feed, intr.' perf. *b-sos* 'to feed, tr.', cf. *g-so-ba*, *g-sos* or *b-sos* 'to feed, to nourish'

Similar to the preceding type, verbs showing an alternation of *a-tsh-* and *s-* go back to an original initial *s-* and are different from those showing an alternation of *a-tsh-* and *tsh-* or *b-ts-* which go back to *tsh-*. We have equally here (19 and 20) to guard against confusion with 5 and 6 which also show an alternation of *ś-*: *tśh-* and *s-*: *tsh-*. There the prefixless forms in *tśh-* and *tsh-* are the test forms for an original *tśh-* and *tsh-*, and show that the *ś-* and *s-* are secondary forms from *s-tśh-* and *s-tsh-*, while here in 18 and 19 the prefixless *ś-* and *s-* and the existence of *tśh-* and *tsh-* only after an *a-* definitely speak for an original *ś-* and *s-* and for an affricativizing of *ś-* and *s-* into *tśh-* and *tsh-* after the prefix *a-*.

There are, however, certain uncertainties in verbs of this type,

a-tshab-pa, *tshabs* or *b-sabs*, *b-sab*, *tshob* 'to pay back, to refund'

While *tshabs* and *tshob* speak for an original *tsh-*, *b-sabs* and *b-sab* favor an original *s-*. It seems to me that this probably represents a mixed type of inflection. We have probably originally two verbs from one root with different prefixes, thus

a-tshab-pa, *tshabs*, ———, *tshob*
 [*sab-pa*], *b-sabs*, *b-sab*, [*sabs*] (<*s-tshab-pa*)

A blend of these two verbs gives us the forms actually found in Tibetan.

21. *adz-* < *a-ź-*

a-dźig-pa, *b-źig*, *g-źig*, *b-śig* 'to destroy; to be ruined', cf. *źig-ral-ba* 'ruined'
a-dźu-ba, *a-dźus* 'to melt, to digest': *źu-ba* 'to melt, to digest', *źun-pa* 'melted'
a-dźug-pa, *źugs*, ———, *źugs* 'to go, to walk'
a-dźo-ba, *b-źos*, *b-źo*, *a-dźos* 'to milk', cf. *źo* 'milk'
a-dźog-pa, *b-źag*, *g-źag*, *źog* 'to put, to arrange'
a-dźog-pa, *b-źogs*, *g-źog*, *źog* 'to cut, to carve'

There are also uncertain forms like *a-dźoms-pa*, *b-tśom* or *źom*, *g-źom*, *tśhom* 'to conquer' which may also be due to a blend as in 19. In such a case a development of *s-dź-* into *ź-* has to be assumed.

22. *adz-* < *a-z-*

a-dźad-pa, *zad* 'to be on the decline'
a-dźar-ba, *b-zar*, *g-zar* 'to hang down', cf. *zar-babs* 'tassel, gold-brocade', *zar-bu* seems to be 'tassel'
a-dźin-pa, *b-zuñ*, *g-zuñ*, *zuñs* 'to take hold, to catch', also *zin-pa*
a-dźur-ba, *b-zur*, *g-zur*, *zur* 'to make way, to step aside', cf. *zur* 'edge, side, corner'
a-dźer-ba 'to say': *zer-ba* 'to say'
a-dźoms-pa 'to come together': *zom* 'point, summit'

There are again some uncertain forms such as,

a-dzugs-pa or *zug-pa*, *b-tsugs* or *zugs*, *g-zug*, *zugs* 'to prick into', cf.
a-tshugs-pa, *tshugs* 'to go into, to penetrate'
a-dzum-pa, *b-tsum* or *zum*, *g-zum*, *tshum* 'to close one's eyes, mouth'

The *z-* forms speak for an original *z-* and the *tsh-* or *b-ts-* forms for an original *tsh-*, which, as we have noticed above (in 10), alternates with *dz-*. A blend as suggested in 19 probably explains best such irregularities,

a-dz-, *b-ts-* (<*b-tsh-*), *g-z-* (<*g-dz-*), *tsh-*
z- (<*s-dz-*), *b-z-* (<*b-s-dz-*), ———, *z-* (<*s-dz-*)

It is to be noticed that we have to assume here the development of *s-dz-* into *z-*. There is of course another uncertainty in verbs like *a-dzed-pa*, *b-zed*, *g-zed* 'to hold out, forth' where we have equal right to consider *dz-* as the original initial, in so far as a cognate with a prefixless *z-* initial is not forthcoming. The *b-z-* form is easily understood as weakening from *b-dz-*.

Prefix *l-*

23. *lk-* < *l-kh-*

l-kob 'fat, heavy, plump': *khob* 'fat, heavy, clumsy'

24. *ltś-* < *l-tśh-*

l-tśud-pa, *l-tśus*, *l-tśu* 'to turn round, to twist': *a-tśhu-ba* 'to be twisted';
tśhu-ba 'sinew'; cf. also *g-tśud-pa*
l-tśu-ba also *g-tśu-ba* 'screw', prob. related to the preceding stem

25. *lt-* < *l-th-*

l-tem-pa 'the state of being full': *them-pa* 'to be full'
l-tams-pa, *b-l-tams*, *b-l-tam* 'to be full, to be born': *tham-pa* 'complete, full'

26. *lt-* < *d-lh-* (?)

l-tuñ-ba, *lhuñ* 'to fall off'

27. *ld-* < *d-l-* < *q-l-* (?)

l-dañ-ba *l-dañs* or *lañs* ———, *ldoñ* 'to rise': *lañ-ba*, *lañs*, ———, *loñs* 'to rise', *s-lañ-ba* or *sloñ-ba*, *b-s-lañs*, *b-s-lañ*, *s-loñs*, 'to cause to rise'
l-dugs-pa, *l-dugs* or *b-lugs*, *b-lug*, *b-lugs* 'to pour, to cast metals', cf. *lhug-pa* 'to pour', *lugs* 'the casting of metals'
l-dab-l-dib 'silly-talk': *lab-pa* 'to say, to talk'
l-dud-pa, *b-lud*, *b-lud*, *b-lud* 'to give to drink'

l-dum-pa 'round': *z-lum-pa* 'round, circular'

l-dog-pa, *log*, ———, *log* 'to return': *z-log-pa* 'to cause to return' *log-pa* 'to return', *s-log-pa* 'to turn around'

l-doñ-ba *l-doñs* or *loñ* 'to become blind': *loñ-ba* 'blind, to be blind'

l-don-pa 'to give back': *lhon-pa* 'to return, to give back'

l-dob-pa 'to apprehend quickly': *lob-pa* 'to learn', also *s-lob-pa*

Notice that in these two sections (25, 26) the *l-* is properly speaking not the prefix but the true root initial, while *d-* is the prefix. I suspect, however, that even *d-* is probably not the original prefix but goes back to some other form. Although there are verbs with *d-* prefix but their paradigms are different from those presented here, namely, *d-l-*, *l-* or *d-l-*, *b-l-*, *b-l-*, *l-* or *b-l-*. On the other hand verbs with *q-* prefix often present paradigms of this sort,

q-dź-, *dź-* or *ź-*, or : *d-l-*, *l-* or
q-dz-, *b-ź-*, *b-ź* *q-dź-* : *d-l-*, *b-l-*, *b-l-*, *l-* or *b-l-*

If we recall such developments as *q-s->q-tsh-*, *q-z->q-dz-*, etc., we can easily understand that a development of *q-l-* into *q-dl-* and through metathesis into *l-d-* is highly probable.

Prefix *r-*

28. *rk-* < *r-kh-*

r-kam-pa 'to desire': *kham* 'appetite'

29. *rt-* < *r-th-*

rta 'horse': *tha-s-kar* 'Rosstern'

r-tuñ-ba, *b-r-tuñs*, *b-r-tuñs* 'to make short': *tuñ-ba* 'short'

r-ten-pa, *b-r-ten*, *b-r-ten*, *r-ton* 'to adhere to, to depend on': *q-then-pa* 'to lean, to repose on (in W.)'

b-r-tan-pa 'firm, steadfast': *q-than-pa* 'firmness'

30. *ris-* < *r-tsh-*

r-tsis 'counting', secondary form *tshis*

r-tsi 'all fluid of somewhat greater consistency, paints, varnish': *tshi-ba* 'tough, viscous, sticky matter, clammy dirt'

31. *rdź-* < *r-ź-*

r-dzed-pa, *b-r-dzed*, *b-r-dzed* 'to honor, reverence': *že-sa* 'reverence'

Conclusions

Above is but a preliminary study of the sandhi rules which govern the prefixes and the root initials. I have limited myself solely to Tibetan, without going into

comparisons with other related languages. For I believe that thus far the comparisons of words made among this group of languages have unfortunately been less rigorous and less systematic than modern linguistics would like to demand. Words that have been suggested for comparison show at their best that they are in some way related but the exact line of correspondence and the exact relation have so far remained beyond our comprehension. This is not accidental for we have no good phonology for each of these languages to serve as control in making our etymologies. In Tibetan, however, where word-formation and derivation seem quite transparent, there is the possibility that certain phonological problems can be tackled from those words whose etymology is clear, and unless linguistic experience leads us astray, we are certain to find the phonetic reactions when different prefixes and initials are put together. The result of such a preliminary study has been given above and it is hoped that this will serve as a basis for further phonological study and if possible for comparison with other languages.

One feature comes out distinctly from the above study, namely, the consonantal alternation. It is true that change of consonant has been observed long ago, and Conrady has even definitely stated that *g-*, etc. are originally intransitive and *k-* and *kh-*, etc. transitive in force. We shall have to modify his observation both as to the consonants themselves and their functions. In the first place, the distinct consonantal alternation is sonant: aspirate, the unaspirated surd does not come in. Conrady's transitive *k-* derived from *s-k-*, *b-k-*, *d-k-* etc. are shown to come from *kh-* through a purely mechanical influence of the prefix. It is interesting to observe that in the schemes of transitive and intransitive initials he has only *g-* and *kh-* for the intransitive and although he gives *k-* in addition for the transitive, the *k-* is invariably preceded by *s-* (given in his scheme as *s-k-*) or *b-* rarely *d-* (not stated in his scheme) (p. 54). Such *k-* is all tracable to *kh-*. Further if *kh-*, an original transitive initial, can be used as an intransitive, why *k-* does not figure at all in the intransitive scheme? Conrady has given some forms with *k-* which seems to alternate with *kh-* or *g-*, but such cases are rare and seem to be largely adjectives and particularly associated with reduplicating adjectives such as *koñ-koñ* 'concave, excavated': *khon* 'inside', *kor-kor* 'round': *kho-ra* 'circle', *kyag-kyag* 'thick, run into clots': *khyags-pa* 'frozen, ice', *kyag-kyog* 'curved': *khyog-po*, *kyom-kyom*: *khyom-khyom* 'of irregular shape', *tob-tob smra-ba* 'to talk confusedly': *dob-dob smra-ba* 'to talk nonsense', *tson-tson=tshon-tshon* 'straight', etc. It is conceivable that some phonetic peculiarity may be connected with the reduplicated forms of descriptive words such as these¹³ and from this creep in other forms of *k-*, etc. alternating with *kh-*, etc. On the whole the unaspirated surds do not as a rule take part in the derivation of words in Tibetan. The alternation is between *g-* and *kh-*, *d-* and *th-*, *b-* and *ph-*, *dz-* and *tsh-*, *dz-* and *tsh-*.¹⁴ Conrady's transitive *k-* initial does not exist.

Now as to the functions of such consonantal alternation. Whether *kh-* is a really transitive and *g-* an intransitive initial, no sufficient evidence can be offered from Tibetan alone, and I can hardly agree with Conrady in thinking that the nominal *kh-* forms are all of transitive origin. Tibetan material abounds in

kh- intransitives and *g-* transitives and it is hardly necessary to think that such simple nouns or adjectives as *tshu* 'water', *khu* 'liquid', *thuñ-ba* 'short', *tshod-mo* 'vegetable', etc. are transitive in origin while *gan-ba* 'full', *gad-mo* 'laugh', *gegs* 'obstacle', *gor-mo* 'round', *riñ-ba* 'long' represent the original substantival initial. Denominatives can be formed from both types with the same prefixes *s-*, *r-*, etc. and moreover strictly according to the phonetic rules formulated above. If *kh-* really represent the transitive and *g-* the intransitive, we should have *a-kheñs-pa* meaning 'to fill' and *a-geñs-pa* meaning 'to be full' instead of just the reverse as found in Tibetan. Conrady's roundabout way of explain these is distinctly unsatisfactory.

But he has gone a step further and maintains that *kh-* comes really from *sk-* or *sg-* without, however, giving how and under what phonetic conditions *kh-* arises while *sk-* and *sg-* are found still existing. It is plain that we have to guard against all such over-simplifications. In the first place we are not justified to assign a transitive function to *kh-* and an intransitive function to *g-*, and, secondly, we have equally no evidence to show that *kh-* really comes from *sk-* or *sg-*. Colloquial Tibetan may present such a type of *g-*: *kh-* as intr.: tr. (Jäschke, *Tib. Gr., Addenda* p. 139-140) as well as some other languages, but before the phonological problem is cleared up, we are not to conclude that such has been the original state of affairs.

Such an alternation of sonant and aspirate appears most clearly in the transitive verbs with *a-* in the present. The present and the future have sonants and the perfect and imperative have aspirates, for examples see 7-10. There are some other formal distinctions which seem to favor such a classification: both the perfect and the imperative take the negative *ma-*, while the sonant group takes *mi-*; and both of them sometimes take the suffix *-s*. The difference in meaning of these two groups as suggested by Francke and Simon is that the sonant group is more durative in force and the aspirate group represents more the active part of the verb. But such a distinction is only observed from transitive verbs of this particular type and cannot be generalized for all initials in the Tibetan language.

For this type of verb, Bacot's observation on the prefix *b-* is important. This prefix, according to him, denotes perfect active but present passive. This is but two modes of looking at the same fact; looking at it actively, we get, for instance, 'one has filled up something', and at it neutrally (or medio-passively) 'something is in the state of being filled up'. It happened that for transitive verbs a passive translation 'something is filled up' corresponds to the active. But this is equally true of the intransitive active verbs, where the active perfect is also taken to denote a mere state—neuter voice—and therefore largely used as an adjective or as a substantive, for example:

khol perf. of *a-khol-ba* 'to boil, intr.', taken in the active voice means 'it has boiled', but taken in the neuter voice (=an adjective or substantive), we have *khol-pa* 'boiled, bubbling', *khol-ma* 'anything boiled'. The actual trend of thought is that something having boiled is therefore in the state

of being boiled, and it is not correct to derive *khól-pa* as a passive from *s-kól-ba* 'to boil, tr'.

gril perf. of *a-gril-ba* 'to be twisted' (the original idea is probably to get twisted, not passive). Cf. *gril* 'a roll, rolled' denotes as a neuter the state of being rolled up, not as a passive to *s-gril-ba* 'to wrap, to wind'.

grib perf. of *a-grib-pa* 'to grow dim, to get dark', also used as a noun 'shadow' (<what has become dark).

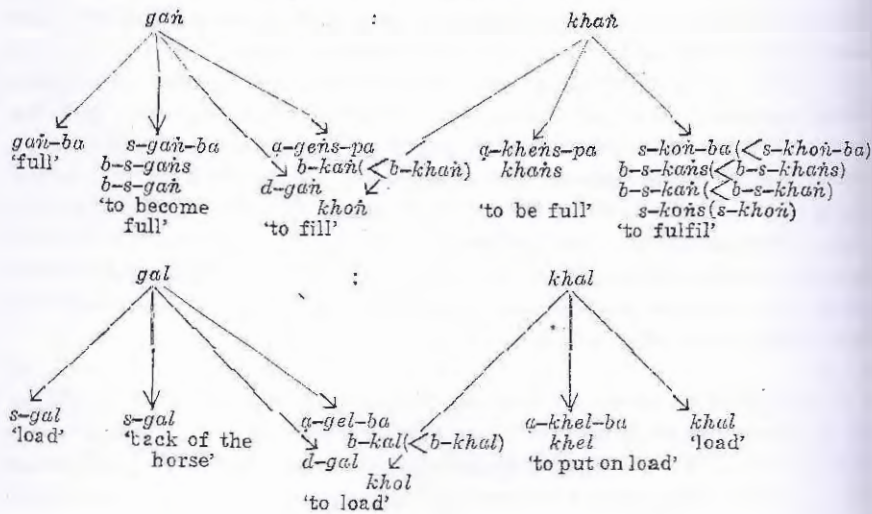
tshad perf. of *a-tshad-pa* 'to be cut, to decay', *tshad-po* 'tom, rent'.

tshogs perf. of *a-tshogs-pa* 'to assemble', used as a noun 'an assemblage' (=what has gathered together).

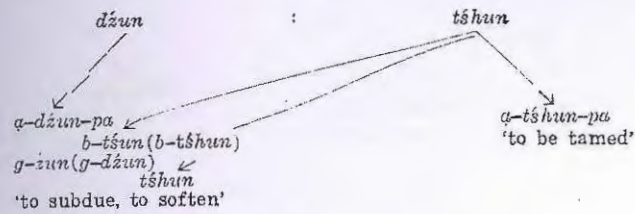
These examples can be readily increased, but it seems clear that not only in the transitive verbs but also in the intransitives the perfect functions in two ways either as the perfect in the active voice or as an adjective or substantive in the neuter voice. This distinction of voice is more fundamental than that of the active and the passive, for we can hardly speak of a passive of the intransitive. The active or passive in Tibetan is largely determined by the meaning of the verb and by the so-called case particles (really postpositions) but the active or neuter function belongs to the perfect proper and not, as indicated by Bacot, to the prefix *b-*, which probably represents an acting subject as suggested by Wolfenden.

Further, the prefixless perfects and substantives, it seems certain, represent the primary form from which a verbal or a substantival idea can be developed, and there it makes no distinction of sonant or aspirate. The function of this interchange of consonants remains still in the dark, but from this investigation we shall be able to trace the rather complicated derivation of words. The following types can be observed:

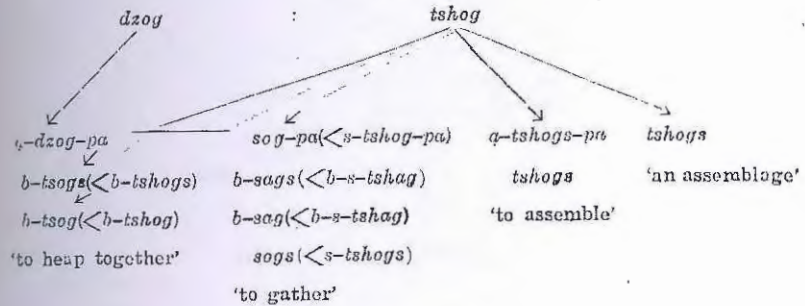
Type I. g- : k- (<kh-) : kh-



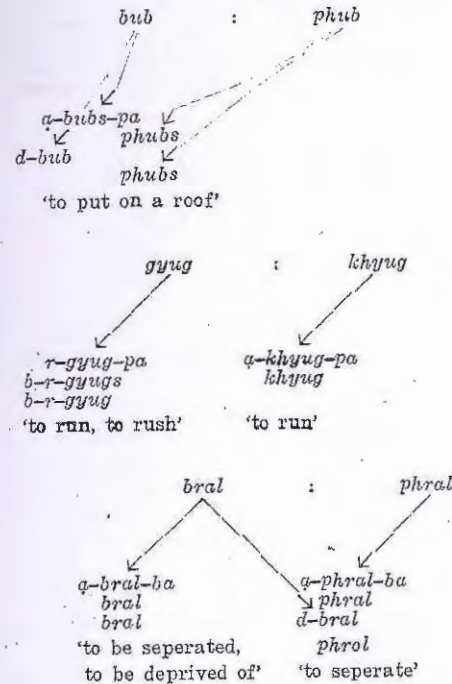
Sub-Type a.

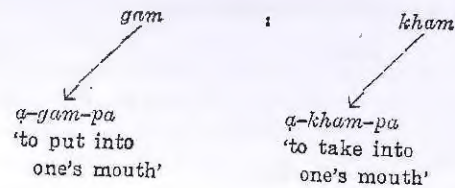


Sub-Type b.

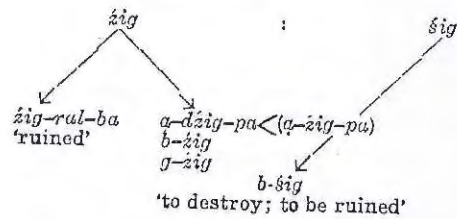


Type II. g- : kh-

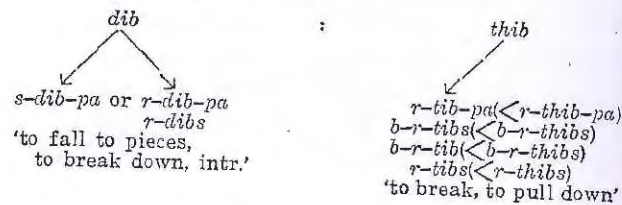




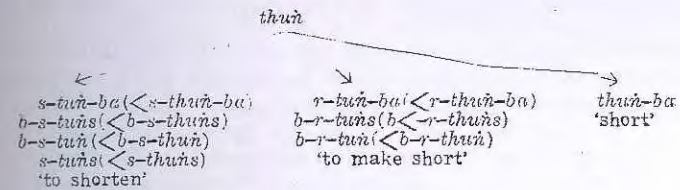
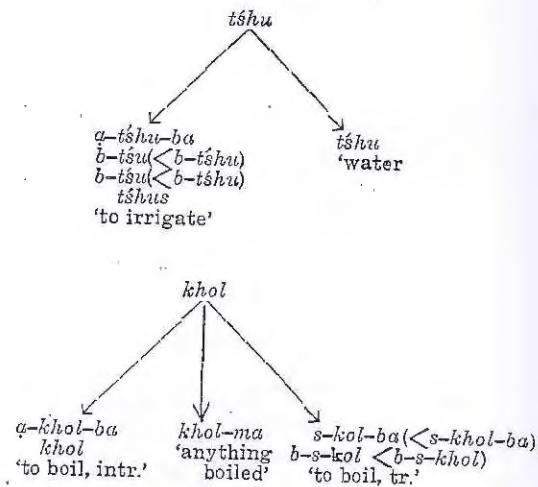
Sub-Type a.



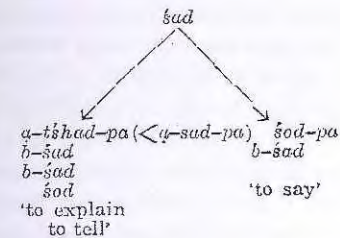
Type III. g- : k- (<kh-)



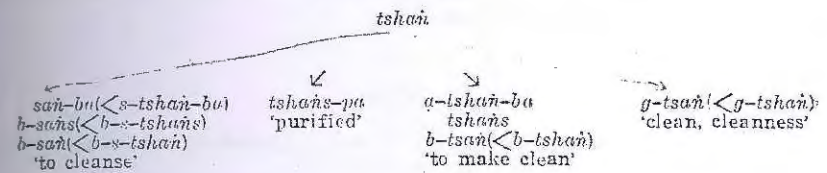
Type IV. k- (<kh-) : kh-



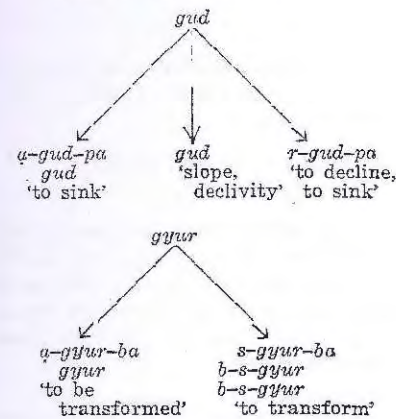
Sub-Type a.



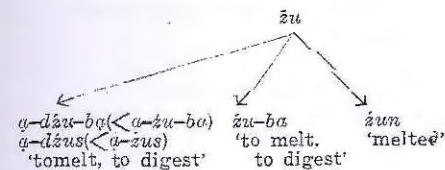
Sub-Type b.

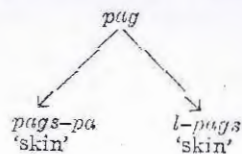


Type V. g- invariable



Sub-Type a.



Type IV. *k*-invariable

In the above types only the initials are taken into consideration, the suffixes, the *da-drag*, and the vocalic changes are temporarily left out. It is clear that in the first three types the stem shows an alternation of the initial consonant and its appearance in Tibetan as having a sonant, an unaspirated surd, and an aspirate as in type I, or as having only sonant and unaspirated surd or aspirate as in type II and III, depends upon mere chance. Type I represents more or less the complete set of derivation, while type II and III have certain forms of initials missing. In the last three types although they may present certain change of initials, the stem goes back to an invariable initial. I have also listed some of the words with affricative or sibilant initials under sub-types because of certain special sandhi changes which these initials have undergone.

Notes

- 1). Cf. Foucaux, *Grammaire de la langue tibétaine, appendices*, and Bacot, *Les slokas grammaticaux de Ton-mi Sambhota* pp. 51-54.
- 2). Cf. Wolfenden, *Outlines of Tibeto-Burman Linguistic Morphology*, 149, 156.
- 3). Op. cit. pp. 54-55.
- 4). Op. cit. pp. 27 ff.
- 5). Op. cit. p. 49.
- 6). Y. R. Chao noted it as *l* in the pronunciation of *lha-sa*, cf. Yu and Chao, *Love Songs of the 6th Dalai lama Tshangs dbyangs rgyo mtsho*, p. 26.
- 7). Cognate to these verbs we have,

l-dan-ba, *l-dans* or *lañs*, ———, *ldoñ* 'to rise'
l-dog-pa, *log*, ———, *log* 'to return'

In these verbs we have to reckon with a metathesis of *d-l-* into *l-d-* as suggested by Simon (*Tibetisch-Chinesische Wortgleichungen* pp. 30-31). But it is not necessary to accept his wholesale consideration of *r-* and *l-* prefixes as due to metathesis: for in that case we cannot understand why we have at the same time *lg-* and *gl-*, etc. The *d-* in the above two verbs is then a prefix attached to the present root, the perfect roots present, as they often do, a plain initial (*l-*).

- 8). Cf. Conrady, op. cit. pp. 26 ff.
- 9). Jäschke, *Tibetan Grammar, addenda* by A. H. Francke and Simon, p. 144.
- 10). There is, of course, a type *a-b-*: *b-* which corresponds to *a-g-*: *g-*, or *a-g-*: *b-g-*

a-bub-pa, *bub*, ———, *bubs* 'to be turned upside down'
a-bor-ba, *bor*, ———, *bor* 'to throw'

- Cf. *a-gol-ba*, *gol* 'to part'
a-gyel-pa, *gyel*, ———, *gyel* 'to fall, to tumble'
a-gyed-pa, *b-gyes*, *b-gye* 'to divide'

- 11). It is interesting to observe the note made by Jäschke in his dictionary under *thag* (p. 228), 'In *thag-pa* and other words beginning with *th-* (e. g. *than*, *tho*), *d-* sometimes takes the place of *th-*, and this uncertainty in the use of the initial letter dates perhaps from a time when the aspirated pronunciation of the media first began to be adopted in C., and was not yet generally introduced.' It seems to me that some of these variations may really go back to an old alternation of *d-*: *th-*.
- 12). The colloquial form of the perfect of this verb is *tshug* (Jäschke, *Tib. Gr., Addenda* p. 140) which according to the usual rule that perfect is used for all tenses, corresponds to *b-tšug*, but goes back to a prefixless form, cf. *b-tul*, *thul* pf. of *a-thul-ba* 'to tame'. The *tsh-* is original.
- 13). Cf. the reduplicated forms in Colloquial Pekinese with a change of tone, 罇 (3): 罇 (3) 罇 (1) 罇, 快 (4): 快 (4) 快 (1) 快, etc. It seems that reduplication has a peculiar phonetic feature different from the usual tone-sandhi.
- 14). We may add some rare instances of *ž-*: *š-*, *l-*: *lh-*, etc., such as *a-dzig-pa b-žig g-žig*, *b-šig* 'to destroy; to be ruined' (*žig*: *šig*), *lugs* 'the casting of metals' *lhug-pa* 'to pour', etc.

NOTES ON TIBETAN VERBAL MORPHOLOGY¹

W. South Coblin

Source: *T'oung Pao* 62, 1/3, 1976, 45-70

Transcription of the Tibetan alphabet

I. Consonants

ཀ k, ཁ kh, ག g, ལ ng, ཅ c, ཆ ch, ཇ j, ཉ ny, ཏ t, ཐ th, ཌ d, ཎ n,
པ p, ཕ ph, བ b, མ m, ཙ ts, ཚ tsh, ཛ dz, ཞ w, ཟ zh, འ z, ཡ ' , ལ y,
ར r, ལ l, ཤ sh, ས s, ཨ h, ཨ (not transcribed).

II. Vowels

ཨ a, ཨ i, ཨ u, ཨ e, ཨ o.

The many and varied problems of Written Tibetan (WT) verbal morphology have been of interest to students of Tibetan and Tibeto-Burman linguistics for over a century and have given rise to a long series of studies.² A number of these investigations have involved WT verbs having more than one root, and have demonstrated the probability that these multiple roots are the result of derivational processes acting upon one or, in some cases, two stems.³ In the present paper we shall comment on some of the observations made in these earlier studies and add several suggestions of our own regarding residual problems involving the multi-rooted verbs.

At the outset we propose to accept the conclusions of Li (1933) with regard to the influences of the prefixes upon WT root initials. Without repeating his arguments we may restate Li's findings as follows:

Prefix s-

1. *sk-* < *s-kh-*
2. *st-* < *s-th-*

3. *sp-* < *s-ph-*
4. *sl-* < *s-lh-*
5. *s-* < *s-tsh-*
6. *sh-* < *s-ch-*

Prefix b-

7. *bk-* < *b-kh-*
8. *bt-* < *b-th-*
9. *bc-* < *b-ch-*
10. *bts-* < *b-tsh-*

Prefix g-

11. *gt-* < *g-th-*
12. *gc-* < *g-ch-*
13. *gts-* < *g-tsh-*
14. *gzh-* < *g-j-*
15. *gz-* < *g-dz-*
16. *gl-, kl-* < *g-lh-, g-l-*

Prefix d-

17. *dk-* < *d-kh-*
18. *dp-* < *d-ph-*

Prefix '-

19. *'ch-* < *'-sh-*
20. *'tsh-* < *'-s-*
21. *'j-* < *'-zh-*
22. *'dz-* < *'-z-*

Prefix l-

23. *lk-* < *l-kh-*
24. *lc-* < *l-ch-*
25. *lt-* < *l-th-*
26. *ld-* < *d-lh-(?)*
27. *ld-* < *d-l-* < *'-l-(?)*

Prefix r-

28. *rk-* < *r-kh-*
29. *rt-* < *r-th-*

30. *rts-* < *r-tsh-*31. *rj-* < *r-zh-*

In the present paper Li's rules 6, 14, 15, 16, 19, 20, 21, 22, 26, 27, and 31 will be identified by number. The remaining rules will be referred to simply as "deaspiration" (deasp.).

We shall be concerned here exclusively with verbs for which four roots, traditionally called present (Pres.), perfect (Per.), future (Fut.), and imperative (Imp.), are attested in lexicographical sources.⁴ Our object will be to suggest hypothetical stems for these verbs and to identify the phonological processes through which their WT forms may be derived.

Let us begin by examining the following examples:

1. *'khyig* *bkyigs* *bkyig* *khyigs*
2. *'thog* *btogs* *btog* *thogs*

These WT roots can be derived from hypothetical stems by positing the following paradigm and applying Li's rules:

	Stem.	Pres.	Per.	Fut.	Imp.	Rules
		'--	b--s	b--	--s	
1.	* <i>khyig</i>	<i>'khyig</i>	* <i>bkhyigs</i>	* <i>bkhyig</i>	<i>khyigs</i>	
		<i>'khyig</i>	<i>bkyigs</i>	<i>bkyig</i>	<i>khyigs</i>	deasp.
2.	* <i>thog</i>	<i>'thog</i>	* <i>bthogs</i>	* <i>bthog</i>	<i>thogs</i>	
		<i>'thog</i>	<i>btogs</i>	<i>btog</i>	<i>thogs</i>	deasp.

However, in the following examples we encounter a problem, for the vocalism of their imperatives differs from that of the other three roots:

3. *'chag* *bcags* *bcag* *chogs*
4. *'chang* *bcangs* *bcang* *chong(s)*

This type of vowel alternation was discussed by Shafer (1951.1022-3) who commented, "The Old Bodish verb types show that whenever the imperative of an *-a-* stem verb has been recorded, the vowel is *-o-*." Noting that various Tibeto-Burman languages have an imperative *-o-* suffix he goes on to suggest, "Good evidence points therefore to the deduction that an imperative ending *-o* existed in proto-Bodic and that in the ancient dialects of Bodish proper the root vowel *-a-* was assimilated to the following imperative ending *-o-*, which then disappeared before writing was introduced into Tibet." Shafer's theory has been adopted by Nishida (1958.37, n. 3) and reiterated by Benedict (1972.126-7);

and, while we still regard it as rather tenuous, we admit it as a possibility for want of a more satisfactory explanation for the *-o-* vowel imperatives. We may symbolize the derivation of the *-o-* vowel forms by adding to the paradigm already proposed above the element **-o* which we shall read as "*-a->-o-*" in the presence of the hypothetical suffix **-o*". This modified paradigm, which we shall designate as Paradigm I, now enables us to account for verbs such as examples 3 and 4:

	Stem.	Pres.	Per.	Fut.	Imp.	Rules
		'--	b--s	b--	--s*o	
3.	* <i>chag</i>	<i>'chag</i>	* <i>bchags</i>	* <i>bchag</i>	<i>chogs</i>	
		<i>'chag</i>	<i>bcags</i>	<i>bcag</i>	<i>chogs</i>	deasp
4.	* <i>chang</i>	<i>'chang</i>	* <i>bchang</i>	* <i>bchang</i>	<i>chongs</i>	
		<i>'chang</i>	<i>bcangs</i>	<i>bcang</i>	<i>chongs</i>	deasp.

The following verbs do not have initial '-:

5. *rkam* *brkams* *brkam* *rkoms*
6. *sgab* *bsgabs* *bsgab* *sgobs*
7. *lta* *bltas* *blta* *ltos*
8. *zla* *bzlas* *bzla* *zlos*

They may, however, be assigned to Paradigm I because '- does not occur in WT before initial configurations such as *rk-*, *sg-*, *lt-*, *zl-*, and may be assumed to have been lost from such environments, thus:

		'--	b--s	b--	--s*o	
5.	<i>rkam</i>	* <i>'rkam</i>	<i>brkams</i>	<i>brkam</i>	<i>rkoms</i>	
		<i>rkam</i>	<i>brkams</i>	<i>brkam</i>	<i>rkoms</i>	'->∅
6.	<i>sgab</i>	* <i>'sgab</i>	<i>bsgabs</i>	<i>bsgab</i>	<i>sgobs</i>	
		<i>sgab</i>	<i>bsgabs</i>	<i>bsgab</i>	<i>sgobs</i>	'->∅
7.	<i>lta</i>	* <i>'lta</i>	<i>bltas</i>	<i>blta</i>	<i>ltos</i>	
		<i>lta</i>	<i>bltas</i>	<i>blta</i>	<i>ltos</i>	'->∅
8.	<i>zla</i>	* <i>'zla</i>	<i>bzlas</i>	<i>bzla</i>	<i>zlos</i>	
		<i>zla</i>	<i>bzlas</i>	<i>bzla</i>	<i>zlos</i>	'->∅

Verbs of the following type may also be included under paradigm I by assuming a dissimilatory loss of the prefix *b-* before bilabial initials:

9. *'phyag* *phyags* *phyag* *phyogs*
10. *'bri* *bris* *bri* *bris*

Thus:

	'--	b--s	b--	--s-*o	
9. <i>phyag</i>	' <i>phyag</i>	* <i>bphyags</i>	* <i>bphyag</i>	<i>phyogs</i>	b- > ∅
	' <i>phyag</i>	<i>phyags</i>	<i>phyag</i>	<i>phyogs</i>	
10. <i>bri</i>	' <i>bri</i>	* <i>b-bris</i>	* <i>b-bri</i>	<i>bris</i>	b- > ∅
	' <i>bri</i>	<i>bris</i>	<i>bri</i>	<i>bris</i>	

The verb '*jib bzhibs bzhib jibs* is problematical, for while the imperative form indicates that the stem initial should be *j-*, we have no rule at hand by which we may derive the initial *zh-* of the perfect and future forms. However we note that, following the suggestion of Simon (1929.30), Li (1933.144) has posited his rule 14. *gzh- < g-j-* whereby *j-* is softened to *zh-* after the prefix *g-*. Referring to Simon's article we find that together with the change *gzh- < g-j-* he also suggests another, *bzh- < b-j-*, and we now propose that this sound change has produced the perfect and future forms of the verb '*jib-pa*, thus:

	'--	b--s	b--	---s-*o	
11. * <i>jib</i>	' <i>jib</i>	* <i>bjibs</i>	* <i>bjib</i>	<i>jibs</i>	
	' <i>jib</i>	<i>bzhibs</i>	<i>bzhib</i>	<i>jibs</i>	<i>bzh- < b-j-</i>

The verb *nyan mnyan mnyan nyon* presents several interesting problems. First we may suppose that an original '- prefix was lost from the present form because '-' is not found before *ny* in WT. Next, following Chang (1971.759, rule I) we may suspect that the prefix *b-* in the perfect and future forms was nasalized to *m-* before *ny*, since *b* does not occur before *ny* in WT. Finally, since *-s* does not follow *n* in WT, we may suggest that a final *-s* was lost from the perfect and imperative forms *mnyan* and *nyon*. There is evidence, however, that this final *-s* became *-d* before being lost, because Thomas (1935-63.II, 97 and 157) records two early occurrences of the perfect root *mnyan* written as *mnyand*, with final *da-drag*.⁵ This situation is not surprising, for as Li (1959.58, n. 3) noted with regard to *-d* in perfect verb roots, "The Tibetan suffix *-d(da-drag)* here is definitely a morpho-phonemic variant of the suffix *-s*, usually found in the perfective."

With these points decided we may now account for the WT forms of the verb *nyan-ba*:

	'--	b--s	b--	--s-*o	
12. <i>nyan</i>	*' <i>nyan</i>	* <i>bnyans</i>	* <i>bnyan</i>	* <i>nyons</i>	
	*' <i>nyān</i>	* <i>mnyans</i>	<i>mnyan</i>	* <i>nyons</i>	b > m
	*' <i>nyan</i>	<i>mnyand</i>	<i>mnyan</i>	* <i>nyond</i>	s > d
	*' <i>nyan</i>	<i>mnyan</i>	<i>mnyan</i>	<i>nyon</i>	d > ∅
	<i>nyan</i>	<i>mnyan</i>	<i>mnyan</i>	<i>nyon</i>	'- > ∅

In addition we may also include in Paradigm I certain other verbs whose perfect and imperative roots lack *-s*, e.g.

	'--	b--s	b--	--s-*o	
13. * <i>khal</i>	' <i>khal</i>	* <i>bkhals</i>	* <i>bkhal</i>	* <i>khols</i>	
	' <i>khal</i>	* <i>bkhald</i>	* <i>bkhal</i>	* <i>khold</i>	-s > -d
	' <i>khal</i>	* <i>bkhal</i>	* <i>bkhal</i>	<i>khol</i>	-d > ∅
	' <i>khal</i>	<i>bkhal</i>	<i>bkhal</i>	<i>khol</i>	deasp.

Finally, certain verbs whose stems end in *-d* may be included in Paradigm I, with the assumption that final **-ds* clusters were simplified to *-d*, e.g.

	'--	b--s	b--	--s-*o	
14. * <i>shad</i>	*' <i>shad</i>	* <i>bshads</i>	<i>bshad</i>	* <i>shods</i>	
	*' <i>shad</i>	<i>bshad</i>	<i>bshad</i>	<i>shod</i>	-ds > d
	' <i>chad</i>	<i>bshad</i>	<i>bshad</i>	<i>shod</i>	Li, #19

One such verb, '*dud btud bdud thud*, is particularly interesting, since it is necessary to posit two stems for it, one for the present and future forms and the other for the perfect and imperative. Li(1933.141) has noted that the two-stem dichotomy of such verbs coincides strikingly with the fact, observed by Francke and Simon (1929.144), that the present and future roots of WT verbs are both negated by the particle *mi* and express a durative sense, while the perfect and imperative roots are negated by *ma* and "express the active part of the verb". The roots of '*dud-pa* may thus be derived as follows:

	'--	b--s	b--	--s-*o	
15. * <i>dud/thud</i>	' <i>dud</i>	* <i>btuds</i>	<i>bdud</i>	* <i>thuds</i>	
	' <i>dud</i>	* <i>btud</i>	<i>bdud</i>	<i>thud</i>	-ds > d
	' <i>dud</i>	<i>btud</i>	<i>bdud</i>	<i>thud</i>	deasp.

Paradigm I does not enable us to derive the present forms of verbs such as 16. '*khru bkrus bkru khru* and 17. '*tshod btos btso tshos*, and for them we must posit a new paradigm, '-d b--s b-- --s-*o, which we call Paradigm II, thus:

	'--d	b--s	b--	--s-*o	
16. * <i>khru</i>	' <i>khru</i>	* <i>bkhru</i>	* <i>bkhru</i>	<i>khru</i>	
	' <i>khru</i>	<i>bkrus</i>	<i>bkru</i>	<i>khru</i>	deasp.
17. * <i>tsho</i>	' <i>tshod</i>	* <i>btshos</i>	* <i>btsho</i>	<i>tshos</i>	
	' <i>tshod</i>	<i>btos</i>	<i>btso</i>	<i>tshos</i>	deasp.

In certain cases it is impossible to decide whether a verb belongs to Paradigm I or Paradigm II, e.g.

	I	'--	b--s	b--	--s-*o	
18.	<i>tshol</i>	' <i>tshol</i>	* <i>btshols</i>	* <i>btshol</i>	* <i>tshols</i>	
		' <i>tshol</i>	* <i>btshold</i>	* <i>btshol</i>	<i>tshold</i> ⁶	-s > -d
		' <i>tshol</i>	* <i>btshol</i>	* <i>btshol</i>	<i>tshol</i>	-d > ∅
		' <i>tshol</i>	<i>btsol</i>	<i>btsol</i>	<i>tshol</i>	deasp.
	or: II	'--d	b--s	b--	--s-*o	
		*' <i>tshold</i>	* <i>btshols</i>	* <i>btshol</i>	* <i>tshols</i>	
		*' <i>tshold</i>	* <i>btshold</i>	* <i>btshol</i>	<i>tshold</i>	-s > -d
		' <i>tshol</i>	* <i>btshol</i>	* <i>btshol</i>	<i>tshol</i>	-d > ∅
		' <i>tshol</i>	<i>btsol</i>	<i>btsol</i>	<i>tshol</i>	deasp.

Let us now consider the following cases:

19.	<i>byed</i>	<i>byas</i>	<i>bya</i>	<i>byos</i>
20.	<i>len</i>	<i>blangs</i>	<i>blang</i>	<i>long(s)</i>
21.	<i>sem(s)</i>	<i>bsams</i>	<i>bsam</i>	<i>soms</i>
22.	<i>sel</i>	<i>bsal</i>	<i>bsal</i>	<i>sol</i>
23.	' <i>byin</i>	<i>phyung</i>	<i>dbyung</i>	<i>phyungs</i>
24.	' <i>dzin</i>	<i>bzung</i>	<i>gzung</i>	<i>zung(s)</i>

Among these verbs, those whose stem vowels may on the basis of the perfect and future forms be identified as *-a-* have an *-e-* vocalism in the present roots, while those whose stem vowel is *-u-* have *-i-* in the present forms. We also observe that each verb whose perfect, future, and imperative forms end in root final *-ng* has final *-n* in its present root. Shafer (1951.1028) noted that forms such as 20. *len* and 24. '*dzin* are attested in early sources with *da-drag*, i.e. as *lend* and '*dzind*, and concluded, certainly correctly, that original stem final *-ng* in these words was partially assimilated to the following *-d*. He then proposed (p. 1028-9) that forms such as 20. *len*, 22. *sel*, 23. '*byin*, and 24. '*dzin* originally had a present suffix **-ed* (or perhaps "proto-Bodish" **-et*) to whose vocalism the root vowels *-a-* and *-u-* were assimilated as *-e-* and *-i-* respectively. On the other hand, for forms such as *sem(s)* he preferred a present suffix **-se* or **-es* (p. 1024). Nishida (1958.35-36) noted (as we have with regard to 12. *nyan-ba* above) that the *da-drag* is found in the perfect as well as present forms of verbs, and also that post-final *-s* and *da-drag* are in complementary distribution in WT, with *-s* occurring after final *-m*, *-g*, *-ng*, and *-b*; and *-d* after *-n*, *-r*, and *-l*. This led him to reconstruct a suffix **-ed* for present roots (p. 38) and **-dV* for the perfect forms (p. 39; *V* = vocalism of some sort which did not affect the vowels *-a-* and *-u-*). The vowel **ε* would have caused the *-a-* > *-e-* and *-u-* > *-i-* changes in the

present forms, and later *-d* would have changed to *-s* after final *-m*, *-g*, *-ng*, and *-b*, yielding the distributional situation of WT.

Here we may propose a somewhat different explanation which will allow us to avoid speculation with regard to the vocalisms of the present and perfect suffixes of these verbs. For 16. '*khru*d *bkrus* *bkrus* *bkrus*, where there can be no question of changes in the suffixes due to a stem-final stop, we posited *-d* and *-s* as markers of the present and perfect roots respectively; and we now note that a similar situation obtains in the case of 19. *byed* *byas* *bya* *byos*. This suggests that perhaps present *-d* and perfect *-s* were also original in examples 19-24.

We might thus propose that the presence of the original suffix *-d* caused the *-a-* > *-e-* and *-u-* > *-i-* changes which resulted in our problematical present forms, and also caused the assimilatory change *-ngd* > *-nd*.⁷

However, we must further qualify our statement concerning the *-u-* > *-i-* change because the present roots of verbs such as 16. '*khru*d (< '*khru*-*d*) and *zlug*s (< **zlug*d) *bzlug*s *bzlug* *zlug*s (Paradigm II) indicate that the mere presence of post-final *-d* could not have caused this vowel shift. Indeed, it would appear that this change occurred only in the presence of a final **-ngd* (> *-nd*) cluster. After these changes had terminated, *-d* changed to *-s* after *-g*, *-ng*, *-b*, and *-m*; and *-s* changed to *-d* after *-n*, *-r*, and *-l*. It would appear that there was some confusion in the behavior of *-d* after *-m*, however, resulting in cases where it was sometimes lost altogether before the *-d* > *-s* change occurred. For example, for '*grem*(s) *bkram* *dgram* *khroms*, *sum* ~ *sums* *bsums* *bsum* *tshums*, and 21. *sem*(s) *bsams* *bsam* *soms* present forms with and without *-s* are attested; and the vocalism of *skem* *bskams* *bskam* *skoms*, *ltem* *bltams* *bltam* *ltoms*, and '*dem* '*dams* *gdam* '*doms* indicates that an original *-d* suffix must have occurred in the present roots of these verbs.

Having dealt with these problematical points we may now propose a paradigm to account for examples 19-22:⁸

Paradigm III	--d	b--s	b--	--s-*o	
19.	<i>bya</i>	* <i>bya-d</i>	* <i>b-byas</i>	* <i>b-bya</i>	<i>byos</i>
		<i>byed</i>	* <i>b-byas</i>	* <i>b-bya</i>	<i>byos</i> a > e
		<i>byed</i>	<i>byas</i>	<i>bya</i>	<i>byos</i> b > ∅

Here we must assume that the suffix *-d* differed from stem-final *-d* in some way at the time the *a* > *e* vowel change occurred, since, as we have seen, we have verb forms such as 14. '*chad* *bshad* *bshad* *shod* where *-a-* did not change to *-e-* before stem-final *-d*. The possible existence of such a difference seems less surprising when we consider that according to the traditional grammatical treatments *da-drag* sometimes behaved differently from final *-d* with respect to morphophonemic variant forms which followed it, e.g. after *da-drag*, *-to*, *-tu*, and *-te* were used, while after *-d*, *-do*, *-du*, and *-de* were employed.

20.	*lang	*langd	blangs	blang	longs	
		*lengd	blangs	blang	longs	a > e
		lend ^p	blangs	blang	longs	-ngd > -nd
		len	blangs	blang	longs	-d > ∅
21.	*sam	*samd	bsams	bsam	soms	
		*semd	bsams	bsam	soms	a > e
		sems	bsams	bsam	soms	-d > -s
22.	*sal	*sald	*bsals	bsal	*sols	
		*seld	*bsals	bsal	*sols	a > e
		*seld	bsald ^o	bsal	*sold	-s > -d
		sel	bsal	bsal	sol	-d > ∅

Several verbs may be placed in either Paradigm II or Paradigm III, e.g.

25.	*skyal	'--d	b--s	b--	--s-*o	
		*'skyald	*bskyals	bskyal	*skyols	
		*'skyeld	*bskyals	bskyal	*skyols	a > e
		*'skyeld	*bskyald ¹¹	bskyal	*skyold	-s > -d
		*'skyel	bskyal	bskyal	skyol	-d > ∅
or: III	*skyal	skyel	bskyal	bskyal	skyol	'- > ∅
		--d	b--s	b--	--s-*o	
		*skyald	*bskyals	bskyal	*skyols	
		*skyeld	*bskyals	bskyal	*skyols	a > e
		*skyeld	*bskyald	bskyal	*skyold	-s > -d
skyel	bskyal	bskyal	skyol	-d > ∅		

Let us now proceed to the next set of examples:

26.	rkyong	brkyangs	brkyang	rkyongs
27.	skong	bskangs	bskang	skong(s)
28.	zlo	bzlas	bzla	zlos
29.	gsob	bsabs	bsab	sobs
30.	gshom	bshams	bsham	shoms
31.	gcod	bcad	gcad	chod
32.	gtong	btang	gtang	thongs
33.	gnon	mnan	gnan	non

Here we encounter new vowel problems, for while the perfect and future roots of these verbs point to an *-a-* vocalism in the stems, the present forms have *-o-* vowels. Shafer (1951.1023) notes that many verbs exhibiting this *a/o* vowel

alternation, such as our examples 29-33, have pre-initial *g-*; and he proposes (p. 1024) that this *g-* derives from an earlier present prefix **go-*, to whose *-o-* vocalism the *-a-* vowels of the verbal stems would have been assimilated. On the other hand, for verbs such as our examples 26-28, where no pre-initial *g-* is present, he posits (p. 1024) a hypothetical present suffix *-*o* as the cause of the *-a-* > *-o-* assimilation and comments, "This type of change would accord with the evidence pointing to *-o-* in imperatives of *-a-* roots coming from a suffix *-o-*." Nishida (1958.39) accepts Shafer's prefix **go-*, but in place of his present suffix *-*o* suggests a prefix **γo*. The *-o-* vowel of this prefix, like that of **go-*, would have brought about the *-a-* > *-o-* change in the *-a-* vowel stems; but, unlike the *g-* of **go-*, the velar fricative initial *γ-* of the prefix **γo-* would have been lost before the WT period.

Here we may suggest that Shafer's *-*o* suffix and Nishida's **γo-* prefix for the present roots are unnecessary. To begin, we observe that forms to which these affixes would be added all begin with initial clusters before which pre-initial *g-* does not occur in WT, e.g. 26. *rkyong*, 27. *skong*, and 28. *zlo*. We do not find in WT such initial configurations as **grk-*, **gsk-*, and **gzl-*. We might thus suspect that Shafer's **go-* occurred in the present tense forms of these verbs and that pre-initial *g-* was lost from such clusters as **grk-*, etc. before WT times. This would allow us to account for all *a/o* vowel alternations with only one type of present affix. However, we may now ask if the *-o-* vocalism of Shafer's prefix is not superfluous. Might we not in fact suspect that pre-initial *g-* itself is responsible in some way for the *-a-* > *-o-* change in the present roots of verbs? At first glance the future roots of such verbs as 31. *gcod-pa*, 32. *gtong-ba*, 33. *gnon-pa* would seem to rule against this possibility, for these forms have the *g-* pre-initial and still preserve the *-a-* vocalism, i.e. *gcad*, *gtang*, and *gnan*. Here we may profitably compare verbs of the following type:

23.	'byin	phyung	dbyung	phyungs
34.	'gegs	bkag	dgag	khogs
35.	'gebs	bkab	dgab	khob
36.	'bogs	phog	dbog	phog

In each of these cases the future forms have pre-initial *d-* rather than *g-*. It is quite interesting to note here that pre-initial *g-* and *d-* are in complementary distribution in WT, i.e.

g- may occur before *c, ny, t, d, n, ts, zh, z, y, sh,* and *s*
d- may occur before *k, g, ng, p, b,* and *m*

This situation suggests a possible solution to our dilemma. We may now propose that the original future prefix of verbs such as our examples 31-36 was *d-*, and that pre-initial *d-* later dissimilated to *g-* before the stem initials *c*(~ *ch*),

ny, t(-th), d, n, ts(-tsh), zh, z, y, sh, and s. If we now assume that this *d* > *g*-change took place only after the *-a* > *-o*-vowel change which had affected the present forms, then we may safely explain this vowel change as having been brought about by the presence of pre-initial *g*-.¹² The later *d* > *g*-change would then have given rise, for example, to a WT form *gcad* (<**dcad*) next to WT *gcod* (<**gcod*).

With these problems behind us we may now propose a paradigm through which the roots of examples 26-30 may be derived:

Paradigm IV	g--	b--s	b--	--s-*o	
26. * <i>rkyang</i>	* <i>grkyang</i>	<i>brkyangs</i>	<i>brkyang</i>	<i>rkyongs</i>	
	* <i>grkyong</i>	<i>brkyangs</i>	<i>brkyang</i>	<i>rkyongs</i>	a > o
	<i>rkyong</i>	<i>brkyangs</i>	<i>brkyang</i>	<i>rkyongs</i>	g- > ∅
77. * <i>skang</i>	* <i>gskang</i>	<i>bskangs</i>	<i>bskang</i>	<i>skongs</i>	
	* <i>gskong</i>	<i>bskangs</i>	<i>bskang</i>	<i>skongs</i>	a > o
	<i>skong</i>	<i>bskangs</i>	<i>bskang</i>	<i>skongs</i>	g- > ∅
28. * <i>zla</i>	* <i>gzla</i>	<i>bzlas</i>	<i>bzla</i>	<i>zlos</i>	
	* <i>gzlo</i>	<i>bzlas</i>	<i>bzla</i>	<i>zlos</i>	a > o
	<i>zlo</i>	<i>bzlas</i>	<i>bzla</i>	<i>zlos</i>	g- > ∅
29. * <i>sab</i>	* <i>gsab</i>	<i>bsabs</i>	<i>bsab</i>	<i>sobs</i>	
	<i>gsob</i>	<i>bsabs</i>	<i>bsab</i>	<i>sobs</i>	a > o
30. * <i>sham</i>	* <i>gsham</i>	<i>bshams</i>	<i>bsham</i>	<i>shoms</i>	
	<i>gshom</i>	<i>bshams</i>	<i>bsham</i>	<i>shoms</i>	a > o

The following interesting cases should also be included under Paradigm IV:

37. <i>dpag</i>	* <i>gdpag</i>	* <i>bdpags</i>	* <i>bdpag</i>	<i>dpogs</i>	
	* <i>gdpog</i>	* <i>bdpags</i>	* <i>bdpag</i>	<i>dpogs</i>	a > o
	<i>dpog</i>	* <i>bdpags</i>	* <i>bdpag</i>	<i>dpogs</i>	g- > ∅
	<i>dpog</i>	<i>dpags</i>	<i>dpag</i>	<i>dpogs</i>	b- > ∅

The imperative form of *dpog-pa* indicates that the initial cluster *dp-* should be taken as part of the stem.

38. <i>myang</i>	* <i>gmyang</i>	* <i>bmyangs</i>	* <i>bmyang</i>	<i>myongs</i>	
	* <i>gmyong</i>	* <i>bmyangs</i>	* <i>bmyang</i>	<i>myongs</i>	a > o
	<i>myong</i>	* <i>bmyangs</i>	* <i>bmyang</i>	<i>myongs</i>	g- > ∅
	<i>myong</i>	<i>myangs</i>	<i>myang</i>	<i>myongs</i>	b- > ∅
39. <i>sed</i>	<i>gsed</i>	* <i>bseds</i>	<i>bsed</i>	* <i>sed</i>	
	<i>gsed</i>	<i>bsed</i>	<i>bsed</i>	<i>sed</i>	-ds > -d

In certain cases it is impossible to determine whether a verb belongs to paradigm I or Paradigm IV, e.g. 40. *rku brkus brku rkus*:

I	'--	b--s	b--	--s-*o	
40. <i>rku</i>	*' <i>rku</i>	<i>brkus</i>	<i>brku</i>	<i>rkus</i>	
	<i>rku</i>	<i>brkus</i>	<i>brku</i>	<i>rkus</i>	'- > ∅
or: IV	g--	b--s	b--	--s-*o	
	* <i>grku</i>	<i>brkus</i>	<i>brku</i>	<i>rkus</i>	
	<i>rku</i>	<i>brkus</i>	<i>brku</i>	<i>rkus</i>	g- > ∅

For examples 31-33 we must posit a different paradigm:

Paradigm V	g--	b--	d--	--s-*o	
31. * <i>chad</i>	* <i>gchad</i>	* <i>bchad</i>	* <i>dchad</i>	* <i>chods</i>	
	* <i>gchod</i>	* <i>bchad</i>	* <i>dchad</i>	* <i>chods</i>	a > o
	* <i>gchod</i>	* <i>bchad</i>	* <i>gchad</i>	* <i>chods</i>	d- > g-
	* <i>gchod</i>	* <i>bchad</i>	* <i>gchad</i>	<i>chod</i>	-ds > -d
	<i>gcod</i>	<i>bcad</i>	<i>bcad</i>	<i>chod</i>	deasp.
32. * <i>thang</i>	* <i>gthang</i>	* <i>bthang</i>	* <i>dthang</i>	<i>thongs</i>	
	* <i>gthong</i>	* <i>bthang</i>	* <i>dthang</i>	<i>thongs</i>	a > o
	* <i>gthong</i>	* <i>bthang</i>	* <i>gthang</i>	<i>thongs</i>	d- > g-
	<i>gtong</i>	<i>btang</i>	<i>gtang</i>	<i>thongs</i>	deasp.
33. * <i>nan</i>	* <i>gnan</i>	* <i>bnan</i>	* <i>dnan</i>	* <i>nons</i>	
	<i>gnon</i>	* <i>bnan</i>	* <i>dnan</i>	* <i>nons</i>	a > o
	<i>gnon</i>	* <i>bnan</i>	<i>gnan</i>	* <i>nons</i>	d- > g-
	<i>gnon</i>	<i>mnan</i>	<i>gnan</i>	* <i>nons</i>	b- > m-
	<i>gnon</i>	<i>mnan</i>	<i>gnan</i>	* <i>nond</i>	-s > -d
	<i>gnon</i>	<i>mnan</i>	<i>gnan</i>	<i>non</i>	-d > ∅

For verbs such as 23-24 and 34-36 we propose the following paradigm:

Paradigm VI	'--d	b--	d--	--s-*o	
23. * <i>byung/</i>	*' <i>byungd</i>	* <i>bphyung</i>	<i>dbyung</i>	<i>phyungs</i>	
<i>phyung</i>	*' <i>byingd</i>	* <i>bphyung</i>	<i>dbyung</i>	<i>phyungs</i>	u > i
	*' <i>byind</i> ¹³	* <i>bphyung</i>	<i>dbyung</i>	<i>phyungs</i>	-ngd > -nd
	*' <i>byind</i>	<i>phyung</i>	<i>dbyung</i>	<i>phyungs</i>	b- > ∅
	' <i>byin</i>	<i>phyung</i>	<i>dbyung</i>	<i>phyungs</i>	-d > ∅
24. * <i>zung</i>	*' <i>zungd</i>	<i>bzung</i>	* <i>d-zung</i>	<i>zungs</i>	
	*' <i>zingd</i>	<i>bzung</i>	* <i>d-zung</i>	<i>zungs</i>	u > i
	*' <i>zind</i>	<i>bzung</i>	* <i>d-zung</i>	<i>zungs</i>	-ngd > -nd
	*' <i>zind</i>	<i>bzung</i>	<i>gzung</i>	<i>zungs</i>	d- > g-

	'dzind ¹⁴	zung	gzung	zungs	Li, #22
	'dzin	zung	gzung	zungs	-d > ∅
34. *gag/	*'gagd	*bkhag	dgag	khogs	
*khag	*'ged	*bkhag	dgag	khogs	a > e
	'gegs	*bkhag	dgag	khogs	-d > -s
	'gegs	bkag	dgag	khogs	deasp.

The verb 41, 'gengs bkang dgang khongs, which probably belongs to Paradigm VI, is interesting in that its present root did not undergo the *-ngd > -nd* change. Instead, after the failure of this rule, *-d* changed to *-s* as it regularly did after *-g*:

41. *gang/	*'gagd	*bkhag	dgang	khongs	
*khang	*'gengd	*bkhag	dgang	khongs	a > e
-----	-----	-----	-----		-ngd > -nd
	'gengs	*bkhag	dgang	khongs	-d > -s
	'gengs	bkang	dgang	khongs	deasp.

A similar phenomenon seems to have occurred in the case of *sngangs bsngangs bsngang sngongs* (Paradigms II/III).¹⁵

We observe that the stem initials of these two verbs are velars, and it seems possible that the presence of these velar initials may have arrested the *-ngd > -nd* change. With this in mind it is interesting to note that while on the one hand there appear to be no velar initial words which underwent the *-ngd > -nd* change, on the other hand there are among verbs with fewer than four attested roots several examples where words with velar initials appear to have failed to undergo this change, e.g.

'khengs (<*khengd?)	khengs	"to be full"
grungs (<*grungd?)	bgrungs bgrung	"to make clear or clean" (Semichov)
(Note that the <i>-u- > -i-</i> did not occur in <i>grungs</i> .)		
'grong ~ 'grongs ¹⁶ (<*grongd?)	grong	"to die"

Nevertheless it must be noted that at least two multiple-rooted verbs with non-velar stem initials also have present forms ending in *-ngs*, i.e.

<i>stongs bstangs bstang</i> (?)	"to accompany; to empty" (Jäschke)
~ <i>stongs bstongs stong</i>	"to accompany; put together" (Semichov)
'phongs phongs	"to be poor, deprived of"

These may merely be blends of some sort, or they may indicate that the conditions which arrested the **-ngd > -nd* change were more complex than we suppose. Moving on we encounter verbs for which a seventh paradigm must be assumed:

Paradigm VII	'--	b--s	d--	--s-*o	
42. *gum/	'gum	*bkhums	dgum	khums	
*khum	'gum	bkums	dgum	khums	deasp.
43. *zhig/	*'zhig	bshigs	*d-zhig	shigs	
*shig	*'zhig	bshigs	gzhig	shigs	d > g-
	'jig	bshigs	gzhig	shigs	Li, #21
44. *byi/	'byi	*bphysis	dbyi	physis	
*phyi	'byi	physis	dbyi	physis	b > ∅

Finally, for the following three verbs a slightly different paradigm must be posited:

Paradigm VIII	'--d	b--s	d--	--s-*o	
45. drang	*'drangd	*bdrangs	*d-drang	drongs	
	*'drend	*bdrangs	*d-drang	drongs	a > e
	'drend ¹⁷	*bdrangs	*d-drang	drongs	-ngd > -nd
	'drend	drangs	drang	drongs	b > ∅; d > ∅
	'dren	drangs	drang	drongs	-d > ∅
46. *bu/	'bud	phus	dbu	phus	
*phu					
47. *dzug/	*'dzugd	*btshugs	*d-dzug	tshugs	
*tshug	'dzugs	*btshugs	*d-dzug	tshugs	-d > -s
	'dzugs	*btshugs	*gdzug	tshugs	d- > g-
	'dzugs	*btshugs	gzug	tshugs	Li, #15
	'dzugs	btugs	gzug	tshugs	deasp.

The eight paradigms proposed for WT four-rooted verbs together with the number of verbs assigned to each paradigm may now be listed as follows:

	Pres.	Perf.	Fut.	Imp.	No. of verbs
I	'--	b--s	b--	--s-*o	55
II	'--d	b--s	b--	--s-*o	5
III	--d	b--s	b--	--s-*o	9
IV	g--	b--s	b--	--s-*o	29
V	g--	b--	d--	--s-*o	4
VI	'--d	b--	d--	--s-*o	14
VII	'--	b--s	d--	--s-*o	16
VIII	'--d	b--s	d--	--s-*o	3

In addition, we should note the number of those verbs which could belong to two or more paradigms:

I/II	6	I/IV	67	VI/VIII	3
II/III	8	IV/V	1	VII/VIII	1
I/II/III	1	I/VII	3	VI/VII/VIII	16

Finally we note that 25 verbs are exceptional and cannot be confidently assigned to any of the eight paradigms.

One criticism leveled by Uray (1953:51-2) at the separation of the various verbal categories distinguished by Shafer (1951) was that Shafer relied too heavily upon the presence or absence of the prefix *'*- and the suffix *-s*, which Uray justifiably describes as "belonging to the most unstable elements of Classical Tibetan".¹⁸ A glance at our eight paradigms indicates that our scheme is also subject to Uray's objection, for the basis for separating paradigms I, II, and III and also VI, VII, and VIII is the presence or absence of *'*-, *-s*, or *-d* (which in many cases became WT *-s*).

Indeed the fact that some paradigms, such as I and IV, contain many verbs while others, such as II and III, contain only a handful leads us to suspect that the number of paradigms was originally fewer than it is now and that new verbal categories have arisen through simplifications and/or analogical changes of some sort. Perhaps future studies may throw further light on the origins and subsequent developments of the various paradigmatic patterns.

We close by listing the sound changes mentioned in this study, other than those proposed by Li (1933). Ordered changes or sets of changes are designated by capital letters.

- I. A. 1. *-a* > *-e*: *-a* changes to *-e* in the presence of post-final *-d*.
 2. *-u* > *-i*: *-u* changes to *-i* in the presence of final *-ngd* (> *-nd*).
 3. *-ngd* > *-nd*: *-ng* changes to *-n* before *d* (except in syllables with stem-initial velars).
- B. 1. *-d* > *-s*: *d* changes to *s* after *g*, *ng*, *b*, and *m*.
 2. *-s* > *-d*: *s* changes to *d* after *n*, *r*, and *l*.
- C. *-d* > \emptyset : *d* is lost after *n*, *r*, and *l*.
- II. A. *-a* > *-o*: *-a* changes to *-o* in the presence of pre-initial *g*.
 B. 1. *d* > *g*: *d* changes to *g* before *c* (*-ch*), *ny*, *t* (*-th*), *d*, *n*, *ts* (*-tsh*), *zh*, *z*, *y*, *sh*, and *s*.
 2. *g* > \emptyset : pre-initial *g* is lost everywhere except before *c* (*-ch*), *ny*, *t* (*-th*), *d*, *n*, *ts* (*-tsh*), *zh*, *z*, *y*, *sh*, and *s*.
- III. A. *b* > \emptyset : *b* is lost before bilabials.
 B. *b* > *m*: *b* changes to *m* before nasals.
- IV. *-ds* > *-d*: *s* is lost after *-d*.
 V. *b-j* > *bzh*: *j* changes to *zh* after *b*.
- VI. *'* > \emptyset : Initial *'* is lost everywhere except before *kh*, *g*, *ch*, *j*, *th*, *d*, *ph*, *b*, *tsh*, *dz*, and vowels.

Appendix

In the following table is recorded the entire corpus of four-rooted WT verbs considered in this study. The verbs are listed according to one or more of the eight paradigms proposed above, and within each paradigm regular verbs are listed first, followed by verbs which exhibit irregularities of some sort. Verbs which could not be assigned to any of the eight paradigms are listed at the end of the table as "irregular verbs". For each verb the following information is given:

1. The four WT roots.
2. The hypothetical stem form or forms, marked by * when the stem does not actually occur as one of the roots.
3. English gloss.
4. Notes on exceptional features of irregular forms.

When more than one form of a particular root is given, the form given first is that accepted by us as "regular" from the standpoint of our proposed paradigms, while those listed below it are considered to be "irregular" variants. When several variant forms are considered regular, they are separated by vertical slashes. All forms and glosses not taken from Jäschke (1881) are marked with superscript letters according to the following scheme:

C: Csoma (1834)	G: Dge-bshes (1957)
D: Desgodins (1899)	S: Semichov (1963)
d: Das (1902)	T: Thomas (1935-63)

The verbs are arranged according to the spelling of their present roots, in the order of the Tibetan alphabet.

Pres.	Per.	Fut.	Imp.	Stem	Meaning	Exceptional features
Paradigm I						
—	b-s	b--	--s* ⁰			
Regular						
rkam	brkams ^S	brkam ^{D,G}	rkoms ^S	rkam	"desire, long for"	
skya	bskyas	bskya	skyos ^{S,G}	skya	"move, convey"	
'khal	bkal ^{S,G}	bkal ^{S,G}	khol	*khal	"spin"	
'khyig	bkyigs	bkyig	khyigs ^{S,G}	*khyig	"bind"	
rgal	brgal	brgal	rgol	rgal	"step over, pass"	
sgab	bsgabs ^{S,G}	bsgab ^{S,G}	sgobs ^S	sḡab	"cover"	
mga	bmgas	brnga	mgos	mga	"mow, cut, reap"	
mga ^S	brmga ^S	brmga ^S	mgon ^S	mga ⁿ	"reward, repay" ^S	

(continued)

(continued)

Pres.	Per.	Fut.	Imp.	Stem	Meaning	Exceptional features
'chag	bcags	bcag	chogs ^s 'chog(?)	*chag	"tread, walk"	
'chang	bcangs	bcang	chong(s)	*chang	"hold, keep"	
'chad	bshad	bshad	shod	*shad	"explain, relate"	
'chab	bcabs	bcab	chobs ^s chob	*chab	"conceal"	
'cha'	bcas	bca'	chos	*cha'	"make, prepare"	
'ching	bcings	bcing	ching(s)	*ching	"bind, fetter"	
'chib	bcibs	bcib	chibs	*chib	"mount, ascend"	
'chu	bcus	bcu	chus	*chu	"ladle, scoop"	
'che	bces	bce	ches	*che	"assure, promise"	
'cho ^D	bcos	bco	chos	*cho	"make, build"	
'chos						
'jib	bzhibs	bzhib	jibs ^G 'jibs ^s	*jib	"suck"	
nyan	mnyan ^s	mnyan ^s	nyon	nyan	"listen, hear"	
snyad	bsnyad	bsnyad	snyod	snyad	"relate, report"	
lta	bltas	blta	ltos	lta	"look, view"	
stad	bstad	bstad	stod	stad	"put on, lay on"	
'thu	btus	btu	thus	*thu	"gather, pick up"	
'thung	btungs	btung	thungs ^{s,G} thung	thung	"drink"	
'thum	btums	btum	thums ^s 'thum btum	*thum	"cover"	
'thog ^s	btogs ^s	btog ^s	thogs ^s	*thog	"pluck, pull" ^s	
'dud	btud	bdud	thud dud	*dud/thud	"bend, bow down"	
rdal	brdal	brdal	rdol	rdal	"spread, extend"	
ldag	bldags	bldag	ldogs ^{s,G} ldog	ldag	"lick"	
ldab	bldabs	bldab	ldobs ^s ldob	ldab	"repeat, do again"	
ldad	bldad	bldad	ldod	ldad	"chew"	
snad	bsnad	bsnad ^s	snod	snad	"harm, injure"	
'phyag	phyags ^{s,G} 'phyags	phyag ^s	phyogs ^s	phyag	"sweep, clean"	
'byug	byugs	byug ^{s,G}	byugs	*byug	"smear, anoint"	
'brab	brabs	brab ^{s,G}	brobs	brab	"catch; beat"	
'bral	bral	bral ^s	brol	bral	"be separated from"	
'bri	bris ^{s,D}	bri ^s	bris ^{s,D}	bri	"draw, write"	
'brim	brim(s)	brim ^s	brim(s)	brim	"distribute"	
'bru	brus	bru	Brus	bru	"dig, chisel"	

Pres.	Per.	Fut.	Imp.	Stem	Meaning	Exceptional features
'brub	brubs ^s	brub ^s	brubs ^s	brub	"overflow"	
'breg	breg(s)	breg ^s	bregs ^{s,G} brog(s)	breg	"cut off, mow"	
'tshag	btsags	btsag	tshogs ^{s,D,G} tshog	*tshag	"strain, filter"	
'tshog	btsogs ^{s,D}	btsog	tshogs ^s tshog	tshog	"hew, chop"	
'tshong	btsongs	btsong	tshongs ^s	*tshong	"sell"	
zla	bzlas	bzla ^{s,G}	zlos	zla	"traverse"	
sran	bsran	bsran	sron	sran	"suffer, endure"	
slan	bslan ^s	bslan ^s	slon ^s	slan	"to mend, repair"	
Irregular						
skyag	bskyags	bskyag	skyog	skyag	"spend, expend"	Lacks Imp. -s.
skrab	bskrabs ^s	bskrab ^s	skrabs ^s	skrab	"trample"	Lacks Imp. -o.
'khyal	bkyal ^s	bkyal ^s	kyal	?	"talk nonsense"	Lacks Imp. -o. Pres. and Per. initials do not agree.
'gom	bgoms ^G goms ^D	bgom ^G	'goms ^s	*gom	"tread, pass"	'- prefix of Imp.
sngag	bsngags	bsngag	sngog	sngag	"praise"	Lacks Imp. -s.
'jo	bzhos	bzho	gzhos ^s 'jos	*zho ¹⁹	"to milk"	Imp. g-prefix.
ltab	bltabs	bltab	ltob	ltab	"fold, put together"	Imp. lacks -s.
Paradigm II						
'-d	b--s	b--	--*o			
Regular						
'khrud	bkrus	bkru	khrus ^{s,G}	*khru	"bathe, wash off"	
'tshod	btsos	btso	tshos	*tsho	"cook, boil"	
rdeb(s)	brdabs	brdab	rdocs ^s	*rdab	"fing down"	
Irregular						
'khrid	bkris ^{s,D}	bkri	khrid ^s	*khri	"lead, conduct"	Imp. final -d.
'cheg	bshags	bshag	shog	*shag	"cleave, split"	Lacks -s in Pres. and Imper.
Paradigms I/II						
'-	b-s	b--	-s-*o			
'-d	b-s	b--	-s-*o			
'khol	bkol	bkol	khol	khol	"use as a servant"	
'bor	bor	bor ^s	bor	bor	"throw, cast"	
'byon	byon	byon ^s	byon	byon	"go, travel"	
'brul ^s	brul ^s	brul ^s	brul ^s	brul	"fall, drop; be ruined" ^s	

(continued)

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<i>Pres.</i>	<i>Per.</i>	<i>Fut.</i>	<i>Imp.</i>	<i>Stem</i>	<i>Meaning</i>	<i>Exceptional features</i>
'tshol	btsol btsal ^{S,D,G}	btsol btsal ^{S,D,G}	tshol	tshol	"seek, try to get"	
zlug(s)	bzlags	bzlug	zlags ^S	zlug	"give notice"	
Paradigm III						
--d	b--s	b--	--s*o			
Regular						
byed	byas	bya	byos	bya	"make, do"	
len	blangs	blang	long(s)	*lang	"get, receive; catch"	
shum	bshums	bshum	shum(s)	shum	"weep"	
sem(s)	bsams	bsam	soms ^{S,G}	*sam	"think, ponder"	
			som			
sel	bsal	bsal	sol	*sal	"remove"	
Irregular						
bgvid	bygis	bgvi	gyis	*gyi	"make"	b- of Pres.
lteb	bltabs ^S	bltab ^S	ltebs ^{S,G}	*ltab	"double, turn down"	Lack of -s in Pres. and presence of -e- in Imp.
sub	bsubs	bsub	subs ^{S,G}	sub	"plug up; erase"	Lack of Pres. -s
sums	bsums(?)	bsum	tshums ^S	?	"bind, tie"	Disagreement of initials in Pres. and Imp.
sum	bsums ^S	btsum ^S				
Paradigms II/III						
'---d	b---s	b---	---s*o			
---d	b---s	b---	---s*o			
Regular						
skud	bskus	bsku	skus	*sku	"smear, besmear"	
skem	bskams	bskam	skoms ^S	*skam	"make dry"	
			skom(s)			
skyel	bskya ^{S,G,d}	bskya ^{S,G,d}	skyol	*skyal	"conduct, accompany"	
	bskyel	bskyel				
ltem	bltams ^S	bltams ^S	ltoms ^S	*ltam	"full"	
sdud	bsdus	bsdu	sdu	*sdu	"collect, amass"	
sbed	sbas	sba	sbos	sba	"hide, conceal"	
sbrud	sbrus	sbru	sbrus	sbru	"stir, knead"	
Irregular						
sngangs	bsngangs	bsngang	sngongs	*sngang	"frighten"	Presence of -a- in Imp.
Paradigms I/II/III						
'-	b--s	b--	--s*o			
'--d	b--s	b--	--s*o			
--d	b--s	b--	--s*o			

<i>Pres.</i>	<i>Per.</i>	<i>Fut.</i>	<i>Imp.</i>	<i>Stem</i>	<i>Meaning</i>	<i>Exceptional features</i>
snyeg(s)	bsnyegs	bsnyeg	snyogs	*snyeg	"hasten; overtake"	
Paradigm IV						
g--	b--s	b--	--s*o			
Regular						
rkyong	brkyangs ^{S,G}	brkyang	rkyongs ^{S,G}	*rkyang	"extend, stretch"	
	brkyang					
skong	bskangs	bskang	skongs ^S	*skang	"fulfill"	
			skong(s)			
skyong	bskyangs	bskyang	skyongs ^S	*skyang	"guard, defend"	
skyob	bskabs	bskyab	skyobs ^S	*skyab	"protect, defend"	
			skyob(s)			
skyom	bskyams ^{S,G,D}	bskyam ^{S,G,D}	skyoms ^{S,G,D}	*skyam	"shake, agitate"	
sgog	bsgags	bsgag	sgogs ^{S,D}	*sgag	"make one swear"	
sgrag	bsgrags	bsgrag	sgrogs ^{S,G,D}	*sgrag	"call out, proclaim"	
sgrong ^{S,G}	bsgrangs ^{S,G}	bsgrang ^{S,G}	sgrongs ^{S,G}	*sgrang	"count, rocken"	
snyob	bsnyabs	bsnyab	snyobs ^D	*snyab	"stretch out"	
stob	bstabs	bstab	stobs ^S	*stab	"feed"	
			stob			
snom	bsnams	bsnam	snom(s)	*snam	"smell"	
dpog	dpags	dpag	dpogs ^S	dpag	"measure; fix"	
spog	spags	spag	spogs ^{S,D,d}	spag	"move, remove, shift"	
sbong	sbangs	sbang	sbongs ^{S,G}	sbang	"steep, soak"	
sbyong	sbyangs	sbyang	sbyongs ^{S,G,D}	sbyang	"clean, purge"	
			sbyung ^D			
myong	myangs	myang	myongs ^S	myang	"taste, experience"	
rtsom	brtsams	brtsam	rtsom(s)	*rtsam	"begin, set about"	
rdzong	brdzangs	brdzang	rdzongs ^{S,G}	*rdzang	"send, dispatch"	
zlo	bzlas	bzla ^{S,G}	zlos	*zla	"say, tell"	
rlob	brlabs	brlab	rlobs	*rlab	"bless"	
rlom	brlams	brlam	rloms	*rlam	"adhere to, strive for"	
srong	bsrangs	bsrang	srong(s)	*srang	"make straight"	
slong	bslang	bslang	slong(s)	*slang	"cause to rise"	
slob	bslabs	bslab	slob(s)	*slab	"learn; teach"	
gsed	bsed ^{S,G}	bsed ^{S,G}	sed ^S	sed	"sort, select"	
gsob	bsabs	bsab	sobs ^G	*sab	"complete, fill up"	
gshom	bshams	bsham	shom(s)	*sham	"prepare, put in order"	
shom						
Irregular						
klog	bklags	bklag	klog	*klag	"read"	Imp. lacks -s.
gshog	bshags	bshag	gshog	*shag	"cleave, split"	Imp. prefix g-
shog		gshag				

(continued)

(continued)

Pres.	Per.	Fut.	Imp.	Stem	Meaning	Exceptional features
<i>Paradigms I/IV</i>						
'--	b--s	b--	--s*o			
g--	b--s	b--	--s*o			
rku	brkus	brku	rkus	rku	"steal, rob"	
rko	brkos	brko	rkos	rko	"dig, hoe"	
skug ^{s,G}	bskugs ^{s,G}	bskug ^{s,G}	skugs ^s	skug	"gamble"	
skung	bskungs	bskung	skungs ^{s,G}	skung	"bury, hide"	
skum	bskums	bskum	skums ^s	skum	"contract, draw in"	
			skum(s)			
sko	bskos ^s	bsko	skos	sko	"appoint, charge"	
	(b)skos					
skyi	bskyis	bskyi	skyis	skyi	"borrow"	
skyung	bskyungs	bskyung	skyungs ^s	skyung	"leave behind, lay aside"	
			skyung(s)			
skyog ^s	bskyogs ^s	bskyog ^s	skyogs ^s	skyog	"put, place" ^s	
skru	bskru	bskru	skrus ^{s,G}	skru	"wait, cut"	
sgug	bsgugs	bsgug	sgugs ^s	sgug	"wait, expect"	
			sgug(s)			
sgo	bsgos	bsgo ^s	sgos ^s	sgo	"say, bid, order"	
sgong	bsgongs	bsgong	sgongs ^s	sgong	"make round"	
			sgong(s)			
sgying	bsgyings	bsgying	sgyings ^s	sgying	"yawn, gape"	
sgrig	bsgrigs	bsgrig	sgrig(s)	sgrig	"put in order"	
sgrib	bsgribs	bsgrib	sgrib(s)	sgrib	"darken, obscure"	
sgrim	bsgrims	bsgrim	sgrim(s)	sgrim	"hold fast, endeavor"	
					"collect, gather"	
sgrug	bsgrugs	bsgrug	sgrug(s)	sgrug	"make, finish"	
sgrub	bsgrubs	bsgrub	sgrub(s)	sgrub	"raise, erect"	
sgreng	bsgrengs	bsgreng	sgreng(s)	sgreng	"draw in, inhale"	
rngub	brngubs	brngub	rngubs	rngub	"bless, dedicate"	
sngo	bsngos	bsngo	sngos	sngo	"vex, annoy"	
sngog	bsngogs	bsngog	sngogs	sngog	"barter, change"	
rje	brjes	brje	rjes ^s	rje		
			brjes			
myong	bmyongs	brnyong	myongs ^s	myong	"ensnare; stretch out"	
snyug	bsnyugs	bsnyug	snyugs ^s	snyug	"dip in"	
snyung	bsnyungs	bsnyung	snyungs ^{s,D}	snyung	"make less; reduce"	
snyeng	bsnyengs	bsnyeng	snyengs	snyeng	"fear"	
snyeng(s) ^{s,D}						
snyob ^s	bsnyobs ^s	bsnyob ^s	snyobs ^s	snyob	"stretch out" ^s	
rtob/rtab	brtabs ^s	brtab ^s	rtobs ^s	rtab	"confused, in a hurry"	

Pres.	Per.	Fut.	Imp.	Stem	Meaning	Exceptional features
sti	bstis	bsti	stis	sti	"rest; honor, esteem"	
sting	bstings	bsting	stings	sting	"scold, abuse"	
stim	bstims	bstim	stims	stim	"enter, penetrate"	
stung	bstungs	bstung	stungs	stung	"make shorter"	
rdib	brdibs ^s	brdib ^s	rdibs ^s	rdib	"fall apart; give way"	
rdung	brdungs	brdung	rdung(s)	rdung	"beat, strike"	
rdeg	brdegs	brdeg	rdeg(s)	rdeg	"beat, strike"	
sdum	bsdums	bsdum	sdum(s)	sdum	"make agree"	
sdeb	bsdebs	bsdeb	sdebs	sdeb	"mix, blend"	
sdo	bsdos	bsdo	sdos	sdo	"risk, venture"	
sdog	bsdogs	bsdog	sdogs	sdog	"prepare, make ready"	
sdong	bsdongs	bsdong	sdongs ^s	sdong	"unite, join"	
sdom	bsdams/ bsdoms	bsdam/ bsdum	sdom(s)	sdom/ *sdam	"bind, tie"	
mog ^{s,G}	brnogs ^{s,G}	brnog ^{s,G}	mogs ^{s,G}	mog	"hide" ^{s,G}	
snub	bsnubs	bsnub	snub(s)	snub	"suppress, destroy"	
snum	bsnums	bsnum	snum(s)	snum	"smell"	
snem	bsnems	bsnem ^s	snems ^s	snem	"shake, cause to move"	
sno ^s	bsnos ^s	bsno ^s	snos ^s	sno	"mix together" ^s	
spong/ spang	spangs	spang	spongs	spong/*spang	"give up"	
rtsi	brtsis	brtsi	rtsi(s)	rtsi	"count, calculate"	
rtsig	brtsigs	brtsig	rtsig(s)	rtsig	"build up, wall up"	
rtseg	brtsegs	brtseg	rtsegs ^{s,D,G}	rtseg	"stack up, build up"	
			rtsog			
rtseng	brtsengs	brtseng	rtsengs ^s	rtseng	"tuck up, truss up"	
			rtsong(s)			
rdzi	brdzis	brdzi	rdzi(s)	rdzi	"press, beat, oppress"	
rdzu	brdzus	brdzu	rdzu(s)	rdzu	"disguise"	
rdze	brdzes	brdze	rdze(s)	rdze	"tuck up, turn up"	
zlum	bzlums ^{s,G}	bzlum ^{s,G}	zlums ^{s,G}	zlum	"collect, gather together"	
zlo ^{s,G}	bzlos ^s	bzlo ^s	zlos ^s	zlo	"call, invite" ^{s,G}	
sri	bsris	bsri	sris	sri	"retain"	
sring	bsrings	bsring	sring ^{s,G}	sring	"stretch; reach"	
srung	bsrungs	bsrung	srung(s)	srung	"guard, watch"	
srub	bsrubs	bsrub	srubs	srub	"stir up"	
sro	bsros	bsro	sro(s)	sro	"to warm"	
slu	bslus	bslu	slu(s)	slu	"entice, seduce"	
sle	bsles ^{s,D}	bsle ^{s,D}	sles ^s	sle	"braid, plait"	

(continued)

(continued)

Pres.	Per.	Fut.	Imp.	Stem	Meaning	Exceptional features
sleb	bslebs	bsleb	slebs ^S	sleb	"reach, extend"	
slog	bslogs	bslog	slogs ^S	slog	"turn"	
Paradigm V						
g--	b--	d--	--s-*o			
gcod	bcad	gcad	chod	*chad	"cut"	
gtong	btang	gtang	thongs ^S	*thang	"give"	
			thong ^{D, G, d}			
			tong			
gtod	btad	gtad	thod ^{C(p. 79)}	*thad	"deliver up; lean on"	
			gtod ^S			
			btod			
gnon	mnan	gnan ^S	non ^{S, G}	*nan	"press, overcome"	
Paradigms IV/V						
g--	b--s	b--	--s-*o			
g--	b--	d--	--s-*o			
gsod	bsad	bsad/gsad	sod	*sad	"kill"	
Paradigm VI						
'--d	b--	d--	--s-*o			
Regular						
'gug(s)	bkug ^{S, T}	dgug	khugs	*gug/*khug	"call, summon"	
	bgug					
'gegs	bkag	dgag	khogs ^G	*gag/*khag	"hinder, lock up"	
			khog			
'gengs	bkang	dgang	khongs ^G	*gang/*khang	"fill; soil, smear"	
			'khongs ^S			
			khong			
'gel	bkal	dgal	khol	*gal/*khal	"load; charge with a task"	
'grem(s)	bkram	dgram	khroms	*gram/*khram	"put down"	
'joms	bcom	gzhom	choms	*jom/ *chom	"conquer; suppress"	
'degs	bteg	gdeg	thegs ^G	*deg/theg	"raise, hold up"	
'deg			theg			
'debs	btab	gdab	thobs ^{S, G}	*dab/*thab	"cast, throw"	
			thob			
'byin	phyung	dbyung	phyungs ^S	*byung/ phyung	"cause to come forth"	
			phyung			
'dzin	bzung	gzung	zung(s)	zung	"seize, take holf of"	

Pres.	Per.	Fut.	Imp.	Stem	Meaning	Exceptional features
Irregular						
'gebs	bkab	dgab	khob	*gab/*khab	"cover, protect"	Imp. lacks -s.
'jums ²⁰	bcum	gzhum	chum	*jum/chum	"shudder, shrink"	Imp. lacks -s.
			'jum			
'bebs	phab	dbab	phob	*bab/*phab	"cast down"	Imp. lacks -s.
'bogs	phog	dbog	phog	*bog/phog	"give, impart"	Imp. lacks -s.
Paradigm VII						
'--	b--s	d--	--s-*o			
Regular						
'gum	bkums	dgum ^{S, G, D, T}	khums ^D	*gum/khum	"kill"	
		dkum	khum(s)			
			khum ^{S, G}			
'jig	bshigs ^{S, G}	gzhig	shigs ^{S, G}	*zhig/shig	"destroy"	
	bshig ^{G, C, T}					
	bzhig					
'ding	btings	gding	thing(s)	*ding/thing	"spread, strew, scatter"	
'dri	dris	dri ^{S, G}	dris ^{S, D, G}	dri	"ask"	
			'dris			
'drub	drubs	drub	drub(s)	drub	"sew, embroider"	
'dreg	dregs ^S	dreg ^S	dregs ^S	dreg	"cut, shave"	
'phral	phral	dpral ^D	phrol	phral	"separate, part"	
		dbral				
'phri	phris	dpri ^{S, d}	phri(s)	*phri	"lessen, diminish"	
		dbri				
'bab	bab(s)	dbab ^{S, G}	bobs	*bab	"descend, fall"	
'byi	phyis	dbyi	phyis ^G	*byi/phyi	"wipe off"	
			byis ^S			
'brad	brad	dbrad ^{S, G}	brod	brad	"scratch, scrape"	
'dzum	btsums ^G	gzum	tshums ^G	*dzum/tshum	"close, shut"	
	btsum		tshum			
Irregular						
'gog	bkog	dgog	khog	*gog/khog	"take away, pull out"	Per. and Imp. lack -s.
'jug	bcugs ^T	gzhug	chug	*jug/chug	"put in"	Imp. lacks -s.
	bcug					
'jog	bzhogs	gzhog	zhog	*zhog	"cut, hew"	Imp. lacks -s.
'thub	btubs ^{S, D, d}	gtub	gtubs ^S	*thub	"cut to pieces"	Presence of g- in Imp.
	'thubs		'thub			
			btub			

(continued)

(continued)

Pres.	Per.	Fut.	Imp.	Stem	Meaning	Exceptional features
Paradigms I/VII						
'--	b--s	b--	--s-*o			
'--	b--s	d--	--s-*o			
'thag	btags	btag/gtag ^{s,d}	thogs	*thag	"grind"	
			thog			
'dral	dral	dral ^s	dral ^{s,G}	dral	"tear apart"	
'tsho	bsos	bso/gso	sos	*so	"nourish, feed"	
Paradigm VIII						
'--d	b--s	d--	---s-*o			
'dren	drang(s)	drang	drongs	drang	"pull, drag"	
bud	phus	dbu	phus	*bu/phu	"blow, inflate"	
	phu ^D					
dzugs	btsugs	gzug ^D	tshugs ^{s,G}	*dzug/*tshug	"stick into, plant"	
		gzugs	zug(s)			
Paradigms VI/VIII						
'--d	b--	d--	---s-*o			
'--d	b--s	d--	---s-*o			
'bugs	phug ^{s,D} / phugs ^D	dbug ^{s,D}	phugs ^G / phugs ^{s,D}	*bug/phug	"hollow out pierce"	
'bubs	phub(s)	dbub	phubs ^s	*bub/phub	"put on a roof"	
'byed	phye	dbye	phyes	*bye/phye	"open"	
	phye		phye			
Paradigms VII/VIII						
'--	b--s	d--	--s-*o			
'--d	b--s	d--	--s-*o			
'big(s)	phigs	dbig	phig(s)	*big/phig	"pierce, bore"	
Paradigms VI/VII/VIII						
'--d	b--	d--	--s-*o			
'--	b--s	d--	--s-*o			
'--d	b--s	d--	--s-*o			
Regular						
'khrol	bkrol ^s	dkrol	khrol ^s	khrol	"play, cause to sound"	
	dkrol					
'god	bkod ^{s,D,G}	dgod	khod	*god/khod	"plan; establish"	
	bgod					
'grol	bkrol	dgrol	khrol	*grol/khrol	"loose; release"	
'jil	bcil	gzhil	cil ^s	*jil/*cil	"expel, eject"	
'jun	bcun	gzhun	chun ^{s,G}	*jun/chun	"subdue, punish"	
'thor	btor	gtor	thor ^{s,D}	thor	"be scattered, fly asunder"	
			'thor			

Pres.	Per.	Fut.	Imp.	Stem	Meaning	Exceptional features
'dul	btul	gdul	thul	*dul/thul	"subdue; till"	
'don	bton	gdon	thon	*don/thon	"expel; cause to go out"	
'drid	drid ^s	drid ^s	drid ^s	drid	"cheat, deceive"	
'dril	dril	dril	dril	dril	"to be turned, rolled; together"	
'drud	drud	drud ^s	drud	drud	"rub, file, rasp"	
'bud	phud	dbud	phud	*bud/phud	*take or pull off"	
'byol	byol	dbyol	byol	byol	"make way, step aside"	
'dzud	btsud	gzud ^{s,G}	tshud	*dzud/tshud	"put, lay"	
'dzur	bzur	gzur	zur	zur	"give way; keep aloof"	
Irregular						
'jal	bcal	gzahl	'jol	*jal/*cal(?)	"weigh, measure"	'- and initial of Fut.
Irregular verbs²¹						
'grog ^s	'grogs ^s	grogs ^s	grogs ^s	*grog	"be friendly with" ^s	
rngod	brngos	brngod ²²	rngos	*rngo?	"parch, roast"	-d in Fut.
gcom ^s	bcams ^s	bcom ^s	coms ^s	*cam?	"destroy, overcome" ^s	-o- of Fut.
			'choms ^s			
'chog ^{s,d}	bcags ^s	bcag ^s	chogs ^s	*chag	"strike, beat" ^{s,d}	-o- of Pres.
'jur	bcur	bcur ^s	cur/chur ^s	*jur/?	"entangled"	Stems irregular.
'jog	bzhag	gzhang	zhogs ^T	*zhag	"put, place"	-o- of Pres.
			zhog			
gnyog	gnyags	gnyag	gnyogs	?	"desire"	
theg	gteg	gteg	thegs	theg	"support, maintain"	
'dem	'dams	gdam	'doms	*dam	"investigate, examine"	
'dogs	btags	gdag	thogs	*dag/ *thag	"bind, fasten"	-o- of Pres.
		gdags				
'doms ^s	gdams ^s	gdams ^s	gdoms ^s	*dam	"persuade, convince" ^s	
'phen	'phangs	'phangs	phong/ phangs	*phang	"throw, cast"	
'phrog	phrogs	dbrog	phrogs ^{s,D}	*phrog/ *brog	"rob"	Stems irregular.
'bag	dbags ^{s,G} / 'bags	dbag	dbogs	*bag	"soil, pollute"	
'bod	bos	bod	bos	?'	"call, exclaim"	-d of Fut.

(continued)

(continued)

Pres.	Per.	Fut.	Imp.	Stem	Meaning	Exceptional features
'byong	byang	'byang ^s	byongs ^s	byang	"be cleansed; skilled"	'- of Fut.
'bral ^s	phrul ^s	dbral ^s	phrol ^s	?	"strip, tear." ^s	-u- of Perf.
'bros	broṣ	'bro ^{s,d}	bros	*bro	"flee"	'- of Fut.
'ju	bzhus	bzhu zhus ^s	gzhu ^s (b)zhu?	zhu	"melt, thaw"	Presence of prefixes and lack of -s in Imp. forms.
za	bzas	bza	zos zo	za	"eat"	Lack of affixes in Pres.
g-yob	g-yabs ^{s,G}	g-yab ^{s,G}	yobs ^s	*yab	"move about, brandish"	
g-yab ^G	g-yobs					
shu	bshus shud ^s	bshu	shu(s)	shu	"take off, strip"	Lack of affixes in Pres.
shong	bshangs	bshang	shong(s)	*shang	"empty, remove"	Lack of g- in Pres.
sang	bsangs	bsang	sangs ^s	sang	"do away with, cleanse"	Lack of affix in Pres. ²³
gsang	gsangs ^D	gsang ^D	songs ^D / gsangs ^s / gsongs ^G	?	"conceal"	

Notes

- I wish to express my gratitude to Professor Li Fang-kuei, who first aroused my interest in Tibetan verbal morphology and from whose advice and guidance I have continued to benefit. I hasten to add, however, that all errors of fact and opinion in the present paper are entirely my own.
- The extensive body of literature on WT verbal morphology has been summarized and evaluated by Uray (1953). To the list of materials mentioned by him should be added Nishida (1958) and Chang (1971).
- In particular we refer here to Li (1933), Shafer (1951), Nishida (1958), and Chang (1971).
- We take Jäschke (1881) as our basic lexicographical source, but we have made frequent use of Desgodins (1899), Das (1902), Dge-bshes (1957), and Semichov (1963). The entire corpus of 266 verbs considered in this paper is listed in the appendix.
- We may propose that the -s> -d change took place after -n, -r, and -l, where the *da-drag* occurs in early WT texts.
- This form is attested in Thomas (1935-63.II, 351:32.B 1).
- Shafer (1951.1028-9) seems to have toyed with the idea that -d alone may have caused these vowel changes, for he said, "The cause of the shift of the root vowel -u- to -i- and of the root vowel -a- to -e- in the present form is not so clear. The

materials are insufficient to decide whether the *a>e* shift in the present is due to the assimilation of the root vowel -a- to the vowel of a proto-Bodish transitive present tense suffix *-et, or whether the Archaic Bodish -d drag unlauted a preceding root -a- to -e-, and -u- to -i-."

- Further problems involving 23. 'byin-pa and 24. 'dzin-pa will be discussed presently.
- Shafer (1951.1028, n. 4) notes several occurrences of the form *lend* in early materials. Cf. also Li (1961.353) *len-pha* (-pa), where, as pointed out by Li (p. 240), the use of *pha* (-pa) after -n indicates that an earlier *da-drag* must have been present.
- The form *bsald* is attested in the Lhasa Treaty Inscription of 821-2, east face, line 41. Cf. Li (1955.32 and 64).
- Cf. Thomas (1935-63.II, 163.10), *bsgyald*, identified as a variant form of *bskyald*. Thomas lists *bskyald* in his glossary but all text examples given for it are actually spelled *bskyal*.
- Four exceptions to this theory appear in our data:

- 'chog bcags bcag chogs
- 'jog bzhag gzhag zhogs
- 'dogs btags gdags thogs
- shong bshangs bshang shongs

The presence of the present prefix '- in examples 1-3 makes it impossible to explain their -o- vocalism, and we can only guess that these forms may have undergone some sort of analogical change based perhaps on those paradigms which mark present forms with '-. In the case of example 4. *shong-ba* we may more confidently suggest that an earlier *g-* was deleted through later scribal practice, perhaps due to the loss of *g-* before *sh-* in speech. This was probably the origin of the alternant form *shom-pa* for our 30. *gshom-pa* and may also explain the following pairs of variants:

shog-pa ~ *gshog-pa* "wing"
shong ~ *gshong* "pit, hole"

- Cf. Li (1961.344) 'byin-pha, where the use of -pha indicates that earlier *da-drag* must have been present.
- Various occurrences of the form 'dzind in early sources are noted by Shafer (1951.1028, n. 1). Cf. also Li (1961.348) 'dzin-pha (-pa).
- Note that the vocalism of the present root *sngangs* is also irregular, since we would expect -e- rather than -a- here.
- Form written with post-final -s ap. Semichov (1963).
- Attested in Thomas (1935-63.II, 223:61.15).
- One need only note the variant forms with and without '- and -s listed in the appendix to the present paper to realize just how "unstable" these elements are in WT.
- As observed by Li (1933.148) the stem of this verb is probably *zho; cf. zho "milk". Thus Semichov's form, *gzhos*, is closest to the hypothetical imperative form *zhos.
- Given by Jäschke and Das in quoted text examples.
- No comments are added in this section for verbs which clearly cannot be assigned to any of the above paradigms. Two-stemmed verbs whose stems do not adhere to the Present-Future versus Perfect-Imperative dichotomy are identified with the gloss "stems irregular".
- Jäschke comments, "perhaps erroneous for *brngo*."
- Cf. 'tshang-ba "to remove, make clean". Could this be the "displaced" present root of this verb?

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ALTERNATION OF FINAL VOWEL WITH FINAL DENTAL NASAL OR PLOSIVE IN TIBETAN

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As was pointed out in the 'Addenda' (by A. H. Francke, assisted by W. Simon) to the 1929 reprint of Jäschke's *Tibetan grammar* (pp. 120-1), we observe an alternation of final vowel with final dental nasal or plosive in a number of closely related words. The examples adduced show sometimes a tripartite scheme, a final vowel in the case of verbs, a dental nasal in the case of adjectives, and a dental (voiced) plosive in the case of nouns, as e.g. *dro-ba* 'to be warm', *dron-po* (or *-mo*) 'warm', and *drod* 'heat'. A bipartite pattern, which is in fact more frequent, has also been observed and illustrated by a few examples, such as *za-ba* 'to eat' and *zan* 'food'.

For the more systematic approach attempted here, limited to dictionary entries and omitting therefore examples in-*te*, it has been found necessary to precede the tripartite scheme (list D) by three bipartite lists to represent alternations of final vowel with either *-n* (list A) or *-d* (list B), and to include in a further list (list C) alternations of *-n* with *-d*, most of these latter cases having already appeared in the preceding two lists. Roman figures have been used to mark further subgroups. Mere variants have been indicated by I, clear distinctions in meaning by II, and both these subgroups have been further subdivided.

I have refrained from discussing the question of an original dental fricative (*ð*) after the final vowel, lost at a later period, as suggested in the 'Addenda', or alternatively of considering *-n* or *-d* as suffixes. In addition to comparative material a re-examination of the problem will have to take the not infrequent cases into account where we note absence of final *-d* to mark the 'future form' of verbs ending in *-d*, or where presence and absence of final *-d* is used to contrast transitive or intransitive, and active or passive uses of verbs.¹

List A

1. *rku(-ba)* 'to steal, rob' / *rkun(-ma)* 'thief, theft'² (II)
2. *skyi(-ba)* 'to borrow' / *skyin(-pa)* 'loan' (II)
3. *gla* 'wages' / *glan(-pa)* 'to patch,³ to return (as an answer)' (II)
4. *mgo* 'head' / *mgon(-po)* 'master, lord, principal' (IIc)
5. *hgro(-ba)* 'to walk' / *hgron(-po)* 'traveller, guest, foreigner' (II) → B-D
6. *rga(-ba)* 'to be old' / *rgan(-pa)* 'old' (IIb) → B-D
7. *rgyu(-ba)* 'to go, move, wander' / *rgyun* 'flow, current, stream', *rgyun-du* 'continually'⁴ (II) → B-D
8. *sgre(-ba)* / *sgren(-mo)* 'naked' (I)
9. *na* / *nan(-po)* 'bad' (I)
10. *no* 'face, countenance' / *nnon(-po)* 'visible, conspicuous' (IIc)
11. *rna(-ba)* 'to mow, cut, reap' / *rnan(-pa)* '[the thing reaped =] reward, fee, hire, wages' (II)
12. *sna* 'before, soon, early' / *snan* 'formerly, before, *snon* 'idem' (IIIf)
13. *sno* / *snon (-bo, -po, -mo)* 'blue, green' (I)
14. *gci(-ba)* 'to make water' / *gcin* 'urine' (II) → B-D
15. *c'e(-ba)* / *c'en(-po)* 'great' (I) → B-D
16. *hc'i(-ba)* (< **hśi(-ba)* (*śi(-ba)* / *śin* (in *śin-sa* 'cemetery', *gśin(-po or -mo)* 'dead person') (II) → B-D
17. *nyi(-ma)* 'sun, day' / *nyin(-mo)* 'day' (I)
18. *nye(-ba)* 'to be near; near' / *nyen* (in *nyen-skor*, variant of *nye-skor* 'relative') (I)
19. *snyi(-ba, -bo, -mo)* / *snyin(-po)* 'soft, smooth' (I)
20. *brnya(-ba)* / *brnyan(-pa)* 'to borrow' (I)
21. *mt'o(-ba)* 'to be high; highness; high' / *mt'on(-po)* 'high' (IIh) → B-D
22. *ht'u(-ba)* / *ht'un(-pa)* 'to gather', *ht'un* 'gatherer' (II)
23. *do* '(the equals =) two, a pair, couple' / *don* '(equivalent =) sense, meaning, signification' (IIc) → B-D
24. *dro(-ba)* 'to be warm' / *dron(-po)*⁵ 'warm' (IIb) → B-D
25. *hdre(-ba)* 'to be mixed with' / *hdren(-ma)* 'mixture, medley' (II)
26. *nu(-ba)* 'to suck' / *snun(-pa)* 'to suckle' (IIa) → B-D
27. *rna(-ba)* 'ear' / *nyan(-pa)* (< **nyran*)⁶ 'to hear', *snyan(-pa)* 'to praise; glory' (IIe) → B-D
28. *rno(-ba)* (Jäschke: 'literary form') / *rnon(-po)* (Jäschke: 'usual form') 'sharp, acute, edged, pointed' (I)
29. *p'o* 'man, male' / *dpon(-po)* 'master, lord' (IIc)
30. *p'yi* 'behind, after, outside' / *p'yin* (in *p'yin-c'ad* 'later, afterwards, outside') (Ia) → B-D
31. *p'ra(-mo)* 'fine, thin, minute' / *p'ran* 'little, small, trifling' (I) → B-D
32. *bye* (in *bye-brag* 'difference, diversity'), *dbye(-ba)* 'partition, division, section, class' / *dbyen(-pa)* 'difference, dimension, discord, section' (I)
- 33a. *ma* / *man* 'below' (Ia) → B-D

- b. *dma(-ba)* 'to be low' / *dman(-pa)* 'low, little, inferior' (IIb)
34. *rma* 'wound', *rma(-ba)* 'to wound' / *rman(-po)* 'wounded' (IIc)
35. *rmu(-ba)* 'dullness, heaviness, fog' / *rmun(-po)* 'dull, heavy, stupid' (IIc)
36. *rmo(-ba)* 'to plough' / *rmon(-pa)* 'act of ploughing' (II) → B-D
37. *smyo(-ba)* 'to be insane, mad' / *smyon(-pa)* 'insane, frantic, mad' (IIb)
38. *bisa(-ba)* 'to bear, bring forth' / *mts'an* 'nephew'⁷ (II)
39. *rtse(-ba)* / *rtsen(-pa)* 'to play' (I) → B-D
40. *ts'a(-ba)* / *ts'an* 'to be hot, warm' (I) → B-D
41. *ts'u* / *ts'un* 'hitherward, on this side' (Ia)
42. *za(-ba)* 'to eat' / *zan* 'food' (II) → B-D
43. *ya* / *yan* 'above' (Ia)
44. *ri(-ba)* 'worth' / *rin* 'price, value' (I)
45. *lo* 'talk, report, rumour, saying' / *lon* 'notice, tidings, message' (I)
46. *śu(-ba)* 'to take off, strip' / *śun(-pa)* 'bark, rind, peel, skin' (II)
47. *sra(-ba)* 'hard' / *sran(-pa)* 'to endure, suffer'⁸ (IIe)
48. *gso(-ba)* 'to feed, rear' / *gson(-pa)* 'to live; life'⁹ (IIa)

Explanatory remarks

As explained in the preliminary remarks, pattern I indicates mere variants of a final vowel and vowel + *n*, pattern II marks distinctions in meaning by means of a final *-n*.

Pattern I. The examples marked as I are the following: 8 (*sgre*), 9 (*na*), 13 (*sno*), 15 (*c'e*), 17 (*nyi*), 18 (*nye*), 19 (*snyi*), 20 (*brnya*), 28 (*rno*), 31 (*p'ra*), 32 (*bye*), 39 (*rtse*), 44 (*ri*), 45 (*lo*).

Pattern Ia. The subgroup Ia consists of four words (Jäschke refers to some of them as 'roots') denoting location in space, *ma* 'below', *ya* 'above', *ts'u* 'this side', and *p'a* 'that side' (the last two reflecting Chinese *bii-tsyy* 彼 此), to which *p'yi* 'behind, after, outside' may be added. The variant in *-n* may in these cases go back to an earlier *na* 'in'. In the same way *mgon-po* (list A, no. 4) may possibly go back to **mgo-na po* 'the man at the head'.

Pattern II. In its basic form pattern II is a verb/noun pattern. List A includes the following 15 examples: 1 (*rku*), 2 (*skyi*), 3 (*gla*), 5 (*hgro*), 7 (*rgyu*), 11 (*rna*), 14 (*gci*), 16 (*hc'i*), 18 (*nye*), 22 (*ht'u*), 25 (*hdre*), 36 (*rmo*), 38 (*bisa*), 42 (*za*), 46 (*śu*).

The following other patterns have been observed.

IIa (verb/verb): 26 (*nu*), 48 (*gso*).

IIb (verb/adjective): 6 (*rga*), 21 (*mt'o*), 24 (*dro*), 33b (*dma*), 37 (*smyo*).

IIc (noun/noun): 4 (*mgo*), 23 (*do*), 29 (*p'o*).

IId (noun/adjective): 10 (*no*), 34 (*rma*), 35 (*rmu*).

IIe (noun/verb): 27 (*rna*).

IIIf (adjective/noun): 45 (*sra*).

IIg (adverb/adverb): 12 (*sna*).

List B

1. *rke(-ba)* 'lean, meagre' / *rked(-pa)* 'waist'¹⁰ (IIe)
2. *skud(-pa)* 'to besmear, daub' / F. *bsku* (III)
- 3a. *skye* / *skyed* 'growth, increase' (I)
- b. *skyed(-pa)* 'to generate' / *skye(-ba)* 'to be born' (IV)
4. *hk'rid(-pa)* 'to lead' / F. *bkri*¹¹ (III)
5. *hk'rud(-pa)* 'to wash, bathe' / F. *bkru* (III)
6. *bgod(-pa)* 'to divide' / F. *bgo* (III)
7. *bgvid(-pa)* 'to make, do, act' / F. *bgvi* (III)
8. *bgrud(-pa)* 'to husk, shell' / F. *bgru* (III)
- 9a. *hgyed(-pa)* 'to divide' / *hgye(-ba)* 'to be divided' (IV)
- b. *hgyed(-pa)* 'to divide; to fight' / F. *bkye*¹² (III)
10. *hgrod(-ba)* 'to walk' / *bgrod* 'walk, gait'¹³ (II) → ACD
11. *rga(-ba)* 'to be old' / *rgad* 'old' (IIb) → ACD; *rgud(-pa)* 'to decline, get weak, frail'
- 12a. *rgyu(-ba)* 'to go, walk, move, wander' / *rgyud* 'string, cord, chain of mountain, thread of tradition'¹⁴ (II) → ACD
- b. *rgyud(-pa)* 'to fasten or file on a string' / F. *brgyu* (III)
13. *na* 'I' / *ned* 'we' (IIIh)
14. *nu(-ba)* 'to weep' / *nud(-mo)* 'a sob' (II)
15. *rnod(-pa)* 'to parch, roast, fry' / F. *brno*?¹⁵ (III)
16. *sno(-ba)* / *snod(-pa)*¹⁶ 'to become green' (I)
- 17a. *gci(-ba)* / *gcid(-pa)* 'to make water' (I) → ACD
- b. *gcid(-pa)* 'to make water' / F. *gci* (III)
- 18a. *gcud(-pa)*, *lcud(-pa)* 'to twist' / *hc'u(-ba)* 'to be twisted' (IV)
- b. *gcud(-pa)*, *lcud(-pa)* 'to twist' / F. *gcu*, *lcu* (III)
19. *lci(-ba)*, *lji(-ba)* 'heavy' / *ljid(-pa)* 'heaviness' (IIe)
20. *c'e(-ba)*, *c'en(-po)* 'great' / *c'ed* 'importance', *c'ed-du* 'on account', *mc'ed(-pa)* 'to spread' (IIe) → ACD
21. *mc'i(-ba)* 'to say' / *mc'id* 'talk, discourse, speech' (II)
22. *mnyed(-pa)* 'to rub' / F. *mnye* (III)
23. *lta(-ba)* 'to look' / *ltad(-mo)* 'sight, spectacle' (II)
24. *mt'o(-ba)*¹⁷ 'to be high' / *stod* 'upper, higher, former part of a thing, the upper half' (II); *stod(-pa)* '(to raise =) to praise, commend, laud' (IIa) → ACD
25. *do* '(the equals =) a couple, pair, two' / *dod* 'equivalent' (IIc) → ACD
26. *dro(-ba)* 'to be warm' / *drod* 'warmth, heat' (II) → ACD
27. *bda(-ba)* 'to drive (out), chase' / *hded(-pa)* 'idem' (I)
- 28a. *hdu(-ba)* 'to come together' / *sdud(-pa)* 'to collect' (IV), *mdud(-pa)* 'knot'
- b. *sdud(-pa)* 'to collect' / F. *bsdu* (III)
29. *na(-ba)* 'to be ill, sick' / *nad* 'disease, sickness' (II)
30. *nu(-ba)* 'to suck'¹⁸ / *nud(-pa)* 'to suckle'¹⁹ (IV) → ACD
31. *rna(-ba)* 'ear', *nyan(-pa)* 'to hear', *snyan(-pa)* 'to praise; glory' / *snyad(-pa)* 'to relate, report' (IIa) → ACD
32. *sne(-mo)* 'extremity, end', *snye(-ma)* '(end =) ear of corn' / *snyed* (in *hdu snyed*, *de-snyed* '(extreme quantity =) so much, so many')²⁰ (I)
33. *spya* / *spyad* (in *spya(d)-dños* 'implements, things') (I)
34. *p'a* 'father' / *spad*²¹ (in *p'a-spad* 'father and children') (IIIh)
35. *p'yi* 'behind, after, outside' / *p'yid(-pa)* 'to retard, prolong, maintain'²² (IIg) → ACD
36. *p'ra(-mo)* 'thin, fine, minute' / *p'rad* 'particle' (IIe) → ACD
37. *hp'yi(-ba)* / *hp'yid(-pa)* 'to wipe, blot out' (I)
38. *hp're(-ba)* 'to incline, lean against' / (*h*)*p'red* 'across, oblique' (IIb)
39. *byed(-pa)* 'to make' / F. *bya* (III)
40. *bro(-ba)* 'to taste' / *brod* 'taste' (II)
41. *blu(-ba)* 'to buy off, ransom, redeem' / *blud(-pa)*²³ 'release, ransom, redemption' (II)
42. *hbud(-pa)* 'to blow' / F. *dbu* (III)
- 43a. *hbyed(-pa)* 'to open' (trans.) / *hbye(-ba)* 'to open' (intrans.) (IV)
- b. *hbyed(-pa)* 'to open' (trans.) / F. *dbye* (III)
44. *hbru(-ba)*²⁴ / *hbrud(-pa)* 'to dig' (I)
45. *sbed(-pa)* 'to hide' / F. *sba* (and *sba(-ba)* 'privy parts') (III)
- 46a. *sbru(-ba)* / *sbrud(-pa)* 'to stir; to knead' (I)
- b. *sbrud(-pa)* 'to stir; to knead' / F. *sbru* (III)
47. *sbre* / *sbred* 'steppe fox, corsac'²⁵ (I)
48. *ma* 'mother' / *smad*²⁶ (in *ma-smad* 'mother and children' and *bu-smad* 'wife and children') (IIIh)
49. *ma* 'below' / *smad(-pa)*,²⁷ *smod(-pa)* 'to blame' (IIg) → ACD
50. *rmo(-ba)* / *rmod(-pa)* 'to plough' (I) → ACD
51. *gtsod* (*btso*d) / *gtso* 'Tibetan antelope' (I)
52. *rtsa* / *rtsad* 'root' (I)
- 53a. *rtse(-ba)* / *rtsed(-pa)* 'to play' (I) → ACD
- b. *rtse(-ba)* 'to play' / *rtsed* 'play' (II)
- 54a. *ts'a(-ba)* 'hot' / *hts'od(-pa)*, *hts'ed(-pa)* 'to cook' (IIg) → ACD
- b. *hts'od(-pa)* 'to cook' / F. *btso* (III)
55. *za(-ba)* 'to eat' / *zad* (< *hdzad(-pa)*) 'to be consumed, spent' (IIa) → ACD
56. *yi* / *yid* 'soul, mind' (I)
57. *re* / *red* 'to be' (I)
58. *lu(-ba)* 'to throw up phlegm' / *lud(-ma)* 'phlegm' (II)
59. *ši(-ba)* 'to die' / *šid*, *gšid(-ma)* 'funeral repast' (II) → ACD
60. *si* (in *si-sgra* 'whistle') / *sid* (in *sid-sgra* 'idem') (I)

Explanatory remarks

To patterns I and II (with its subgroups), which have been used as in list A, patterns III and IV have been added. Pattern III refers to the cases, already mentioned in the preliminary remarks, where we note absence of final *d* marking (often with the addition of a *b*-prefix) the 'future form' of verbs ending in *-d*,²⁸ and pattern IV

refers to cases where presence and absence of final *-d* is used to contrast transitive or intransitive and active or passive (or causative) uses of verbs.

Pattern I (variants): 3a (*skye*), 16 (*śho*), 17a (*gci*), 19 (*lci*, *lji*), 27 (*bda*), 32 (*snye*), 33 (*spy*), 37 (*hp'yi*), 44 (*hbru*), 46a (*sbru*), 47 (*sbré*), 50 (*rmo*), 51 (*gtsod*), 52 (*rtsa*), 53a (*rtse*), 56 (*yi*), 57 (*re*), 60 (*si*).

Pattern II (verb/noun): 10 (*hgro*), 14 (*ñu*), 21 (*mc'i*), 23 (*lta*), 24 (*mt'o*), 26 (*dro*), 29 (*na*), 40 (*bro*), 41 (*blu*), 53b (*rtse*), 58 (*lu*), 59 (*śi*).

IIa (verb/verb): 28a (*nyan*), 55 (*za*).

IIb (verb/adjective or adverb): 11 (*rga*), 38 (*hp're*).

IIc (noun/noun): 25 (*do*).

IId (noun/adjective): ———.

IIe (adjective/noun): 1 (*rke*), 20 (*c'e*), 36 (*p'ra*).

IIf (adverb/adverb): ———.

IIg (adverb/verb): 35 (*p'yi*), 49 (*ma*).

IIh (other changes): plural: 13 (*na*); s-prefix: 34 (*p'a*), 48 (*ma*).

Pattern III: 2 (*skud*), 4 (*hk'rid*), 5 (*hk'rud*), 6 (*bgod*), 7 (*bgvid*), 8 (*bgrud*), 9b (*hgyed*), 12b (*rgyud*), 15? (*rñod*), 17b (*gcid*), 18 (*gcud*, *lcud*), 22 (*mnyed*), 28b (*sdud*), 39 (*byed*), 42 (*hbud*), 43b (*hbyed*), 45 (*sbed*), 46b (*sbrud*), 54b (*h̄ts'od*).

Pattern IV: 3b (*skyed*), 9a (*hgyed*), 18a (*gcud*, *lcud*), 28a (*hdu*), 30 (*mu*), 43 (*h̄byed*).

List C

1. *hgron* (A 5) / *bgrōd* (B 10)
2. *rgan* (A 6) / *rgad* (B 11)
3. *rgyun* (A 7) / *rgyud* (B 12)
4. *gcin* (A 14) / *gcid* (B 17)
5. *c'en* (A 15) / *c'ed* (B 20)
- *6. *snyan(-pa)* / *snyad(-pa)*²⁹
7. *mt'on* (A 21) / *stod* (B 24)
- *8. *h̄t'an(-pa)* 'firmness' / *h̄t'ad(-pa)* 'idem'³⁰
9. *don* (A 23) / *dod* (B 25)
10. *dron* (A 24) / *drod* (B 26)
11. *snun* (A 26) / *nud* (B 30)
12. *p'yin* (A 30) / *p'yid* (B 35)
13. *p'ran* (A 31) / *p'rad* (B 36)
14. *dbyen* (A 32) / *h̄byed* (B 43)
15. *dman* (A 33b) / *smad* (B 49)
16. *rmon* (A 36) / *rmod* (B 50)
17. *rtsen* (A 39) / *rtse* (B 53)
18. *ts'an* (A 40) / *h̄ts'od* (B 54)
19. *zan* (A 42) / *zad* (B 55)

- *20. *yun* 'time' / *yud* 'very small portion of time, moment'
- *21. *śan* 'difference, distinction' / *śad* '(distinguishing mark =) mark of punctuation'
- *22. *śan(-pa)* 'butcher' / *gśed(-ma)* 'executioner, hangman'; *gsod(-pa)*, perf. *bsad* 'to kill'
23. (*g*)*śin* (A 16) / (*g*)*śid* (B 59)
- *24. *sran(-bu)* / *srad(-bu)* 'thread'³¹
- *25. *sran(-ma)* / *srad(-ma)* 'peas, beans, lentils'
- *26. *lhan* 'together', *lhan(-pa)* 'to join, patch'³² / *lhad* 'alloy'

Explanatory remarks

As mentioned in the preliminary remarks, most items of the above list have already been included in lists A or B. Special interest attaches therefore to the asterisked examples which illustrate apparently the existence of an alternation final nasal and final dental plosive, i.e. without, in some cases, members of the word family ending in a final vowel.

List D

1. *hgro* (A 5, B 10) / *hgron* (A 5, C 1) / *bgrōd* (B 10, C 1)
2. *rga* (A 6, B 11) / *rgan* (A 6, C 2) / *rgad* (B 11, C 2)
3. *rgyu* (A 7, B 12) / *rgyun* (A 7, C 3) / *rgyud* (B 12, C 3)
4. *gci* (A 14, B 17) / *gcin* (A 14, C 4) / *gcid* (B 17, C 4)
5. *c'e* (A 15, B 20) / *c'en* (A 15, C 5) / *c'ed* (B 20, C 5)
6. *h̄c'i*, *śi* (A 16, B 59) / (*g*)*śin* (A 16, C 23) / (*g*)*śid* (B 59, C 23)
7. *mt'o* (A 21, B 23) / *mt'on* (A 21, C 7) / *stod* (B 24, C 7)
8. *do* (A 23, B 25) / *don* (A 23, C 9) / *dod* (B 25, C 9)
9. *dro* (A 24, B 26) / *dron* (A 24, C 10) / *drod* (B 26, C 10)
10. *nu* (A 26, B 30) / *snun* (A 26, C 11) / *nud* (B 30, C 11)
11. *rna* (A 27, B 31) / *snyan* (A 27, C 6) / *snyad* (B 31, C 6)
12. *p'yi* (A 30, B 32) / *p'yin* (A 30, C 12) / *p'yid* (B 35, C 12)
13. *p'ra* (A 31, B 36) / *p'ran* (A 31, C 13) / *p'rad* (B 36, C 13)
14. *ma*, *dma* (A 33, B 49) / *dman* (A 33, C 15) / *smad* (B 49, C 15)
15. *rmo* (A 36, B 50) / *rmon* (A 36, C 16) / *rmod* (B 50, C 16)
16. *rtse* (A 39, B 53) / *rtsen* (A 39, C 17) / *rtse* (B 53, C 17)
17. *ts'a* (A 40, B 54) / *ts'an* (A 40, C 18) / *h̄ts'od* (B 54, C 18)
18. *za* (A 42, B 55) / *zan* (A 42, C 19) / *zad* (B 55, C 19)

Explanatory remarks

The tripartite scheme of list D has been arrived at by combining relevant examples of lists A–C, which therefore may be considered as in fact incomplete when

presented under the three bipartite schemes. List D clearly shows that the pattern set out in the 'Addenda' and mentioned in the preliminary remarks, according to which a final vowel indicates a verb, a final dental nasal an adjective, and a final dental plosive a noun, is merely one of several possible patterns.

Addendum

Two further examples of alternation, to be inserted between nos. 1 and 2, and nos. 49 and 50 of list B, must be mentioned.

- (a) *skad* 'speech, words, talk, news' / *skan* in *re skan* 'how say' (perhaps = 'do you (does he) mean to say . . .') (II). (The proposed meaning of *skan* is tentative, cf. also *BSOAS*, xxxi, 3, 1968, 560–1.)
- (b) *rma(-ba)* 'to ask' / *rma(-pa)* 'wonderful' (Iib) (cf. English 'to wonder' in the meaning 'to be desirous to know').

Notes

- Some cases of the latter kind have already been mentioned by A. Conrady. See p. 45 of his *Indochinesische Causativ-Denominativ-Bildung*, Leipzig, 1896.
- The noun *rkud* adduced in the meaning 'theft' in the 'Addenda' (p. 120), has been omitted in this paper as its meaning clearly needs re-examination. The word occurs several times in a Tun-huang fragment (No. 753 of the *Catalogue of the Tibetan manuscripts from Tun-Huang in the India Office Library* by Louis de La Vallée Poussin, OUP, 1962, p. 236) edited by F. W. Thomas (*Zeitschrift für vergleichende Rechtswissenschaft*, L, 1936, 275–87). In a note (p. 285) Thomas considers the dictionary meaning 'misfortune' inadequate and modifies it to 'penalty', without however mentioning the dictionary to which he is referring. The word has not been included in our Western dictionaries. The Tibetan–Mongolian dictionary by Sumatiratna (*Corpus Scriptorum Mongolorum*, VI–VII), Ulan Bator, 1959, I, 83, gives the meaning *bisirel* 'faith, reverence, worship'. A verb *rkud-pa* (*rkud-par hgyur*) occurs in the meaning '[?] to be stolen =] to disappear' in the last sentence of chapter lxi of the Tibetan version of the *Mahākarmavibhaṅga* (ed. S. Lévi, Paris, 1932, 205), there apparently corresponding to *antardhāsyanti* of the (otherwise different) Sanskrit sentence of the chapter (ibid., 50).
- From the semantic point of view cf. ex. 3 in *AM*, xvii, 2, 1972, 217.
- The semantic link is apparently the idea of a continuous uninterrupted movement, or, in the case of *rgyud* (see below list B, ex. 12), of an extended line. *rgyud* 'tantra' reflects the etymology of Sanskrit *tantra*, meaning 'thread, string, line, warp' and belonging with *tan* 'to extend, spread, stretch'.
- Jäschke refers to *dron-mo* as 'colloquial' in the English edition of his dictionary; in the first (German) edition he notes it as 'vulgar'. *dron-po* occurs in classical Tibetan. See, e.g., J. Nobel, *Suvarṇaprabhāsottama-sūtra*. II. *Wörterbuch*, Leiden, 1950, 103.
- See 'Ear, sharp and hearing—a Tibetan word family', in M. Boyce and I. Gershevitch (ed.), *W. B. Henning memorial volume*, London, 1970, 407.
- See Stuart N. Wolfenden, *Language*, IV, 4, 1928, 279.
- From the semantic point of view cf. Latin *durus* 'hard', from which English *endure* is derived.
- cf. *AM*, xix, 1, 1974, p. 96, n. 45.

- cf. also *rka* 'small furrow' and *rko-ba* (in Tsang *rkod-pa*) 'to dig', and, from the semantic point of view, French *tailler* 'to cut' and *la taille* 'waist'.
- Jäschke (*Dict.*, 61) places a question mark after *bkri*. Nobel (see p. 52, n. 5) adduces (p. 20) an example for *bkri*. Das in the entry *hk'rid* of his *Dictionary* gives *bkri* erroneously as perfect form instead of future.
- Nobel (see p. 52, n. 5) notes (p. 37) *bgye* and *dgye*. For a further example of *dgye*, see *Tibetan Tripitaka*, XLIII, 198³ (*dgye-bar brtsams-nas*).
- In the 'Addenda' (loc. cit., p. 121) A. H. Francke cites *grod* 'march' from the *gZer-myig*.
- See above, p. 52, n. 4.
- br̄io* has been conjectured by Jäschke (*Dict.*, 134) instead of Csoma's *br̄iōd* (*Dict.*, 247).
- Noted by Csoma (*Dict.*, 321).
- cf. below no. 49 (*ma / smad-pa*).
- cf. above, list A, no. 26.
- Western Tibetan, according to Jäschke (*Dict.*, 305).
- cf. *BSOAS*, xxxviii, 3, 1975, p. 614, no. 10.
- cf. below, no. 48 (*ma / smad*).
- Suggested by Jäschke (*Dict.*, 350).
- Variant of *glud* 'idem' and related to *glan-pa* and *lhan-pa* 'to patch'. Cf. also above list A, no. 3, and p. 51, n. 3.
- Also *hdru/hdrud*.
- Professor C. R. Bawden kindly refers me to the entry *kirsa* in Kowalewski's *Dictionnaire mongol-russe-français*, III, 1849, 2553, where the Tibetan equivalent *sbre* has been adduced, as well as Manchu *kirsa*. For the latter word the Latin name listed by Professor Jerry Norman in his *Manchu-English dictionary*, Taipei, 1967, is 'Cynalopex corsac (Linnaeus)'.
- cf. above, no. 34, *p'a* and *spad*.
- cf. above, no. 24, *mt'o-ba* and *stod-pa*.
- As a special case, not to be included in this list, the future form *bco* of *hc'os-pa* 'to make, prepare, build' must be mentioned, which may go back to an earlier **hc'ods-pa*.
- cf. *BSOAS*, xxxviii, 3, 1975, p. 614, ex. II B 6 and n. 29.
- Csoma, *Dict.*, 191.
- Das's entry (*Dict.*, 1287) is *srad-bu* in Tibetan script, followed by *sran-bu* in transcription. The obvious Chinese cognate of *sran-bu* is *hsien* 鐵, Karlgren, *Grammata Serica* 155 r, *sjan* 'idem'.
- See above, p. 55, n. 23.

THE ADDITION OF FINAL STOPS IN THE HISTORY OF MARU (TIBETO-BURMAN)

Robbins Burling

Source: *Language* 42, 3, 1966, 581-6

It has become commonplace in historical linguistics to recognize instances in which final consonants have been lost from the ends of words.¹ When inspecting sets of apparent cognates which differ only in that one language has final stops which are missing in the other, few linguists would hesitate to conclude that the stopped items represent the older form. More specifically, among the Tibeto-Burman languages, where some languages have a much fuller complement of final stops than others, it has been generally taken for granted that languages with many final stops are, in that feature, more conservative than languages with few or no final stops. Nevertheless, in the Maru language, which is spoken in northern Burma and which is quite closely related to Burmese, certain final stops seem to be intrusive, though they have developed in an entirely regular way from unstopped syllables. That is, certain Maru syllables which have final stops are cognate with unstopped Burmese syllables, and it will be the purpose of this paper to argue that the open syllable forms of Burmese are the more conservative.

Maru belongs to a group of closely related languages sometimes referred to collectively as the 'Kachin' languages, all of which are spoken in northern and northeastern Burma and which, with Burmese, form a distinct subgroup of Tibeto-Burman.² Data from three languages will be presented in this paper: Maru, Atsi (which is another 'Kachin' language), and Burmese. These three languages share many features though they are well beyond the range of mutual intelligibility. In them, as in many other languages in southeast Asia, syllables are likely to correspond with morphemes. They display contrasting tones, a sharply limited set of contrasting elements in postvocalic (syllable final) position as compared to prevocalic (syllable initial) position, and a reduction of tonal contrasts in stopped syllables as compared to open and nasal syllables. The only final stops in Atsi and Maru are /-p/, /-t/, /-k/, and /-ʔ/. All final stops are unreleased and bring the

syllable to an abrupt conclusion. Burmese has even more restricted postvocalic contrast, since it has but a single stopped form. This is always glottal in absolute final position, though it assimilates to the initial of the next syllable when that follows in close juncture. The restricted tonal contrasts of stopped syllables, together with a tendency for vowel allophones of stopped syllables to be quite different from those of open syllables, suggests a rather fundamental distinction between stopped and unstopped (either open or nasal) syllables. A few examples which demonstrate these generalizations are given in Table 1.³

For the most part, where one language has a stopped syllable, cognates in the other languages also have stops, although, as can be seen in Table 1, there have been a number of shifts among the various stops. Nevertheless, in two crucial cases, Maru alone of the three languages has stops, while apparent cognates in both Atsi and Burmese have open syllables. These crucial cases are listed in Table 2, and they appear to be entirely regular. The only complication is that the vowel which usually becomes /-au/ in Atsi becomes /-ui/ when following *y, a situation occasionally obscured because initial *y develops into Atsi /v/. Specific lexical items demonstrating these correspondences are given in Table 3.

One's first guess upon surveying these terms might well be that the final Maru stops represent the more ancient forms, which both Burmese and Atsi have lost. If we examine the situation in more detail, however, this interpretation becomes untenable. To demonstrate this, we must consider in some detail the regular correspondence among the tones in the more common situation in which all three languages

Table 1

	<i>Burmese</i>	<i>Atsi</i>	<i>Maru</i>
fat	shú	tshú	tsháu
dig	dú	dú	dáu
blood	θwêi	sùi	sā
egg	ù	ǔ	áu
enter	wín	vân	wà
mortar	shóun	tshúm	tshám
throat	cháun	khyùŋ	khyōŋ
flower	bân	bân	bīn
deer	shaʔ	tshat	tshéʔ
drink	θauʔ	šuʔ	šók
sew	chouʔ	khyup	khyáp
black	neʔ	noʔ	nòʔ

Table 2

<i>Burmese</i>	<i>Atsi</i>	<i>Maru</i>
-ei	-i	-it
-ou	-au/-ui	-uk

Table 3 Lexical items showing Maru stops

	Burmese	Atsi	Maru
die	θéi	šĩ	šit
leg	chéi	khyí	khyit
rice beer		í	it
skin	yéi		γit
water	yéi		γit
grandchild	myéi		myit
parrot	cēi	jì	jit
wash		chí	chit
grandmother		phyí	phyit
dung	chēi	khyi	khyit
in front	šèi	hĩ	γ'it
seed		jĩ	jit
horn	chóu	khyúí	khyúk
green, dark	nyóu	nyúí	nyúk
sweet	chóu		chúk
mushroom		mâu	múk
cry	ŋóu	ŋâu	ŋúk
nephew		áu	úk
widower	phóu	pháu	phúk
difficult		vúí	γúk
copulate	lôu	láu	lúk
sky	môu	mâu	múk
bone	yôu	vúí	γúk
dye	shôu	tsháu	tshúk
old (things), bad	shôu	tshâu	tshúk
smoke	khôu	khâu	khúk
steal	khôu	khâu	khúk
stab	thôu	tháu	thúk
grandfather	phôu	phâu	phúk
breast	nôu	nâu	núk
feather		mâu	múk
stop up	shòu		tshúk

have open or nasal syllables. Burmese /' (sometimes referred to as the 'first' Burmese tone) is low and somewhat rising; it corresponds either to Atsi /' (mid, short, falling) or /' (high, short, falling) and to Maru /' (low).⁴ Burmese /' ('second' tone) is high and somewhat falling; it corresponds to Atsi /' when appearing with verbs (including 'adjectives') but to /' (low, medium long, falling) on nouns, and to Maru /- (mid, level, long).⁵ Burmese /' ('third' tone) is short and falling, and it corresponds regularly to Atsi /' (high, even, long) and to Maru /' (high). These correspondences can be numbered 1, 2, and 3 following the convention in Burmese;

Table 4 Tone correspondences

	Burmese	Atsi	Maru
1.	Ŷ	Ŷ, Ŷ	Ŷ (low)
2.	Ŷ	Ŷ, Ŷ	Ŷ (mid)
3.	Ŷ	Ŷ	Ŷ (high)

the essential phonetic fact to note is that these appear in Maru as low, mid, and high tones, respectively. These relationships are summarized in Table 4.

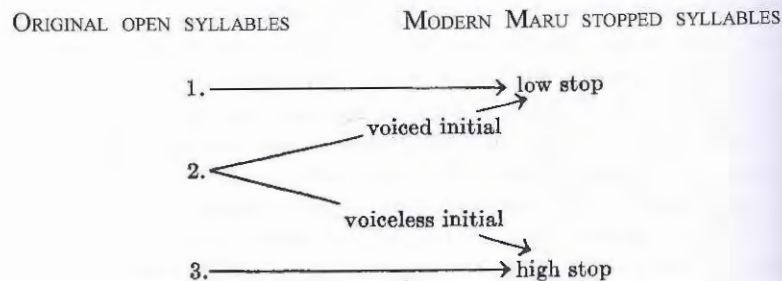
It will be noticed that the Burmese and Atsi items given in Table 3 exhibit the regular tone correspondences shown in Table 4, but the Maru items, being stopped, seem to be aberrant.

Burmese stopped syllables show no tonal contrasts at all; indeed, the stopped syllables are generally said to constitute the fourth Burmese tone, since they never contrast among themselves, but contrast collectively with all unstopped syllables. Similarly, there is no minimal contrast among the stopped syllables in Atsi, and all stopped syllables can be said to display an additional Atsi tone. Nevertheless, it is important to note that the stopped Atsi syllables do appear in two quite different allotones, for stopped syllables with voiced initials are pitched distinctly lower than stopped syllables with voiceless initials. In Maru, however, stopped syllables do fall into two contrasting tones. Phonetically, these sound very much like the allotones of Atsi stopped syllables, but in Maru they do not pattern consistently according to the initial consonant, and abundant minimal pairs force the recognition of two contrasting stopped tones (e.g. *phúk* 'widower', *phúk* 'grandfather'; *múk* 'mushroom', *múk* 'feather').

This leads to the crux of the problem. We might start by assuming that the Maru examples in Table 3 represent the older pattern, but we should be reluctant to assign more than two contrasting tones to the stopped syllables of the ancestral language. And yet, from two tones, it would be impossible to derive the more complex tonal patterning now found in the open syllables of the apparent cognates in Burmese and Atsi. It is this that forces us to doubt whether the original forms could have been stopped after all.

The ancestral language has to be credited with at least three contrasting unstopped syllable tones, in order to provide for the various tones in the consistently unstopped syllables of the modern languages. If we start with the hypothesis (contrary to that just considered) that the ancestral forms of the sets given in Table 3 had open syllables, and had the proper open syllable tone which would lead to the tones of Atsi and Burmese, can we predict the tone of the newly stopped syllables of Maru? We can do so by means of the following rules: (1) Forms which fall into tone set 1 (i.e. lead to Burmese /' and to Atsi /- or /') usually give rise to the low tone in Maru; but with the vowels shown in Table 2, they result in a low stopped tone instead (see sets glossed in Table 3 as 'die, leg, rice beer, skin, water, horn,

green, sweet, mushroom, cry, nephew, widower, difficult'). (2) Syllables of tone set 3 (which lead to Burmese /ˈ/ and to Atsi /ˈ/) usually give rise to a high tone in Maru, but with these same vowels they result instead in a high stopped tone (see sets glossed in Table 3 as 'in front, seed, breast, feather, stop up'). (3) Syllables of tone set 2 (which lead to Burmese /-/ and Atsi /ˈ/ or /ˈ/) usually result in the Maru mid tone, but with these same vowels they split along lines reminiscent of the Atsi rule for allotones. (4) When the syllable derived from original tone 2 begins with a voiced initial, the tone falls together with the low stopped tone derived from the older open tone 1 (see sets glossed in Table 3 as 'grandchild, parrot, copulate, sky, bone'); but when the syllable begins with a voiceless initial, it falls together with high stopped syllables deriving from older open tone 3 (see sets glossed in Table 3 as 'wash, grandmother, dung, dye, old, smoke, steal, stab, grandfather'). Thus, the three open tones are regularly reduced to the two stopped tones of Maru, a situation readily summarized in diagrammatic form:



By recognizing the Maru stops which follow these vowels to be new, we simplify the comparisons among the three languages in one other way. Somehow we must explain the presence of the two contrasting stopped tones of Maru. We might suppose that this contrast is an old one which has been lost in Burmese and Atsi, but by recognizing these stops as new, we can see that their development alone would have been enough to break up an old allophonic pattern into a new phonemic contrast. If we imagine that an earlier form of Maru had the same allophonic variation as that found in present day Atsi stopped syllables (with low pitch in syllables having voiced initials and higher pitch in syllables having voiceless initials), then this closure of syllables would have broken up the older pattern, since the tone on some of the newly stopped syllables became high or low without influence of the initial. All syllables derived from tone 1 became low regardless of the initial, and syllables derived from tone 3 became high. A contrast was then introduced where none had existed before. Indeed, OTHER stopped Maru syllables which ARE cognate with stopped syllables in Burmese and Atsi do tend to be low when having voiced initial but otherwise tend to be high, suggesting an earlier more pervasive pattern.

The hypothesis that certain final stops of Maru are intrusive, therefore, results in a far simpler historical interpretation than does the opposite hypothesis. The

ancestral language can be assumed to have had but a single stopped tone and no more open syllable tones than are found in the modern languages. The tones of the modern languages can be unambiguously derived from simple reconstructed forms. Moreover, once these intrusive stops are recognized as necessary, their phonetic shapes can be seen as not at all unreasonable. A final velar stop was introduced only after high back vowels, very likely indeed after a vowel glide which moved toward the high back position. An apical stop was introduced only after a high front vowel, which may have included a glide toward high front.

Two conclusions would seem to be warranted: (1) Until each individual case is carefully investigated, we cannot maintain the easy assumption that the forms in Sino-Tibetan languages which have final stops are necessarily more conservative than cognates lacking the stops; and (2) without a full understanding of the tones of the various languages, any attempt to understand their historical relationships is foredoomed to serious limitations.

Notes

- 1 This paper represents a fragment of a general comparative study of the subgroup of Tibeto-Burman to which Burmese belongs. All the data given here were collected from native speakers while I was a lecturer at the University of Rangoon under the Fulbright Program in 1959 and 1960. I have worked upon the data at scattered intervals since then, and I am particularly grateful to the Center for Advanced Studies in the Behavioral Sciences in Stanford, California, which afforded me time to analyze my materials, and to a grant from the Faculty Research Fund of the Horace H. Rackham School of Graduate Studies at the University of Michigan, which provided funds for research assistance. William Gedney read an earlier draft of this paper; the present version incorporates most of his many thoughtful suggestions.
- 2 The term 'Kachin' is subject to confusion since the Jinghpaw language is often referred to as 'Kachin proper', although it is a more remote member of the Tibeto-Burman family and lacks any specially close ties to Maru or to Burmese.
- 3 The transcription used for Burmese follows closely that used by William Cornyn in his *Outline of Burmese grammar*, Language Dissertation No. 38, Supplement to *Lg.* 20:4 (1944). The transcriptions for Atsi and Maru were devised by me and are very much alike. Both Atsi and Maru have stops and nasals in three positions, as well as two types of affricates /p t k ts c/. In each of these five positions, stops and affricates may be either voiceless aspirated (/pʰ/ etc.), glottalized (/pʷ/ etc.), or plain voiced (/b/ etc.) Nasals may be either plain (/m/ etc.) or glottalized (/mʷ/ etc.). Labials and velars may be followed by a 'medial' /y/. Other initials include /s š h v l ʰ y/ in Atsi, and /s š y w h ɣ/ in Maru. Both Atsi and Maru have five simple vowels. Atsi supplements these with the diphthongs /ai au ui/, while Maru has /ai au oi/. Final stops and nasals occur only after the simple vowels, and in Maru there are severe limitations upon the freedom with which vowels combine with final consonants. The cognate correspondences among the initials of the various languages have been worked out in considerable detail but are not particularly relevant to the point at issue here. The reader is asked to accept, without lengthy discussion or proof, the cognate status of the initial consonants and of all vowels except the particular three which became stopped in Maru. The correspondences among the tones are more crucial to the argument of the paper and will be described more fully in the text.
- 4 The presence in Atsi of two tones corresponding to a single tone in Burmese and Maru is an unresolved puzzle. It may be necessary to assume an extra tone in the original

language to account for the Atsi tones, but for present purposes they can be considered together.

- 5 It may seem odd to base alternative tone correspondences upon a syntactic difference, as I have done in Atsi. Although my data on Atsi syntax are not complete enough for me to make a definitive statement, the situation seems to have developed somewhat as follows: Atsi verbs seem always to require a suffix and my informant was reluctant to pronounce a verb base without a suffix. Nouns, on the other hand, were readily pronounced in isolation. If we imagine an older Atsi tone to have corresponded consistently to the Burmese second tone, then nouns bearing this tone became Atsi /'. Verbs having this tone, however, fell together tonemically with /', which otherwise corresponds to the first Burmese tone. As a result, no verbs in Atsi as spoken by my informant bore the tone /'.

COLLOQUIAL CHIN AS A PRONOMINALIZED LANGUAGE

Eugénie J. A. Henderson

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IT is over 100 years since Brian Houghton Hodgson was persuaded by what he described as 'great peculiarities in the use of the pronouns'¹ in certain of the languages of the southern Himalayan region to 'divide the Himalayan races primarily into two groups, distinguished by the respective use of simple or non-pronomenalised [*sic*], and of complex or pronomenalised languages'.² This method of classification was taken over by Sten Konow in the third volume of the *Linguistic Survey of India* and has been widely accepted by linguists since that time. 'Pronominalization' has been taken to mean pronominal usage of a certain kind, particularly within the verbal complex, and has on the whole been regarded as a non-typical feature of Tibeto-Burman languages, probably to be accounted for by alien influences, and restricted, within the Tibeto-Burman family, to the languages grouped together by Konow under the name 'Himalayan'.

The Kuki-Chin languages are described by Konow as belonging to the Burmese branch of the Tibeto-Burman family. So far as I am aware, no one has ever suggested classing them as 'pronominalized' in Hodgson's sense, but I have been interested to find that my Chin material, collected in the field in 1954, exhibits features closely akin to those regarded as peculiar to the pronominalized languages. Most of these features are not proper to what I shall call 'formal literary style', which accounts for their absence in the texts on which Konow's classification was based. They are almost entirely lacking in my own narrative texts, except in the passages of direct speech where a more informal style of discourse is felt appropriate.

In order to assess the degree to which colloquial Chin may be regarded as a pronominalized language, it is necessary to recall what has been meant by the term in the past.

Hodgson drew attention to a number of features, the presence of which might be regarded as a mark of 'pronominalization' in the language concerned. Such features may be summarized as follows:

- 'marks of genuine inflection' in the pronouns³
- the frequent occurrence of pronominal forms at the end of the sentence⁴
- the 'reduplication' of the first and second personal pronouns in verbal constructions⁴
- the use of conjunct and disjunct pronominal forms⁵
- the prefixation and/or suffixation of conjunct pronominal forms.⁵

Konow noted the use of 'short forms of personal pronouns as prefixes'⁶ (*d, e*), and 'a tendency to distinguish the person of the subject by adding pronominal suffixes to the verb, so that a kind of regular conjugation is effected' (*b, e*).⁷ In addition, he pointed out that (*f*) 'dual' pronominal forms,⁸ and (*g*) inclusive and exclusive forms of the first person plural⁹ are frequently found in pronominalized languages. More recently, in the latest edition of *Les langues du monde*, a further feature has been commented upon, namely, (*h*) the absence of pronominal forms to mark the third person as subject.¹⁰

Colloquial Tiddim Chin usage in regard to these eight pronominalizing characteristics is set out below:¹¹

(a) Marks of inflection in the pronouns

The examples Hodgson gives from Dhimal show vowel and consonant alternances, e.g. *ka, keng, kangko* 'I, me, of me'; *na, neng, nangko* 'you, you, of you'; *wa, weng, oko* or *wanko* 'he, him, of him', etc.¹² In Tiddim Chin the alternance is tonal. There are two mutually predictable forms of every noun and pronoun, which may be regarded as the expression of *direct* and *oblique* case. The alternance is perfectly regular, and is as shown below:

<i>Direct case</i>		<i>Oblique case</i>
Rising tone	<i>alternates with</i>	Falling tone
Falling tone	" "	Level tone
Level tone	" "	Rising tone.

The following examples demonstrate how this tonal inflection operates for the disjunct pronominal forms. It will be observed that there are alternative forms for some of the pronouns.¹³

<i>Direct case</i>		<i>Oblique case</i>
<i>1st pers. s.</i>	/kei, /kei_ma?	\kei, /kei_ma
<i>2nd pers. s.</i>	/naŋ, /naŋ_ma?	\naŋ, /naŋ_ma
<i>3rd pers. s.</i>	ǎ_ma?	ǎ_ma

Direct case

1st pers. p. (incl.) /ei, /ei_tɛ, /ei_ma?, /ei_ma:u

1st pers. p. (excl.) \kou, \kou_tɛ, \kou_ma:u

2nd pers. p.

(missing in material to hand)

3rd pers. p.

ǎ_ma:u, ǎ_ma:u_tɛ

Oblique case

\ei, /ei_tɛ, /ei_ma, /ei_ma:u

\kou, \kou_tɛ, \kou_ma:u

ǎ_ma:u, ǎ_ma:u_tɛ

(b) Frequent occurrence of pronominal forms at the end of the sentence

In Tiddim Chin there is a sharp contrast here between colloquial and formal literary usage. Sentences in formal literary style almost invariably end with a verb followed by a particle, never with a pronominal form. In colloquial style final pronominal forms abound. This is best illustrated by comparing literary and colloquial usage side by side, as follows:

<i>Formal literary style</i>		<i>Colloquial style</i>
(pron. prefix + verb + particle)		(verb ± pron. suffix)
kǎ_pai \hi	I went	ṽpai \iŋ
nǎ_pai \hi	you went	ṽpai_tɛ?
ǎ_pai \hi	he went	ṽpai
ṽpai \hi	we (incl.) went	ṽpai \haŋ
kǎ_pai u? \hi	we (excl.) went	ṽpai \uŋ
nǎ_pai u^hi	you (pl.) went	ṽpai u?_tɛ?
ǎ_pai u^hi	they went	ṽpai u?

Compare also the literary *kǎ_pai/di:ŋ\hi* 'I will go', etc., with the following colloquial forms:

ṽpai /niŋ	I will go
ṽpai ni_tɛ?	you will go
ṽpai in_tɛ?	he will go
ṽpai \ni	we (incl.) will go, i.e. let us go
ṽpai \nu:ŋ	we (excl.) will go
ṽpai nü_tɛ?	you (pl.) will go
ṽpai un_tɛ?	they will go

In formal literary style negation is accomplished by the interpolation of the word /kei between the verb and the final particle, e.g. *kǎ_pai /kei \hi* 'I did not go'. In colloquial style a negative pronominal form is frequently used, which was felt by my informants to be a fusion of /kei and the pronominal suffix found in affirmative sentences. Thus we have *ṽpai \in* 'Go!' (Singular) but *ṽpai \ken* 'Don't go', which was said by my informants to be 'for /kei \in'. See also:

ṽpai /keŋ	I didn't go
ṽpai /kei_tɛ?	you didn't go

ṽpai /kei	he didn't go
ṽpai \xaŋ	we (incl.) didn't go
ṽpai /kei \uŋ	we (excl.) didn't go

In other similar constructions we find forms which may be interpreted as a fusion of *le*² 'if' with a pronominal suffix. Comparison with literary usage is of particular interest here since formal style demands that a special form of the verb be used before *le*². Chin verbs are inflected, having two alternating forms like nouns and pronouns, but the manner of inflection is quite different. The verbal inflection may be effected by variations in tone, vowel, final consonant, or length, or by certain combinations of these. According to the grammatical contexts in which it is used, one form of the verb may be regarded as the exponent of indicative, the other of subjunctive mood. In literary style the subjunctive form of the verb is required in constructions ending with the particle *le*². In colloquial style, on the other hand, the indicative form is used, and the sentence is closed by a pronominal suffix, sometimes incorporating the particle, sometimes preceded by it. Compare for example:

Formal Literary Style		Colloquial Style	
(pron. prefix + verb (subj.) + particle)		(verb (indic.) + particle ± pron. suffix, or verb (indic.) + 'fused' suffix)	
kǎ \pai le ²	if I go	ṽpai \leŋ	
nǎ \pai le ²	if you go	ṽpai \le te ² , ṽpai \le cin	
ǎ \pai le ²	if he goes	ṽpai le ²	
ĩ \pai le ²	if we (incl.) go	ṽpai \le :əŋ	
nǎ \pai u ² le ²	if you (pl.) go	ṽpai \le u ² cin, ṽpai \le u ² te ²	
ǎ \pai u ² le ²	if they go	ṽpai (u ²) le ²	

(c) Reduplication of first and second personal pronouns in the verbal complex

There is no parallel in my Chin material to this feature, which appears to be peculiar to Dhimal. Hodgson's examples include such forms as *kyel hin kyel* 'we laughed', *nyel hin nyel* 'you (pl.) laughed', beside *ubal hin* 'they laughed'.¹⁴

(d) The use of conjunct and disjunct pronominal forms

The Tiddim Chin disjunct pronominal forms have already been listed under (a). In common with certain other Tibeto-Burman languages not classed as pronominalized, such as Karen, Chin has a series of short pronominal prefixes, which may be affixed to either nouns or verbs in formal style, and to nouns only in colloquial style. They are:

	Singular	Plural	
1st Pers.	kǎ-	(incl.)	ĩ-
		(excl.)	kǎ- (with suffix u ²)

	Singular	Plural		
2nd pers.	nǎ-	nǎ-	(" " ")	
3rd pers.	ǎ-	ǎ-	(" " ")	

Also to be regarded as conjunct are the pronominal forms which follow the verb in colloquial style, e.g. \iŋ, /niŋ, \ni, \nu :ŋ, te², cin, \uŋ, /keŋ, \xaŋ, etc.

(e) Prefixation and/or suffixation of conjunct pronominal forms

As has been amply demonstrated already, colloquial Chin uses both prefixed and suffixed pronominal forms. Hodgson and others after him have remarked upon the variations in usage in this matter in the Tibeto-Burman field as a whole. Hodgson cites the Kiranti language as prefixing nouns and suffixing verbs.¹⁵ This is also true of colloquial Chin, but not of literary Chin, which prefixes both nouns and verbs. A Tiddim Chin verb may not, according to my informant, have both pronominal prefix and suffix at the same time. Hodgson also notes that in some languages both disjunct and conjunct forms may be used together 'prefixally', e.g. Bodo *angni apha*, Vayu *ang upa*, Dhimal *kang apha* or *kapa* 'my father'.¹⁶ He points out the similarity here to Kuki (Chin), which may use parallel constructions.

(f) The use of dual pronominal forms

I have not discovered any such forms in my material.

(g) The use of both inclusive and exclusive forms for the first person plural

Such forms occur in Chin, and have been indicated in the preceding sections.

(h) The absence of pronominal forms to mark the third person

Here one may refer back to forms already quoted, such as ṽpai 'he went' beside ṽpai \iŋ 'I went', ṽpai te² 'you went'; ṽpai le² 'if he goes' beside ṽpai \leŋ 'if I go', ṽpai \le cin 'if you go'.

From the foregoing examination we find that out of eight features regarded as characteristic of the pronominalizing languages, colloquial Tiddim Chin, even in such relatively scanty material as is available, can provide reasonably close parallels for six. It appears not unlikely that improved knowledge of the Chin languages and of others equally remote geographically from the so-called pronominalized groups will bring further similarities to light. In this event linguists may be obliged to conclude that, contrary to what has often been supposed, pronominalization is after all a genuine Tibeto-Burman family trait.

Notes

- 1 *On the Kocch, Bodo and Dhimál tribes*, Calcutta, 1847, 116.
- 2 Footnote to the reprint of 'On the Kocch, Bodo, and Dhimál tribes', in *Miscellaneous essays relating to Indian subjects*, I, London, 1880, 105. Earlier references are to be found in the essay 'On the physical geography of the Himalaya', written in Darjeeling in 1846, and later published in *Selections from the Records of the Government of Bengal*, xxvii, Calcutta, 1857, and in the revised reprint in this same volume of a paper on the 'Origin and classification of the military tribes of Nepal', originally read to the Bengal Asiatic Society in 1833.
- 3 *On the Kocch, Bodo and Dhimál tribes*, Calcutta, 1847, 113. 'The declension of the pronouns seems to be the least imperfect part of the structure of the Bodo and Dhimál tongues, and in the latter exhibits throughout marks of genuine inflection.'
- 4 *ibid.*, 116. 'There are two great peculiarities in the use of the pronouns in these tongues; one is, that in both languages the pronouns frequently stand as the last word in the sentence; and this whether they be personal or possessive. The other peculiarity is confined to the Dhimál, and consists in the reduplication of the first and second persons. . . .'
- 5 'Comparative vocabulary of the languages of the broken tribes of Népal', *JASB*, xxvi, 1857, 429 ff., 481; *ibid.*, *JASB*, xxvii, 1858, 393 ff., 439 ff.
- 6 *LSI*, iii, 1, 276.
- 7 *LSI*, iii, 1, 179.
- 8 *ibid.*, 179.
- 9 *ibid.*, 179.
- 10 A. Meillet and M. Cohen, *Les langues du monde. Nouvelle édition*, Paris, 1952, 558-60. 'Le trait distinctif de ces langues est d'inclure les pronoms personnels dans le verbe, sous des formes diverses de préfixes et de suffixes. Aucune ne marque le pronom de la 3^e personne sujet; en dehors de ce fait, chaque parler a ses règles propres, et ils ne pratiquent pas tous cette inclusion au même degré.'
- 11 The Chin illustrations in this paper are all taken from the Tiddim Chin (Kamhau) dialect, since I have more material to draw upon in this dialect than in any other. Examples are given in phonetic transcription as the orthography does not always indicate such relevant phenomena as tone and vowel length. The transcription will be largely self-explanatory to those familiar with the alphabet of the International Phonetic Association, but it may be helpful to point out that the symbol ~ is used to mark the vowel of a syllable which is short and unstressed in relation to the syllable immediately following.
- 12 *On the Kocch, Bodo and Dhimál tribes*, Calcutta, 1847, 113-14.
- 13 Certain explanatory notes of the examples are called for. It will be seen that where the pronominal form has more than one syllable the last syllable only is inflected, i.e. /ei alternates with /ei/, but /ei/te with /ei\te/, etc. A short syllable closed by a glottal stop is usually pronounced on a low pitch, and is accordingly preceded in the phonetic transcription by the symbol ~. Functionally, however, this pitch is a realization of 'falling tone', as is clearly shown by its rôle in these examples. Level tone syllables may not be closed by a glottal stop, so that this sound does not figure in, for example, the oblique case of the third person singular, although present in the direct case. My informant was aware that the direct case forms of the first person plural exclusive were 'irregular' in his usage. He believed that the 'expected' forms, /kou/, /kou\ma:u/, etc., were to be found in the neighbouring and very closely akin Teizang dialect.
- 14 *On the Kocch, Bodo and Dhimál tribes*, Calcutta, 1847, 116.
- 15 'Comparative vocabulary of the languages of the broken tribes of Népal', *JASB*, xxvii, 1858, 389.
- 16 *ibid.*, *JASB*, xxvi, 1857, 481.

PRONOMINAL VERB MORPHOLOGY IN TIBETO-BURMAN

Jim Bauman

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0.0. Introduction

The most commonly proffered typological evaluation of Tibeto-Burman (T-B) as a language family characterizes it as consisting of monosyllabic roots strung together into higher syntactic organizations in an analytic manner, there being little if any derivational or inflectional morphology. It is also characterized as semantically terse, expressing few redundancies within its structure. Skirting the issue of whether this description is synchronically accurate or not, the proponents of this view have used it as a springboard from which questions of wide relationship and diachronic development have been launched. It certainly constitutes a concise heuristic principle, and in early comparative linguistic work proved useful in circumscribing the field of T-B, separating it off from neighboring families such as Austroasiatic with its disyllabic stems exhibiting a pervasive derivational morphology; Indo-Aryan with its complex system of noun and verb classification seen in its various declensions and conjugations, its syncretic inflections, and its complicated system of agreement and concord relations; and Altaic with multi-syllabic roots, a multitude of agglutinative affixes on both nouns and verbs some of which express agreement relations, and verb stem alternation associated with tense distinctions.

In the pages to follow, a specific problem in T-B will be examined, concerning the appearance in a minority of languages of a very complex verbal morphology. Two contrasting opinions will be probed, each purporting to account for the origin of this complexity. The dominant opinion, in keeping with the spirit of the preceding typological assessment of the family, proposes some non-native source from which T-B borrowed this structure. The other, much less advocated stance rejects this common stereotype of T-B, proposing instead that the verb morphology in question reverts to a feature of the proto-language.

The type of verb structure under consideration shows elaborate paradigms of person/number agreement with the subject, and often object, of the sentence. The details differ from language to language, but within this framework, most languages will show agreement for singular, dual, and plural numbers in all three persons, as well as for inclusive and exclusive 1st persons in the dual and plural. For the most part the affixes involved are suffixed either directly to the verb stem or to some type of tense/aspect auxiliary. In some languages prefixes are also used. The syntax of the verb with respect to these affixes varies widely, some languages prefixing some markers, suffixing others; some splitting subject from object affixes across a tense or aspect marker; some prefixing for certain semantic relations, suffixing for others; some allowing agreement only for certain tenses; etc. This phenomenon has following Hodgson's¹ (1856) usage been referred to as verb pronominalization or just simply as pronominalization. I will continue to use this term since it is solidly entrenched in over one hundred years of literature, even though it is potentially confusable with certain recently proposed transformational processes.

1.0. History of thought regarding pronominalization

The next section sets itself the task of tracing the history of the pronominalization problem in the literature. Bearing in mind the preceding statement of the overall simplicity in which T-B was and is conceived, most of the early explanations of pronominalization were allied to the first position of finding some outside source on which these languages modeled their verb morphology. Brian H. Hodgson, however, was exceptional in seeing the feature as native, although within a much wider network of relationship than can be sustained today.

1.1. Brian H. Hodgson

Hodgson's² post as British Resident at the Court of Nepal with the India Office for over 20 years (1821-1843) and his later unofficial residence at Darjeeling for about 10 years (1848-1857), provided him the opportunity of actively collecting materials dealing with the native languages and cultures. During this time, Hodgson collected many of the materials that, up until the last few years, constituted our only sources of information about several languages of the area. It was apparent then and remains true today that in most ways he was an accurate and thorough recorder of whatever he heard.³ His material consequently remains valuable. Hodgson's linguistic interests ranged very widely and consequently we have information on tribes extending from northern Tibet to Ceylon and southern Burma.

Some publications under his name, however, are materials submitted to him by other investigators of languages located in Burma and eastern Assam (Hodgson 1849a, 1850, 1853a) and in central and southern India (Hodgson 1848, 1849b, 1856). All other materials were personally gathered from native speakers of the languages. For some of these languages, namely Bodo and Dhimal (1847) and Hayu and Bahing (1857-1858) he supplied full grammatical sketches and

extensive lexical materials. For others only random grammatical notes and partial vocabularies are available.

1.11. Classification of Tibeto-Burman

Hodgson's primary purpose in amassing such copious data was to substantiate his contention that all of the aboriginal population of British India including Nepal, Burma, Indo-China, and China proper was ultimately related, though the web of relationship was somewhat diffuse even in his own mind. He conceived of three major "stocks" (1847, 1849c) into which this population was subdivided: a Tibetan stock which included many of the languages of the sub-Himalayas and northern Assam; a Chinese stock to the east of this region, excepting the languages of the Assam valley; and a Tamulian stock comprising all the native languages of India including those in the Assam valley and those of the forested Indian border areas of Nepal, Sikkim, and Bhutan. These stocks merge families now felt to be separate, such as Dravidian and Munda within Tamulian, and also transect now recognized families, specifically T-B and Austroasiatic. The T-B languages seen as Tamulian include many of the Barish⁴ languages of Assam as well as the East Himalayish group of Nepal; the Tibetan members comprise Tibetan and its dialects as well as the Gurung branch of central Nepal; and the Chinese stock includes Chinese and the many T-B languages of Burma and Thailand. Even though Hodgson does not state the reasons for assigning one language or another to different stocks, it would seem from the evidence available to him that he depended most heavily on the syllabic structure of the word. Tamulian, including the T-B languages considered as such, shows words susceptible of a polysyllabic analysis, while the root structure of Chinese type languages is decidedly monosyllabic.⁵ The Tibetan stock took in those languages which were predominantly monosyllabic in root structure, but which also evidenced more complicated morphological processes, such as verb stem alternation. Hodgson yields a clue to his reasoning in his opinion "that the Bodo and Dhimal languages belong pretty evidently to the aboriginal Indian tongues [i.e. Munda and Dravidian] and not to the Indo-Chinese or monosyllabic" (1847:157).⁶

Several years later, however, Hodgson (1850) had corrected his original groupings. Now he finds "one type of language prevailing from the Kali to the Koladan, and from Ladakh to Malacca, so as to bring the Himalayans, Indo-Chinese, and Tibetans into the same family" (1850:28). And, suggesting how he has arrived at this re-evaluation, he points to "syntactic poverty and crudity and etymological refinement and abundance [as] the characteristics of this vast group of tongues" (1850:33). He also presumes that "grammatical peculiarities" will not prove especially useful as diagnostics of relationship since they are "apt to be excessively vague or else palpably borrowed" (1850:33). His methods of linguistic comparison had now channeled into a heavy reliance on lexical, as opposed to morpho-syntactic evidence, and neither he nor his successors have ever swerved too far from this course.⁷ "A common stock of primitive roots and serviles . . . indicates unmistakably a common lineage and origin among the several races to which such stock belongs."

(Hodgson 1853:33). It should also be noted, in reinforcement of an earlier argument, that Hodgson had in effect negatively christened his neonate Tibeto-Burman as possessing no interesting syntax or morphology to whet a comparativist's appetite. This view also persisted under his powerful influence, until Conrady (1896) partially dispelled it by demonstrating the archaic nature of the prefixes of written Tibetan along with some of the morphological categories they probably represented.

1.12. *The Turanian hypothesis*

In spite of this hierarchical redistribution of languages and the postulation of T-B, Hodgson still firmly believed in the larger pattern which enclosed all of central and eastern Asia's languages, excepting those of Indo-European lineage. This hypothetical construct he called Turanian. "Tamulians, Tibetans, Indo-Chinese, Chinese, Tangus, Modgols, and Turks are so many branches of another single family, viz., the Turanian" (1849d:3). This quote demonstrates his early position; his consistency is maintained seven years later after he had rearranged his subgroups. "Turanian affinities are not to be circumscribed by the Deccan, nor by the Deccan and Central India, nor, I may here add, by the whole continent of India, but spread beyond it into Indo-China, Himalaya, and the northern regions beyond Himalaya" (1856:127). In an earlier paper Hodgson (1853b) also attempted the demonstration of a relation between the languages of the Caucasus and Mongolian (intending mostly Tibeto-Burman) and, even farther afield, Pelasgian (intending Malay and Tagalog); though properly speaking he excluded these other groups from Turanian.

It was by this Turanian category that Hodgson chose to explain many of the apparent similarities between widely separated members of the family. In the last and most complete statement of his position, Hodgson (1856) lists a series of facts, one of these being verb pronominalization, which, from his point of view, seem to offer evidence of genetic relation between his Turanian languages, specifically those now thought to be separate and unrelated. From an explanatory standpoint, this wide stance allows him to explain characteristics at variance with the overall typological picture of the language subgroup as merely remnants of a more archaic stage of the language, showing up in fuller or even unaltered form at some other point within Turanian.

1.121 GENERAL TURANIAN CHARACTERISTICS

Taking the position of T-B as central, rather than Nilgirian (Dravidian) as Hodgson does, the following points of resemblance with other language families within Turanian are made:

1. Proliferation of sibilants in T-B and in Dravidian (1856:131);
2. Numeral classifiers in T-B and also in Dravidian (131);
3. Nominalization of adjectives by suffixation in Tibetan, Himalayish, and Dravidian (135);

4. Proliferation of gerundial or participial verb forms in Tibetan and Himalayish, but especially in Mongolian and Manchurian (140);
5. A tendency toward double causative verbs in Himalayish and literary Dravidian⁸ (141);
6. General absence of a passive construction in T-B, Altaic, Hill Dravidian,⁹ and Munda (141);
7. Low reliance on morphological tense distinctions with a correspondingly greater reliance put on temporal adverbs to distinguish relative time—a feature common to all Turanian languages¹⁰ (141-2);
8. The presence of a transitive or intransitive sign following the verb root in Himalayish, Altaic, Finno-Ugric, and in remnant form in Dravidian¹¹ (137-8).

Besides these grammatical correspondences, and the others described below, which Hodgson submits as demonstrating his Turanian hypothesis, he also suggests that many lexical correspondences provide confirmation. Here, however, as is often the case when wide comparisons are attempted, the sound laws for individual languages had not been worked out for shallower time depths, which immediately makes any conclusions suspect. Even so, much of Hodgson's grammatical evidence remains intriguing, even that which submits to alternative explanation, such as (2) the numeral classifiers which probably diffused westward out of Sino-Tibetan and Tai (Emeneau 1956, 1965); (6) the absence of a passive which may be implicationally related to characteristics of ergative type languages; (3) adjective nominalization, an expectation in verb final languages; (5) double causatives which possibly originate in Indo-Aryan (cf note 8); and (7) the relative unimportance of tense distinctions which is possibly more typical of the world's languages (with the exception of Indo-European) than its opposite. I leave the significance of these interlinguistic parallels an open question, however, since other non-genetic explanations aside, the cumulation of all these factors certainly could inspire the view that there may have been historical connections between these families. We may be observing traces of an older, now deteriorating linguistic area, especially since most of Hodgson's resemblances between T-B and other families occur in the western border languages (most notably Himalayish). Additionally, there existed the trading and cultural area of northern Tibet and western China which included Indo-European Tocharians and Khotanese, Mongolians, Turkic Uigurs, Manchurians, and Sino-Tibetans, all presumably influencing and being influenced by their neighbors.¹²

1.122 PRONOMINAL CHARACTERISTICS OF TURANIAN

The remainder of Hodgson's evidence describes parallels between the pronominal systems of his Turanian languages, which overall are typified as "greatly developed."¹³ These are as follows:

9. Separate forms for personal (independent) and possessive forms of pronouns (1856:135);

10. Separate inclusive and exclusive forms for 1st person pronouns (135);
11. Different sets of possessive pronouns: one used disjunctively (i.e. as a free form) and the other conjunctively (i.e. as an affix) (135);
12. Distinction between dual and plural number categories (137);
13. Verb pronominalization¹⁴ (128, 135, 139, 143);
14. Prefixation of noun possessive forms and suffixation of verb pronominal affixes¹⁵ (136);
15. A prevailing verb structure consisting of root + transitive/intransitive marker + pronominal suffix¹⁶
16. The morphological conflation of 2nd and 3rd persons in T-B (Newari) and Dravidian in opposition to 1st person forms (140).

Most of these characteristics are associated with pronominalized languages, but many other languages with simpler verbs also show the categories. With regard to pronominalization itself Hodgson notes that the Himalayish languages and Munda show the feature in fullest form while the other Turanian languages either lack it entirely or show much more impoverished forms of it. Specifically intending Dravidian he says, "Whether from non-development or from decomposition, the pronominalization is very imperfect on the whole" (1856: 137); with reference to Altaic, "The Mantchuric and Mongolic groups of tongues were long alleged to show no sign of pronominalization. It is now known that that was a mistake" (1856:139).

I have emphasized this section in part to counter a possible interpretation that Hodgson regarded pronominalization as perhaps due to the unidirectional influence of one language on another. As we will see later the Munda group of languages has often been proposed as a diffusional or substratal source of the pronominalization which appears in Tibeto-Burman. However, Hodgson's only mention of both groups, with reference to their jointly possessing the feature, is the following: "Kiranti, Vayu, etc., of Himalaya show a wonderful agreement with what Müller calls the Munda class of languages in Central India. In all these tongues alike not only the agents (singular, dual, and plural, and inclusive and exclusive of the two latter), but the objects are welded into the verb, thus showing the maximum of pronominalization" (1856:135). Nowhere does he propose a directionality of influence from one to the other.

1.2. *The Linguistic Survey of India (LSI)*

The period stretching from the last of Hodgson's linguistic writings in 1857-1858 to the beginning of the LSI in 1894¹⁷ paralleled the development of more rigorous approaches to comparison and reconstruction. The general tenor of the times stressed scientific accuracy, and, as a consequence, Hodgson's elaborate Turanian edifice became neglected. Wide relations lacked the necessary materials for an adequate scientific demonstration. Work in eastern Asia became more descriptive,

and what comparative work there was, explored what would have been to Hodgson only subgroups.

1.21. *Konow's assessment of T-B*

It was in this climate of opinion that Sten Konow, who had the task of editing all of the T-B materials received by the Survey and assembling a coherent system of internal classification, inherited the problem of Hodgson's pronominalized languages. Also due to the efforts of the Survey the number of pronominalized languages themselves increased with the recognition that Kanauri and other languages in Almora and farther northwest also showed the feature.¹⁸ This created two main groups in the Himalayas exhibiting this complex verb morphology and the associated complexity in pronominal categories. The newly discovered group became known as the Western Pronominalized branch and Hodgson's original group in eastern and central Nepal as the Eastern Pronominalized branch of Himalayan. The only other recognized T-B language with similar morphology was Namsangia Naga (cf note 35), a geographically far distant member of the Eastern Naga subgroup of southeastern Assam. A short sketch grammar appeared in 1849 by Robinson and was therefore known to Hodgson, who did not hesitate to include it as pronominalized (Hodgson 1856:128). The LSI however makes no mention of how this language would directly relate to the Himalayan group if at all, or how it might best be accounted for historically. The silence on this issue could partly stem from the inability of the Survey to collect any additional information from this area.

In any event Konow operating with a vastly increased corpus of T-B materials became convinced of how best the ancestor language might have looked morphologically and syntactically. Contrary to the procedure of simply abstracting from the synchronic language, however, he did take account (following Conrady) of the probable course of development in the historically attested languages, especially literary Tibetan. This led him to put less reliance on the traditional view that T-B must have been monosyllabic since Written Tibetan, many of the Bodo-Garo languages, and Kachin showed evidence of an elaborate prefix system at an earlier stage of development. He also advocated the position that Chinese, Tibetan, and other tonal languages developed their tonal systems from loss of these prefixes.¹⁹ He therefore viewed the proto-language as agglutinative rather than isolating and partly subgrouped on the basis of how the daughter languages respected or rejected these agglutinative affixes. His other important criteria for subgrouping were based on tones, classifiers, and the syntax of the negative marker.

Besides the many general T-B characteristics listed earlier, Konow suggested several more such as a decimal numeral system, absence of a relative pronoun, and syntactic methods of adjective comparison, which were clearly justified from his data. However, several other suggestions were certainly contrived,

forced out of the common 19th century prejudice that tribal languages were not very capable of forming abstractions. "Most Tibeto-Burman languages further evince a difficulty in forming words for abstract ideas . . . It has been common to draw attention to the fact that languages such as Tibeto-Burman are unable to distinguish between form and substance, because they do not possess form words, i.e., words which do not denote any substance or any material conception but simply the different ways of forming and arranging them in the mind" (LSI 3(1):5). In less biased sounding terminology, this simply indicates that T-B lacked derivational morphology and relied instead on compounding type processes.

But taking an additional metatheoretical step from this platform, Konow emphasized that the class of nominal elements in T-B took precedence over verbal categories; in other words, verbs and adjectives were only 'surface' syntactic phenomena; at some underlying stage they were to be regarded as nouns.²⁰ This point will be of some importance, since Konow used it to explain away the phenomenon of verbal agreement for person and number by prefixation, as seen especially in Kuki-Chin. By treating the verb prefix as a possessive pronoun modifying an underlying noun, he restricts the term 'pronominalization' to only suffixal occurrences of such markers, and in effect disassociates these languages from other pronominalized groups. In a later part of this paper (cf sec. 4.324), this view of affixation type as a critical factor in comparison will be challenged.

1.22. *The Munda hypothesis*

Returning now to the more central problem of accounting for the appearance in certain T-B languages of pronominal verb morphology in the face of a parent language which did not exhibit it, Konow fell back on Hodgson's notice of the similarity between Munda verb morphology and T-B pronominalization and forged a causative link between the two by appealing to the very popular late 19th century notion of the substratum. To quote his own statement:

"In such characteristics [complexity of pronominal categories and pronominal related morphology] the dialects in question have struck out lines of their own, in entire disagreement with Tibeto-Burman, or even Tibeto-Chinese principles. They have accordingly become modified in their whole structure. It is difficult to help inferring that this state of affairs must be due to the existence of an old heterogeneous substratum of the population, which has exercised an influence on the language. That old population must then have spoken dialects belonging to a different linguistic family, and the general modification of the inner structure of the actual forms of speech must be due to the fact that the leading principles of those old dialects have been engrafted on the languages of the tribes in question. Now it will be observed that all these features in which

the Himalayan dialects differ from other Tibeto-Burman languages are in thorough agreement with the principles prevailing in the Munda forms of speech. It therefore seems probable that Mundas or tribes speaking a language connected with those now in use among the Mundas, have once lived in the Himalayas and have left their stamp on the dialects there spoken at the present day."

(LSI 3(1):179 and 1(1):56)

It is this contention of a Munda substratum in T-B to explain pronominalization, which has been sustained by a majority of researchers. Consequently it is also the hypothesis which will be given most comment, first by making a detailed comparison of Munda and T-B pronominal verb morphologies and second by reviewing current opinion within Austroasiatic concerning the evolution of these structures in Munda.

1.3. *Other hypotheses*

1.31. *Morphological borrowing from Indo-European*

Besides Hodgson's view of pronominalization as progressing without interruption back to a common Turanian ancestral language and Konow's espousal of a substratal influence from Munda, two additional hypotheses have been advanced. The first of these professes the policy of *Les Langues du Monde* (Meillet and Cohen 1952), built on the detailed examination provided by Henri Maspero (1946). On the argument that the underlying syntax of the verb differs significantly between Munda and Himalayish, Maspero rejected the Munda hypothesis. But, presumably not feeling the evidence strong enough to warrant an internally motivated explanation, he instead proposed an influence out of Indo-Aryan based on the analogy of that family's conjugational system.

Cet emploi des pronoms affixés au verbe diffère de celui des langues munda en ce que les pronoms sont toujours employés pour leur valeur propre, et non pour rappeler des notions précédemment exprimées dans la phrase par des noms. Plutôt qu'à l'influence d'un problème de substrat munda, c'est probablement à celle des parlers aryens environnants et de leur conjugaison qu'il faut attribuer ces faits qui éloignent fort ces dialectes de la norme des langues tibéto-birmanes.

(Maspero 1946: 175-176; Meillet and Cohen 1952:560)

This position has also been affirmed by Egerod (1973) who sees T-B pronominal verb morphology as "very reminiscent of adjacent Indo-European," and suggests that "the probability of an original close relationship of the two families must be taken into account" (1973:503).

1.32. *Hypothesis of native origin*

The fourth and final position to be elaborated was, to my knowledge, first suggested by Eugénie J. A. Henderson (1957) in a short paper whose immediate purpose was the demonstration that the term pronominalization, in the sense of a packet of features typically found together in certain languages, was appropriate to the colloquial (though not literary) standard of Tiddim Chin. The actual data and points of agreement with the Himalayan languages will be discussed later; for now, however, it seems only appropriate to stress that the feature had by this time been acknowledged in four different groups of T-B languages:²¹ Western Pronominalized Himalayish, Eastern Pronominalized Himalayish, Eastern Naga, and Kuki-Chin. The implication of such widespread occurrences is suggested by Henderson.

It appears not unlikely that improved knowledge of the Chin languages and of others equally remote geographically from the so-called pronominalized groups will bring further similarities to light. In this event linguists may be obliged to conclude that, contrary to what has often been supposed, pronominalization is after all a genuine Tibeto-Burman family trait."
(1957:327)

With this tentatively offered proposal that Proto-Tibeto-Burman may have exhibited complex verbal and pronominal morphology not usually attributed to it, all the bases are effectively covered. We have the competing ideas of nativeness within a network of very wide relationship, substratal influence, borrowing, and nativeness at the level of T-B. No other possibilities seem forthcoming, with the doubtful exception of independent innovation wherever the feature appears.

2.0. *The Munda substratum hypothesis*

In an attempt to establish a plausible connection between the Munda family and the T-B Himalayan languages, Kuiper (1962) indicates that "even now the distance between the most northern point where Santali [Munda] is spoken and the area of Limbu (a Himalayan language) is not greater than about 130 miles" (1962:42). Following the Indo-Aryan occupation of the Ganges valley which separates these two languages today, groups of Munda speakers in the northern hills of the valley became separated from their more southerly main contingent. Subsequently, Munda continued to be spoken there until its speakers finally "gave up their own language and adopted Tibeto-Burman dialects" (1962:42). Kuiper offers a set of potential cognates between Munda and T-B to substantiate his claim of earlier contact. However, since he employs a scatter approach to comparison, taking his items from very widely flung T-B languages, many of which are not Himalayish at all, no sound correspondences can be set up. His appeal to verb pronominalization

as another indication only reiterates Konow's subjective impression, since he also provides no detailed comparison.

2.1. *The Munda pronominal system*

In fact it seems that the only attempt at a non-superficial comparison of the two pronominalized families by Maspero (1946), led to the denial of any causative relation between them. Maspero's conclusion, quoted earlier, hinged on his finding that the Munda and T-B verb were syntactically dissimilar. In Munda, object pronouns are directly incorporated into the verb. In other words, object affixes are not agreement markers, they are the only surface manifestation of the underlying semantics, while subject affixes are simply agreement markers with an optionally deletable independent subject pronoun. The situation in those T-B languages with both subject and object affixes differs in that both are agreement markers, with the possibility of having the independent pronouns in preverbal position.

Perhaps to explain this difference, it might be relevant to mention the absence of a true morphological system of case marking in Munda (Bodding 1929) in contrast to its general presence in T-B. In other words, since nominative and accusative forms of the independent pronouns are not distinguishable in Munda, there would be potential confusion if both occurred in independent noun phrases (assuming too that the relative order of the noun phrases is more or less free); disambiguation of role status has to be made in the verb. In T-B, however, ambiguities (which indeed do arise in the verb) are resolvable by different case markings on the independent pronouns or noun phrases. The issue will be re-aired shortly in discussing the probability of word order changes in Munda. The difference between the two systems, however, does seem to be significant, especially if it does involve other deep-seated facts about the languages.

2.2. *Comparison of Bahing and Santali*

Even on other grounds, however, there exist indications of important differences between the pronominalized verbs of Munda and T-B. In drawing the comparison I will restrict the discussion to one language from each family—Santali for Munda²² and Bahing for T-B.²³ Neither of these languages would necessarily best represent the system of their respective proto-languages. Nevertheless, I feel that since they exhibit to the maximum the number of distinctions possible, any truly Munda influenced structures would very likely show up in both.

2.21. *Independent pronouns*

In Chart 1 on the following page, the independent pronouns of both languages are compared. One of the striking incongruities of these two systems, which the chart reveals, is the presence of an alternate stem for Bahing possessive pronouns,²⁴ which fits in with the typical presence in T-B of a morphological system of case

Chart 1 Independent pronouns of Santali and Bahing

		Santali	Bahing	
			Subj.	Poss.
1	sg	iñ	go	wa
1	dl incl	alaŋ	gosi	isi
1	dl excl	aliñ	gosuku	wasi
1	pl incl	abo(n)	go-i	ike
1	pl excl	ale	goku	wake
2	sg	am	ga	i
2	dl	aben	gasi	isi
2	pl	ape	gani	ini
3	sg anim	uni	harem	a
	inam	ona		
3	dl anim	unkin	harem dausi	asi
	inam	onakin		
3	pl anim	onko	harem dau	ani
	inam	onako		

marking. (Hodgson very early pointed out separate possessive stems as a Turanian characteristic, partly on T-B evidence. Cf sec. 1.122.) Munda, on the other hand, typically lacks case markings. Therefore, to form the possessives in Santali the independent pronoun simply precedes²⁵ the head noun. The fact of this alternation in Bahing would seem to argue, therefore, that the pronominal categories in T-B would be of some age, and not copied from a Munda template. No reason is obvious for why a language would add two forms of a pronoun when the prospective model language makes do with only a single form.

Besides this one major difference, there is also the lack of correspondence between the presence of animate/inanimate gender of Santali and its absence in Bahing; the obvious number affixes for Bahing²⁶ (cf -*si* 'dual'; -*ni* 'plural') while only the 3rd person of Santali uses number affixes; and the non-1st person morphemes analyzable in the inclusive and exclusive forms of Bahing (cf -*i* 'inclusive' = *i* '2nd person, poss. stem'; -*ku* with probable 3rd person significance, as in *go-su-ku* '1st dual excl', *go-ku* '1st pl excl'). It is possible also that *wa-* the possessive exclusive stem is equivalent to the 3rd possessive root *a*. Its use then as the normal possessive of the 1st singular would represent the regularization of the paradigm, especially since closely related languages show a different root (cf Vayu (Hodgson 1857-1858) *ang* '1st sg poss' and *wathi* '3rd person'). The principles of constructing these forms are thus distinct, Santali being relatively unanalyzable while Bahing still shows the probable derivational path from some no longer productively used morphemes. In addition there are no obvious phonological correspondences between any of the forms.

2.22. Intransitive verb affixes

Even more indicative of the historical independence of T-B from Munda are the verb affix systems themselves. The following chart, of the intransitive verb paradigm, will be presented first. In this chart a distinction is made between *neuter* and *intransitive* affixes for Bahing. (The terms are from Hodgson.) Neuter affixes are used with a small set of intransitive verbs which from their structure seem to be derived from old causatives. In any event it is a lexically determined contrast.

Chart 2 Intransitive verb affixes of Santali and Bahing

		Santali	Bahing		
			Pres/fut.	Preterite	
			Intr.	Neuter	
1	sg	-iñ	-gna	-u	-ti
1	dl incl	-laŋ	-sa	-isa	-tasa
1	dl excl	-liñ	-suku	-isuku	-tasuku
1	pl incl	-bon	-ya	-iya	-ntayo
1	pl excl	-le	-ka	-ika	-ktayo
2	sg	-em	-ye	-i	-te
2	dl	-ben	-si	-isi	-tasi
2	pl	-pe	-ni	-ini	-ntani
3	sg	-e	-Ø	-a	-ta
3	dl	-kin	-se	-ise	-tase
3	pl	-ko	-me	-ime	-mtame

Syntactically, the Santali affixes are applied most commonly to the word immediately preceding the verb or to the final position in the verb following the "finite marker" (Bodding 1929:49). These affixes are only used with animate subjects in the active voice (however, Bodding also remarks that the subject marker can appear if there is an *underlying* animate subject not appearing on the surface, as even in a passive sentence, for example). In Bahing a subject marker will appear in a fixed position for every sentence.

A comparison of this chart with the independent pronouns of both languages shows that the Santali affixes are all easily derived from the free forms, showing typically the loss of the initial vocalic element (or of the entire first syllable of 3rd person forms), while the Bahing forms are sometimes less obviously derived or even suppletive (cf 1st sg intr -*gna* [-ŋa] with 1st sg *go*; 2nd sg intr -*ye* with 2nd sg *ga*; the 3rd person affixes have no relation to 3rd person free pronouns, since these latter have probably only recently developed). In addition the Bahing forms show a great deal of internal diversity. For example the neuter set calls to

mind the possessive set of independent stems (cf *-u* '1st sg neuter' with *-wa* '1st sg possessive'; *-i* '2nd sg neuter' with *i* '2nd sg possessive'; *-a* '3rd sg neuter' with *a* '3rd sg possessive') and also duplicates the subject affixes of transitive verbs used with 3rd person objects²⁷ (cf sec. 2.23). Another complication is the presence of a preterite set of affixes sometimes not easily relatable to the present/future set, even allowing for the assuredly temporal value to be assigned to the *t-* or *ta-* of these forms (cf 1st sg preterite *-t-i* (< *ta* + *i*) with *-gna* [-ŋa] or *-u* 1st sg affixes; 1st pl excl preterite *-k-ta-yo* with *-ka* '1st sg intransitive' where there is a discontinuity around the temporal element). It is quite probable then that there was some interaction, presumably phonological, between tense/aspect and pronouns which resulted in a morphological syncretism for these affixes. The morphological details will be explored at greater length in following discussions (cf sec. 4.3131, 4.321).

2.23. Transitive verb affixes

The final comparison relates to the respective treatments of transitive propositions. The Santali situation includes the placement of an object affix, either direct or indirect but not both, after the "verbal suffix" and before an optional possessive affix.²⁸ These forms are essentially identical to the subject affixes (however, the 2nd sg object affix is *-me*, cf 2nd sg subject affix *-em*); it is their order with respect to the root which unambiguously defines them as objects. Subject affixes, it will be recalled, either precede the verb root or occur as the final element of the verb phrase. The possessive affix functions as a possessive pronoun, though its use is optional. Again, the forms are phonologically identical to the affixal form of the pronoun but with the addition of a prefixed element *ta-* (for example, *-taben* '2nd dl possessive', cf *-ben* '2nd dl affix'); morphophonemic changes are possible, however (cf *-tiñ* '1st sg possessive' < *-ta* + *iñ*).

The Bahing data is much more complex than this relatively simple situation. It is charted on the following page.

The most interesting aspects of this transitive conjugation are the identical forms for the 2nd and 3rd person subjects with 1st person objects (2 → 1, 3 → 1)²⁹ and the 2nd person subjects with 1st or 3rd person objects (2 → 1, 2 → 3); the appearance of forms without any correspondants in the set of intransitive affixes, such as *-na* in '1 → 2' or *-ka* '1 pl excl → 3'; in the preterite forms, one of several consonants preceding the preterite marker *-ta*; and the seemingly reversed syntax of some forms, with the order subject-object varying with object-subject in the affixes. It would appear that some affixes are capable of shuffling some of their semantic features in different occurrences; for example, the suffix *-ni* has the meaning 2nd person plural object or 2nd person plural subject, but it confusingly also appears in preterite 2 → 3 pl forms making for complicated homophony, such that 'we saw you (pl)', 'you (pl) saw them', and 'they saw you (pl)' would share identical verb structure.³⁰ There are many other instances.

It would appear also that some rule of semantic priority operates to mark 1st person whether it occurs as subject or object in preference to 2nd person, and,

Chart 3 Bahing transitive affixes
Top half of cell: present/future form
Bottom half of cell: preterite form

Verb	1st		2nd		3rd	
	SR	DL	SR	DL	SR	DL
1st sg	SR					
	DL					
2nd	SR					
	DL					
3rd	SR					
	DL					

in turn, 2nd person takes priority over 3rd. There are many problems with this hypothesis, but whether it eventually holds up or not the very complexity of the conjugation sets it strongly apart from the relative straightforwardness of the Santali conjugation.

In evaluating all of the above data, from independent pronouns to affixes of transitive verbs it is apparent that the burden of accounting for the evolution of the Bahing system falls on the back of the Tibeto-Burmanist. In all points Bahing seems either equally or more complex than Munda, not only in the total number of morphological distinctions, but also in its highly involved and elaborate syntax. But to round out the arguments, we can also consider the impressive work by Pinnow in reconstructing Munda verbal morphology (1966) and the Austroasiatic pronoun system (1965).

2.3. *Munda and Austroasiatic*

It would seem that the contention of a Munda influence on T-B verb morphology would itself revert back to earlier stages of the language, most likely being itself a feature of the ancestral Proto-Austroasiatic. This presupposition is necessary because the time depth of the postulated contact with T-B must be fairly early, pre-dating the Aryan invasion and the split of early T-B dialects. However, on gross comparative evidence alone, it might be expected that the nearer we approach Proto-Austroasiatic the more we will have to accommodate the simpler morphological structures of the majority of the family. On the whole, Austroasiatic exhibits much the same overall pattern as T-B; a definite minority of its members show the complex pronominalization at issue, the majority are decidedly analytic in structure. Pinnow suggests the following explanation to account for this discrepancy in Austroasiatic between Munda on the one hand and Khmer-Nicobarese on the other.

This difference between the two branches . . . has its origin mainly in the fact that the two Austroasian groups belong to distinct linguistic leagues (Sprachbunde): The synthetic structure of Munda was strengthened by the proximity of Dravidian and Indo-Aryan languages, while the analytic structure of the Khmer-Nicobar languages was favored by the contiguity of the Thai, Kadai, Indonesian and also Burmese languages.

(1966:183)

2.31. *The proto-Austroasiatic pronominal system*

Pinnow then proceeds along regular lines of comparison to point out the probable archaic status of the three person categories, three number categories, and the inclusive/exclusive distinction for the independent series of pronouns, even successfully demonstrating the cognation of many of the phonological forms, thereby arriving at a set of probable reconstructions.

However, he feels the affixal forms along with the attendant morphological system, to be a secondary development within Munda. "In proto-Munda . . . the pronouns properly were independent, isolable free forms. The affix character of the pronouns, which were incorporated into the verb complex as subject or object respectively, is of more recent date" (1966:183). He also attempts a rationale for the syntax of the incorporated pronoun object of the verb, supposing an original SVO word order which is still mimicked by the order of affixes, the subjective pronoun immediately preceding the verb and the object pronoun following. At the stage of development where the word order changed to the present SOV pattern, the pronouns had already assumed affixal status and consequently did not participate in the general object phrase reorientation. Pinnow has found independent support for this hypothesis in a dialect of Kharia which maintains SVO word order in some circumstances. Going even further he expresses confidence in the assumption that the affixal realization of indirect objects and possessives as in Santali, which is very restricted over the entire Munda area, is not traceable to Proto-Munda.

In one last previously unmentioned particular, Pinnow records no instance of a special reflexive pronoun. In this respect again Bahing shows both a means of forming an independent set of reflexive pronouns (*wa-dwabo* 'I myself') as well as a verbal affix to express self-inflicted action (*-si-gna* 'I verb myself'). This verb suffix then is in addition to the regular pronominal terminations described earlier.

From this summary of Pinnow's analysis of Austroasiatic pronouns and verb morphology, Munda again seems to offer no promise of unraveling the problem of the T-B pronominalized verb. All of the arguments taken collectively, from the detailed typological comparison of the two families to the internal evidence for morphological innovation within Munda itself, seem to inescapably force some other explanation.

3.0. *Morphological borrowing and Indo-European influence*

The question of a morphological influence on T-B of the order necessary to produce the complexity of the Bahing verb is debatable from several lines of argument. For one reason, there has been, to my knowledge, no well documented example from any part of the world of such an influence. As is perhaps intuitively obvious, languages more often than not tend to simplify their morphological structures in contact situations. Examples to the contrary exist, of course, but the overall consensus holds that there is a resistance to borrowing at the more formally structured levels of the grammar (Whitney 1882, Haugen 1950). The adoption of a morphological mechanism, then, precedes generally by one of two routes.

In the first a word may be borrowed from one language into another as an unanalyzable whole. After a period of time and perhaps on analogy with other similarly constructed borrowed words, a secondary analysis is made by the borrowing

language, so that the word is now recognized to consist of morphemic elements. Then according to its own principles of word formation, one of the elements may generalize to other environments, thereby becoming grammatically productive. Meillet (1918) stresses that, "it does not necessarily follow that such a grammatical form is, properly speaking, borrowed" (1918:14).

The second pathway turns on the relative comparability of languages in contact, emphasizing that a certain degree of commonality in structure is necessary for one language to borrow from another. Even Schuchardt who generally approved of the notion of morphological borrowing, unconstrained by any qualification, held to the view that, "frequently the influence of a foreign language works together with a prevailing tendency (*herrschenden Tendenz*) in another language." (1884:11). Whitney states the principle unequivocally by denying the doctrine that a language can learn from another "a grammatical distinction, or a mode of expression, formerly unknown" (1882:19). In the same vein, Sandfeld (1938) speaks of "points of receptability" between a donor and a recipient language, and Jakobson (1938) of a "collective tendency" between languages, if a change in linguistic structure is to be copied from one to the other.

The implication of this wide consensus of opinion has important bearing on the origin of pronominalization, since it would direct us to look for such structures, or 'predispositions' to add such structures, first in T-B, before trying to match it with those of Indo-European or any other family which is a presumed model. What the preceding brief discussion makes clear is that complexities on the order of what we have seen in Bahing are not likely to have been totally borrowed, though the possibility cannot be ruled out that particular aspects of the system may have been borrowed, given a certain native framework on which to place them.

Since this line of argument would be impossible to carry through without having first assembled the comparative data and attempted to push it back internally as far as possible, the question of Indo-European, Munda, or other outside direction on T-B is best postponed to a later point. However, I would safely assume even now that Indo-European, like Munda, has not been an important influence for the reason that its contact with T-B has been of relatively recent date and that at the time of contact the family had probably already split off into branches which today still maintain pronominalization. A more compelling reason is that Indo-European, even less than Munda, has structures comparable to those seen in Bahing. In every case Indo-European is much less complex or organized according to different norms of complexity, as seen in its subject agreement affixes synthetic for person and number or in its use of gender distinctions.³¹

4.0. Hypothesis of native origin

4.1. T-B sources

Since the writings of Hodgson and Konow when the problem of pronominal verb morphology in T-B was first described and an attempt was made to draw a

plausible picture of its origin, some additional languages have been recognized as exhibiting similar complexity. In a few cases the investigator attempted to place the new data within the framework of the earlier hypotheses. In some small subset of these languages the fit was facilitated by the geographic proximity of the language to others already recognized as pronominalized. For example, Chepang's (Cp) nearness to one center of pronominalization farther east in Nepal created no special problems for subgrouping it together with these languages. Parallel arguments could then easily be provided for the genesis of the complex verb structure in terms of a Munda substratum (Caughley 1971),³² without necessitating complex explanations for migration or diffusion of the structure. For languages in greater or lesser isolation from the two recognized nuclei of pronominalization (in Eastern Nepal [Eastern Pronominalized] and in Northwest India [Western Pronominalized]), two different courses were taken: 1. The verb morphology is simply described with no mention of its being "pronominalized", as with Jinghpaw (Jg) (Hanson 1896, Hertz 1935, Wolfenden 1929), Jyarung (Jy) (Chin 1949, 1957-1958),³³ Rawang (Ra) (Barnard 1934),³⁴ Nocte (No) (Das Gupta 1971),³⁵ and Lushai (Lu) (Shaha 1884, Lorrain and Savidge 1898); or 2. The language is recognized as pronominalized but explanations of outside influence are rejected, as for Kham (Kh) (Watters 1971) and Tiddim Chin (Td) (Henderson 1957, 1965; cf sec. 1. 32).

In this section these languages will be systematically compared with several languages of the two nuclear pronominalizing groups; from the Western branch: Kanauri (Ka) (Bailey 1909), Bunan (Bu) (Francke 1909), and Manchari (Mn) (Francke 1909) and from the Eastern branch: Bahing (Ba) (Hodgson 1857-1858), Vayu (Va) (Hodgson 1857-1858, Michaelovsky 1974), and Limbu (Lm) (LSI 1909). This list, of course, does not exhaust the possibilities (see Shafer 1950 and 1966 for fuller lists), but, very importantly it effectively covers most of the T-B linguistic area (see map next page) and includes most of the major recognized subgroups of T-B.³⁶

4.2. Method of comparison

In the sections to follow the pronominal systems from the languages mentioned above will be compared point by point with a view to demonstrating the integrity of the hypothesis that pronominalization was a trait native to T-B. Such a demonstration, I realize, raises questions of what happened to this complex pronominal verb morphology in languages which do not exhibit it synchronically—those, of course, being the great majority of the family. While it seems beyond the capabilities of our present data to successfully answer this question for all cases, it does appear that individual examples can be cited where remnants of pronominal verb morphology are still apparent in various non-pronominalized languages. One of the critical problems to be solved in effectively supporting this contention is the demonstration of cognation between these so-called remnants and the true pronominal roots of the proto-language. However, any

cursory glance at comparative pronoun data³⁷ points up the difficulty with identifying a single unequivocal set of roots for the original language, whether those be independent pronouns, in the ostensibly simpler case, or the touchier situation of pronominal verb affixes.

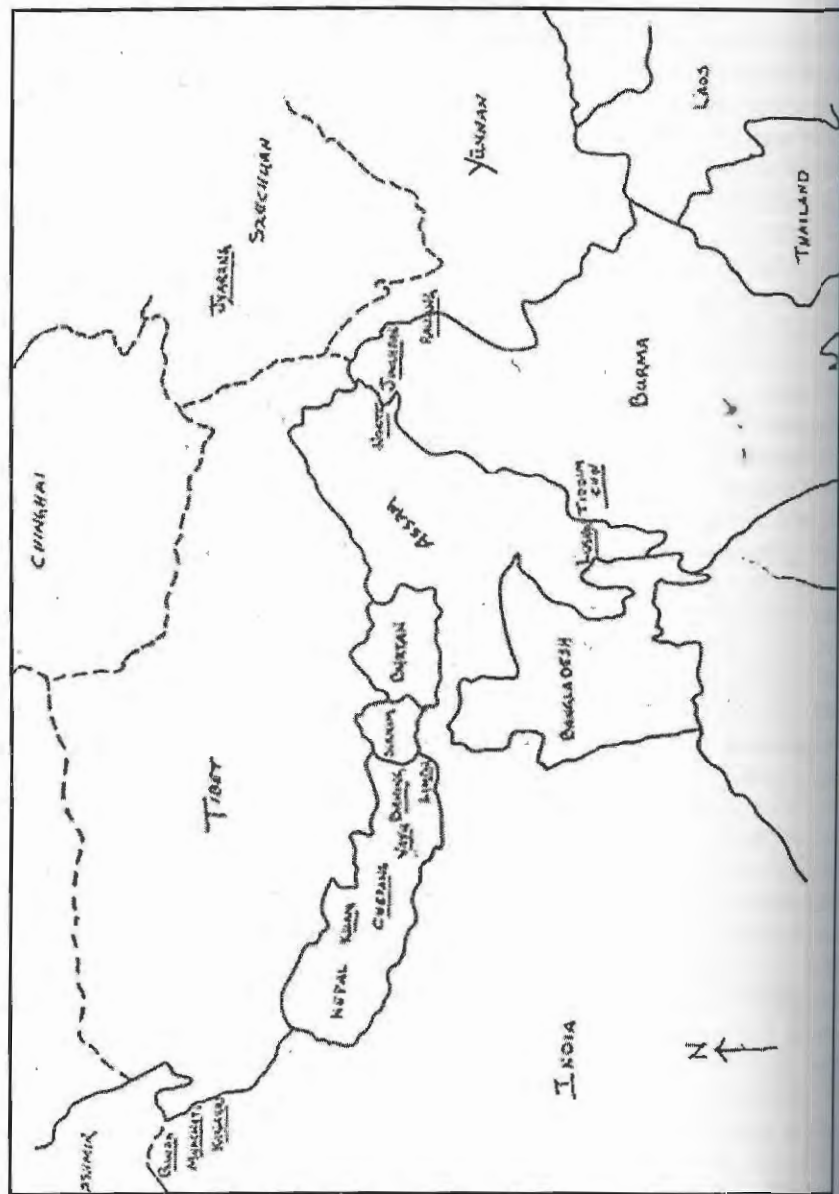
To compensate for this apparent lack of comparability, I have adopted the policy of viewing parts of a total pronominal system in abstraction from the narrower confines of a particular paradigm within that system. A pronominal system is here understood to encompass the entire person and spatial deictic apparatus of a language—formally apparent in the subsystems of independent personal pronouns; person/number verb affixes; demonstratives; relative, interrogative, and indefinite pronouns; numerals; and kinship and status terms. Even within one of these subsystems it may be possible to further characterize various component patterns or structures. For example, the independent pronouns may be looked at from the standpoint of the case functions they carry out; very often the genitive or possessive pronoun is formally distinct from the nominative/objective (ergative) pronoun, not just in the case marker, but also in the stem itself. Compare for Kanauri: 1 sg erg *gö* and 1 sg poss *an̄*.

This sort of complexity within subsystems naturally provides more information for comparative purposes, if the methodology that I have advocated is subscribed to. For Kanauri, therefore, I would factor out the person information from both of these 1 sg forms, ignoring for the time their different semantic/syntactic usages, and compare one or both with 1 sg forms in other T-B languages, in any subsystem that they may occur. Again, I hope by such procedures to demonstrate not that there is less than the usually conceived of diversity in the number of pronominal roots, but that the diversity is patternable and ultimately explicable within the framework of an original complex morphological system.

Since my ultimate goal is a morphological rather than a lexical reconstruction, I plan to take some liberties with the phonological comparison of the pronominal roots. Rather than provide exact phonological reconstructions of different roots (which necessarily presupposes that the historical phonologies of all the compared languages are sufficiently well understood, which they are not) I will, instead only require that a form realized by comparison *approximate* the original proto form.³⁸

The task of reconstructing a morphological system for Proto-Tibeto-Burman, which can account for the complexity we have seen in Bahing, can only proceed slowly over a long course of time, with very careful sifting of a multitude of data. This task thus necessarily lies beyond the foundation laid in this paper. Essentially what I am attempting to demonstrate here is only the plausibility of the nativeness hypothesis and the justification for a more detailed investigation.

In the immediately following sections, some of the factors that must eventually be considered are listed so as to constitute a typological assessment of the problem. What I intend by this survey of some dozen or so languages is to show how different pronominal complexities cross-cut lexically established subgroup



boundaries, to show that the solution must circumscribe all of T-B and not isolated minorities within the family.

In a few cases the actual verbal syntax of various languages will be described and compared, even though our poor knowledge of the developmental histories of the individual languages complicates the problem. In applying such comparisons it would seem dangerous to simply take the most elaborate synchronic morphology to serve as the model for the proto-language. Recall Pinnow's contention that the complexity of the Munda verb will not reconstruct to Proto-Austroasiatic (cf sec. 2.31). Pinnow proposes instead that it developed as an areal influence from surrounding Dravidian and Indo-Aryan languages. In the case of T-B many individual languages may have accrued complexities due to similar areal pressures. The transitive verb affix system is especially troublesome since it is manifested in more than one typological format (cf sec. 4.311), one of which is perhaps secondarily derivable from the components of the simpler intransitive affix system. The special problems to be met with in this area will, therefore, simply be acknowledged, without presenting any thorough treatment. In any event, though, the very existence of these complexities in the transitive verb assuredly points back to some type of historically retrievable morphological structures serving as a template. It will be primarily the intransitive verb paradigm which will be examined for direct evidence of this structure.

4.3. Typology of T-B pronominal systems

4.31. Verb affixes

It is the presence or absence of a verbal affix system for person-number agreement which is criterial for designating a language as pronominalized or not. However, within this broad assessment it is possible and desirable to particularize various parameters of this morphology, and rank individual languages as to their behavior. This procedure can be very useful in delineating language subgroups and these subgroups, in turn, can be valuable aids for tracking the chronology of development from earlier stages of the language.

4.311 TRANSITIVE AFFIXES

The primary distinction of pronominal affixation which suggests itself from the briefest look at the data is that between intransitive and transitive affixes.³⁹ Some languages have mechanisms for only subject agreement (intransitive) while others require agreement for both subject and object (transitive). Within the transitive category two subtypes can be recognized. One of these has a set of object agreement affixes phonologically and morphologically distinct from the subject agreement set (the *Discrete* subheading of Table 1), while the other has a set of

affixes which simultaneously indicate the subject and object roles in a "single" phonological form (the *Syncretic* subheading of Table 1). The latter is typified by the Bahing system presented earlier (cf sec. 2.23). Within the languages with separable object and subject affixes it is further possible to specify different syntactic arrangements of the affixes with respect to one another and to the verb. Compare, for example, the situation in Kham:

1 sg → 2 sg nga verb ni
3 sg → 1 sg verb na- -o
1 sg → 3 dl nga-ni verb

where prefixation and suffixation are differentially used to express the various possible role interrelationships. There are additionally several other characteristics of the transitive verb which will not be charted. These typically involve verb stem alternations and/or the insertion of epenthetic consonants at particular points of the paradigm. I have only been able to speculate about the possible functions these processes serve.

4.312 THE REFLEXIVE AFFIX CATEGORY

A distinct type of verb affix expressing a reflexive meaning occurs in some languages. This usage is absent in other languages, which use instead pronoun based reflexive constructions. Compare:

Kh nga-verb-si 'I verb myself'
Jg ngai-hkum 'I myself'

It is possible, though, for a language with a reflexive verb affix to also make use of a pronominal reflexive; for example, Kham can reduplicate the pronominal root to form a reflexive (although this can not occur with singular roots).

Kh gin gin 'we 2 ourselves'

Languages exhibiting a verbal reflexive affix are indicated in Table 1, subdivided according to affixation pattern.

4.313 AFFIXATION PATTERNS

As indicated above the affixation patterns of the language to be treated can be fairly complex. To simplify the chart somewhat, advantage will be taken of the fact that any prefixing language also exhibits suffixing mechanisms. Therefore, such a language will be indicated only once—in the prefixation row.

Table 1 also includes information relative to whether a particular language engages in one or both of two types of "concord" relations.

4.3141 *Tense/aspect-mood concord* The more important of the two concerns the phenomenon of pronominal affixes, transitive and intransitive, having different forms agreeing with the tense/aspect marker of the verb. In what seems to be a related phenomenon, a separate set of affixes is used for what are variously called "potential", "subjunctive", "conditional", or "subordinate" clauses. These contrast with the set(s) used in independent clauses. Both the tense/aspect and this modal concord are treated together under the former label. For instance, Hanson (1896) describes the following suffixes in Jinghpaw:⁴⁰

-nng	'I am <i>verbing</i> '
-ring ng	'I will <i>verb</i> '
-ni	'I have <i>verbed</i> '
-li	'may I <i>verb</i> '
-se	'I <i>verbed</i> '
-rē	'I will have <i>verbed</i> '

The comparative analysis of this type of system will form an important aspect of a later study, though for now only the number and general nature of the distinctions which each language makes will be considered.⁴¹

4.3142 *Negative concord* A second type of pronominal concord occurs in a few languages for the negative marker. The details differ from language to language. In a simple case, for example Cp, the negative set of affixes seems to be morphophonemically related to the positive set.

Cp	1st sg positive	-ng
	1st sg negative	-nga

However, in other languages, such as Nocte, the root itself can change.

No	1st sg positive	-ang
	1st sg negative	-mak [- <i>m</i> is the negative marker]

A further peculiarity of Nocte is that the separate negative forms occur only in "present" type tense/aspects. Unfortunately this phenomenon cannot be systematically examined at present since relevant data is missing in most languages. Table 1 will simply indicate the presence of some form of this negative concord for languages where it has been described. In languages with transitive affixes, the

Table 1

		Affixation type				
		Intransitive	Transitive		Reflexive	
			Discrete	Syncretic		
Affixation pattern	Prefixing	Kh	Kh	Lm	Jy	
		Lm	Lu (1 only)	Jy	Lu	
		Jy		Ra		
		Ra (2 only)				
		Lu				
		Td				
	Suffixing	Bu	Bu (1 only)	Cp	Ka	
		Mn	Jg	Ba	Kh	
		Ka		Va	Ba	
		Cp		No	Va	
		Ba			Ra	
		Va				
		No				
Jg						
Concord	Tense/aspect	Bu (pres, fut, imperf, perf)				
		Ka (pres/fut, past)				
		Ba (pres/fut, past)				
		Va (pres/fut, past)				
		Lm (pres, past)				
		Jy (only vestiges)				
		No (pres/fut, past/subord)				
		Ra (pres, imperf, fut/imperf, potential)				
		Jg (pres/fut, past, optative)				
		Lu (independent, subord)				
		Td (pres, fut, conditional)				
		Negative	Cp (morphophonemic)			
			No (separate stems)			

same concord distinctions are made as for intransitive affixes, so there is no need to separately indicate this on Table 1.

4.32. *Typological assessment of pronominal verb affixes*

4.321 OCCURRENCE OF TENSE/ASPECT CONCORD

Table 1 yields a few significant generalizations, probably the most striking of which is the statistically high occurrence of tense/aspect concord in the languages

sampled (11 out of 14). It has only *not* been reported in Kham, Chepang, and Manchati, although Manchati exhibits a system of verb stem alternation for tense aspect which may be historically related. There is further support in view of its most closely related sister languages—Kanauri and Bunan—exhibiting the concord; although Kanauri itself seems to have partially leveled out the complexity also. Chepang has as yet not been fully described and final judgment on its actual behavior in respect to tense/aspect concord should be withheld.

Kham seems to be a true exception at this point. An interesting feature of its verb morphology, however, is the inclusion of a tense marker following the verb which can interpose itself between the subject and object affixes. This marker, in line with all affixes generally, seems to maintain its phonological and semantic discreteness. Kham thus seems to approach more than any other language considered a true agglutinative structure. Perhaps, then, the morphophonemic processes which in earlier times may have led to the concord system were inoperative in Kham. On the other hand, if the system of tense/aspect concord was original to Proto-Tibeto-Burman (as the cross linguistic data would support), then Kham has probably innovated. This second hypothesis will eventually carry more weight in view of a great many other peculiarities in Kham's structure. It more than any other language seems to overstep the norms.

4.322 CO-OCCURRENCE OF TRANSITIVE WITH INTRANSITIVE PARADIGMS

Another significant finding is the high positive correlation between the presence of transitive with intransitive affixes. Again only three languages do not exhibit the correlation. Two of these, Kanauri and Manchati, are closely related in the Western Pronominalized group. Bunan, the third representative of this group, can almost be included as lacking transitive affixes, since only a single object suffix, *-ku* 'me, for me', is used, and this only in imperatives and in the imperfect with 3rd subject. These three languages would together constitute a particular subgroup which presumably lost object agreement at an earlier stage of development.

The other language without object agreement is Tiddim Chin which, however, on the evidence of closely related Lushai, may be supposed to have originally possessed a set of discrete object affixes. Lorrain and Savidge (1898) report that the object affixes of Lushai are not used obligatorily so we may suppose that forces are at work to eliminate the distinction entirely. Lushai would then pattern with Tiddim Chin.

4.3221 Parallels between Lushai and Jinghpaw If Bunan is eliminated from consideration of possessing object agreement for the reasons above and if Kham is eliminated by reason of its exceptional agglutinative approach to affixation, then only Lushai and Jinghpaw are left as representatives of the discrete type of object affix. An attempt to account for this coincidence, by comparing the object affixes in these two languages (which are usually not considered as especially close geographically or genetically) revealed an interesting association, with possible implications for subgrouping.

Chart 4 Lushai and Jinghpaw object affixes

	1 sg	1 pl	2 sg	2 pl
Lu	min ~ mi' (prefix)	min ~ mi' (prefix)	che ~ chi-a (suffix)	che-u ~ a-che-u (suffix)
Jg	mi	mi	de ~ di	ma-de-ga ~ ma-de

In addition Jg has two 3rd person object forms which have no correspondents in LU. It is, of course, fairly apparent that the 1st person forms in **mi* are cognate (in spite of their being prefixed in Lu). The 2nd sg forms are almost as easily related, the *ch-* of Lu simply being the palatalized variant of the dental stop of Jg. What makes this even more obvious is the occurrence of the same vocalic alternation, *-e* ~ *-i*, in both languages. The 2 pl forms keep the 2nd person root but make use of different plural markers: *ma* in Jg (cf *-we-ai* '3 sg obj'; *-ma-we* '3 pl obj (dial)') and *u* in Lu (cf *verb-imperative-u* 'imperative pl'; cf also Td *-u²-te²* '2 pl').

4.3222 Parallels between Tiddim Chin and Jinghpaw The object affixes of Jg taken together with their corresponding subject agreement members form a particular pattern within the total pronominal affixation system of the language. Hanson (1896) described this set as the "descriptive present" although he states that it may be used to convey any temporal notion. It simply does not vary with the tense/aspect markers of the sentence as does the other major set of affixes. What the determining variables are which select one set or the other is not made entirely clear, but it seems possible that it may be similar to a stylistic affixal variation found in Tiddim Chin. Td has a set of prefixed forms used only in the literary language and a contrasting set of forms used in colloquial speech. This second set shows variation for tense/aspect concord, while the literary set is invariable. It seems, therefore, that the "descriptive" set of Jg would functionally pattern with the literary set of Td.

4.3223 Morphological links between Jinghpaw and Kuki-Chin If now the Jg, Td, and Lu systems are viewed concurrently, a certain pattern of development

Chart 5 1st person agreement affixes of Lushai, Tiddim Chin, and Jinghpaw

	Pronominal agreement affixes			
	Colloquial		Literary	
	Present	"Subordinate"	Subject	Object
Jg	-nng	-li	-we	-mi
Td	-ij	-ley	kã-	
Lu		-ila	ka-	min-

suggests itself. The following chart provides forms for the 1st person agreement affixes only.

In clarification it should be mentioned that Lu has only a single set of affixes, making no distinction between 'literary' and 'colloquial', though it seems fair to surmise that it did possess this distinction earlier, as seen in its 'subordinate' reflex of the "old" colloquial set. (In Lu and Td this affix lends a conditional meaning to the clause; in Jg the meaning is "optative" 'may I . . .'.)

The major characteristic distinguishing the two Chin languages from Jg is their innovation of the subject agreement prefix *ka-*, which along with the respective 2nd and 3rd person forms constitute a diagnostic feature of the Kuki-Chin languages. The remaining parallels would seem to suggest some previous stage of common development.

4.3224 *Morphological links from Jinghpaw to other pronominalized languages* An additional idiosyncrasy of Jg provides a possible bridge to the languages with syncretic transitive affixes. Should this structure bear the weight of a phonological comparison, then the continuity of all the languages could be traced in regard to their handling of transitive affixes—all of them presumably initiating in a syncretic system.

The relevant data are found in certain of the descriptive subject agreement affixes. For instance, the 1 pl subject marker has two forms: *-ga* used with sg objects and *-gaw* used with pl objects. The 3rd pl object marker likewise has two forms *-nme* used with 1st sg subject and *-mu* used with 2nd or 3rd sg subjects. In other words Jg shows remnants of syncretic affixes within this particular subsystem.⁴²

The morphological complexity of the paradigm itself may lend further support. In the preceding discussion of the Bahing transitive paradigm (cf sec. 2.23), the phenomenon of homophonous affixes expressing different role relationships (for example, 2 → 1 = 3 → 1) may be recalled. The same homophony is found in Jg in what is ostensibly a discrete affix marking system. (Cf, for example, 3 sg descriptive subject *-wu* = 2nd sg descriptive subject *-wu* and 1 sg descriptive subject *-we* = 3 sg descriptive object *-we*.) This role homophony is certainly less understandable as deriving from a basically discrete system of agreement. For instance, no purely *intransitive* paradigm in any of these languages exhibits any similar homophony. Why there should be any syncretic affix homophony of this sort at all is still an unexplored area,⁴³ however, given its occurrence in a language, such as Jg, with discrete agreement markings, it would seem that referent ambiguity would be a persistent problem. In view of this, the system might prove unstable, and eventually be eliminated or leveled, as perhaps occurred in Td and Lu.

4.323 OCCURRENCE OF REFLEXIVE AFFIXES

The languages which have a suffixed reflexive marker (cf Table 1) provide an additional isolated bit of evidence toward the verification of the nativeness hypothesis of pronominalization. These five all show forms which are undoubtedly cognate

as seen in their verb internal syntax (verb-reflexive-subj affix) as well as their phonological form.

Ba	-si
Va	-chi
Ka	-shi
Kh	-si
Ra	-shi

Since our information regarding other languages is incomplete it might be expected that this reflexive affix is even more widespread than here indicated.

The two languages with prefixed reflexive markers also show correspondences in their internal syntax and phonological shape.

Jy	pronoun-i + nə + (prefix)-verb [-i = genitive case marker?]
Lu	subj prefix-in-verb

Again, the behavior of the other prefixing languages is not known. However, it appears that the Lu form may have arisen from some sort of periphrastic reflexive construction, as Jy points to.

4.324 PREFIXATION VS SUFFIXATION

The final point to be made from the configurations of Table 1 concerns the methodological value of maintaining the separateness of prefixing and suffixing languages for comparative purposes. I have reserved this discussion for last since I would appeal to the preceding arguments to further argue that the dichotomy should be ignored for investigating *deep* levels of relationship. In the first place, no prefixing language is exclusively prefixing. Of the languages listed, Lu and [d] have already been discussed with a view to demonstrating their innovative behavior in regard to prefixing. Of the others, Lm, Ra, and Jy show certain commonalities with Cp, a strictly suffixing language, which certainly suggest that they have rearranged their own internal verb syntax.

Chart 6 Intransitive verb affixes of Chepang, Rawang, Jyarung, and Limbu

	<i>Cp</i>	<i>Ra</i>	<i>Jy</i>	<i>Lm</i>
1 sg	-ng	-ng	-ŋ	-a
1 dl	-tayh-ca (incl)	-shi	-t	a-verb-chi (incl)
1 pl	-tayh-i (incl)	-i	-i	a-verb (incl)
2 sg	-te	è-	tə-verb-n	kʰ-
2 dl	-te—ja	è-verb-shi	tə-verb-ntʃ	kʰ-verb-chi
2 pl	-te—y	è-verb-ning	tə-verb-n _l	kʰ-verb-i

Although a detailed analysis of the roots is beyond the task at hand, it can be seen that the morphological patterns of affixations share much in common. Compare the palatal element in all dual forms, especially in 2nd person which is always separated from some overt marker of 2nd person status by some additional form—usually the verb, but in Cp, the tense marker. The *-i ~ -ni* marker of 2nd pl shows a similar pattern.

In considering data from other languages not presented here it would seem that the affixation pattern displayed by Cp was original and that the other three languages have innovated—Ra and Jy perhaps together, as can be seen in their overall similarity in roots, but both definitely in isolation from Lm. The relevant data will be considered in a follow-up study.

The one remaining prefixing language of Table 1 then is Kham which resists explanation on this as on other criteria.

The affixation patterns of a language are certainly not to be dismissed. There are undoubtedly historical reasons for why a language will undergo a shift from suffixing to prefixing behavior. To a certain extent we can say that each type of behavior is associated with or implied by other syntactic facts of the language (Greenberg 1961). It is, however, beyond the goals of this paper to examine these reasons, even assuming them to be retrievable from our generally impoverished data. The critical point at issue here is that these syntactic changes do not constitute a primary division of the proto-language. The various languages which have undergone such syntactic changes, in whatever direction this may have been, have done so independently or as members of recognized subgroups (such as Kuki-Chin). The pronominal categories and roots, then, can and should be studied in abstraction from the particular syntactic network in which they are embedded.

4.33. *Pronominal categories*

In this section, the analysis will continue by inspecting some variables which hopefully will bridge the gap between the pronominalized and non-pronominalized languages. It is essential that the continuity of the proto-system of verb morphology, suggested in the preceding pages, be traced to its loss in many members of the family. We must be sure that the geographical range of the pronominalized verb is still not the result of any complex process of diffusion from one T-B language to another from some original source outside of the family. The groundwork necessary to demonstrating this continuity of development will be presented here, by completing the broad characterization of the pronominal systems of the pronominalized languages.

Essentially all this will consist of is presenting in Table 2 a list of those languages which maintain an inclusive/exclusive distinction and/or a number distinction. Rather than simply providing a checklist, these distinctions will be made more apparent by providing the incl pl forms and the dl forms for both the free pronouns and intransitive agreement affixes. It can be taken for granted that all

Table 2 Pronominal categories

	<i>Pronominal categories</i>			
	<i>Inclusive</i>		<i>Dual</i>	
	<i>Pronoun</i>	<i>Affix</i>	<i>Pronoun</i>	<i>Affix</i>
Bu	erang+ji	—	+nyispi	—
Mn	ngena+re	—	+ku	-shi
Ka	kishōña'	-e'	+shi	-ic
Kh	—	—	+n~+ni	+n~+ni
Cp	ngi	-tayh-i	+ci	-ca
Va	go khata	-ke	+nakpu	-chhik
Ba	go-i	-ya	+si	-si~sa
Lm	ānī	ā-	+chi	-chi
Jy	jo [yo]	-i	+ndʒ	-tʃ
Ra	—	—	+ni	-shi
No	—	—	—	—
Jg	—	—	+n	—
Lu	—	—	—	—
Td	/ei	i-(coll)	—	—

the languages distinguish three persons and have a pl form, although the details will not be presented here.

4.331. *Correlations between categories*

Certain overall conclusions may be drawn from Table 2. One of the most apparent of these is the high correlation between the presence of each distinction in both free pronoun and agreement affix forms, this in spite of the fact that the two forms are not necessarily closely related phonologically (cf Va, Mn, and Ra dual forms). The exceptions to this statement are Bunan and Manchatī which currently appear to be leveling out their entire affix system for instance, all Bu agreement markers in 1st person are -£, no distinction is made for number or incl/excl; Mn maintains no person distinction between 1st and 2nd dl and pl) and Jg which is also undergoing similar processes (cf note 42).

Another interesting association is the general presence of a dual distinction with the incl/excl. Two different interpretations might be given to this fact. In the first, the parallel might involve a semantic reinforcement between the two concepts, in that an incl notion in most cases will apply to the speaker and one hearer, i.e. two persons. The incl/excl distinction might then 'predispose' a language to also maintain a dual. There is some indication in the data presented that

the inclusive form is probably of longer standing in T-B than the dual form simply in the greater range of phonological shapes which it exhibits; in spite of the fact that it appears in fewer languages. The only language which goes contrary to the expectation that a dl will be present if there is an incl/excl opposition is Td, but this seems to be linked to its loss of the dl in conformity with the other languages of the area. The Td incl forms seem to be related to those in the other languages (cf Td *ĩ*, Jy *-i*, Cp *-tayh-i*, Ka *-e'*).

An alternate explanation for the dl-incl/excl parallel might contend that the majority of the languages which lack one or both of these distinctions are located in the southern end of the pronominalized verb range, i.e. in the general area of northern Burma (see map). As such, the drive to level out the distinctions might be part of a larger areal configuration, which includes Lolo-Burmese and Barish with their fewer oppositions and simpler verb morphology. The major exception to this interpretation is Kham in west-central Nepal. Its loss of the incl/excl would constitute an innovation.

4.332. Proto-categories

In judging the relative antiquity of both the dl and the incl/excl categories, notice can be taken of the degree of phonological resemblance between the forms. The dl marker can fairly easily be traced back to some sibilant plus high front vowel (*š̥i). Such an element is present in all of the affix forms (allowing for phonological alterations) and some of the free pronoun forms. The pronouns which use some dual indicator other than *š̥i generally have a form in *n* or *ni* (perhaps related to the numeral 'two' *g-nis). Kham has extended this form to the affix also.

An incl marker can, with slightly more effort, be recognized, again, in all the affix forms, but in only some of the pronouns. This root very likely will reconstruct to a simple high front vowel (*i).⁴⁴ The free pronouns which do not use this root, however, show no obvious similarity in the substituted form (cf Bu *erang*, Mn *ngena-*, Ka *kishōnā'*, Va *khata*).

This predominant pattern of the affixal forms showing a higher degree of retention than the free pronouns within a particular category is a feature which characterizes other forms also. It suggests first that a reliable picture of the early pronominal roots of the family may be achieved by looking at affixal forms, as these seem to be generally more conservative to change. Secondly it suggests that the free pronouns are themselves susceptible to more rapid changes, entailing problems for comparison.

A possible reason for the relative instability of the free pronouns might lie in their syntactic optionality. In the grammars which mention such details, it appears that the verb or the context itself is sufficient to carry the brunt of referent identification. This is also the case with non-pronominalized languages. Any agreement marker, however, appears to be obligatory, which perhaps accounts for the integrity of the roots in pronominalized languages through what must be very long spans of independent development. A later study will make clear that this instability of

the pronouns in conjunction with the collapse of the incl/excl and dl categories has led to certain roots changing categories, for example from incl to 2nd person significance (as one particular instance, cf *i 'incl'; Lu *i-* '2 sg'; Ba *-i* (~~ye) '2 sg').

Summary

Previous hypotheses advanced to explain the occurrence in some Tibeto-Burman (T-B) languages of very complex paradigms of pronominal agreement markers in the verb (pronominalization), have usually invoked some other language family as providing either a substratal base or a directing influence on T-B to account for it. The viewpoint of this work has been that the hypothesis of native origin, although generally dismissed due to the stereotype of T-B as a morphologically simple family, actually has the best chance of verification. The evidence involves comparisons of a pronominalized T-B language with a Munda language, the most frequently postulated contact influence, and then a typological assessment of the pronominal systems of fourteen pronominalized languages. These languages cover a very substantial range of the T-B geographic area and represent most of the major subgroups of the family. This work is considered both justification and preparation for a full scale reconstruction of the morphological system of the proto-language.

Notes

- 1 The dates for Hodgson's work will be given as for their original publication in the *Journal of the Asiatic Society of Bengal*. The page references, however, will be given from the reprinted and corrected versions of these works in either the *Miscellaneous Essays* (1880) or *Essays on the Languages, etc. of Nepal and Tibet* (1874), wherever this is applicable.
- 2 The biographical materials on Hodgson which are interspersed through this section were found in a short preface to Mitra (1882) and in a full, booklength portrayal by Hunter (1896).
- 3 The editors of *JASB* in a short preface to Hodgson's (1849c) "A brief note on Indian ethnology", suggest strongly that other workers in the area should submit themselves to following a single model in order to maintain a certain unity in the field, "and if we are to be guided in this matter by the experience and judgment of any one man in India, surely none are entitled to higher respect than those of Mr. Hodgson" (1849c:238).
- 4 This and other names for subgroups follow Shafer's (1966) terminology.
- 5 It will be recalled that Hodgson was only possessed of secondary information on these languages, entirely consisting, as far as the published information indicates of vocabulary lists. A true picture of the complexity of the Burmese verb would not then have been available to suggest a closer approximation to say the structure of the Bodo verb (initially classified by Hodgson as Tamulian) with which it does show many parallels.
- 6 In a footnote to a later paper, Hodgson (1853b:31) restates his position with regard to Bodo and Dhimal by repositioning them within the Tibetan and Himalayan stock, rather than the Tamulian.

- 7 Compare for example Hunter's (1868) *Comparative Dictionary of the Languages of India and High Asia*, which assembled Hodgson's lexical materials for about 200 roots from over 100 languages, and the vast *Linguistic Survey of India* which faithfully maintained many of Hodgson's subclassifications. Shafer (1966) and Benedict (1972) have similarly maintained an emphasis on lexical comparison.
- 8 Hodgson intends by this term the phenomenon of an intransitive verb undergoing a transitivizing or causativizing process with the possibility of the resultant verb undergoing an additional causativization. His example, from Vayu: *dun* 'become', *thun* 'to cause to become', *thum-ping-ko* 'to cause to cause to become'. He does not note that this process of double causativization is quite common in Indo-Aryan (cf Kellogg 1938:252ff) and that this family could have provided the model for what might be independent borrowing in Dravidian and Himalayish.
- 9 Hodgson remarks that the passive construction of literary Dravidian "is clearly factitious and suggested by contact with Arianism" (1856:142).
- 10 Hodgson does not approach the question of the distinction between tense and aspect markers in languages such as Tibetan, still a tricky problem. Therefore, he makes claims that, in some languages, where two "tenses" are distinguished, the present and future will be conflated. It might be better to discuss such a system as aspectual rather than temporal, especially since in the same languages the 'past tense' marker often equates to the transitive marker. This occurs in Himalayish, Dravidian, Turkic, and Finno-Ugric.
- 11 Hodgson professes to see in this transitive marker an association with 3rd person object markers, implied in the transitive imperative suffixes of strictly monosyllabic T-B languages such as Lepcha and Burmese. Many languages show a variety of forms for these affixes, a particular verb uniquely requiring one of them, thus setting up a system of implicit verb classification.
- 12 A wealth of literature exists dealing with these languages. One of general merit which I believe, largely succeeds in unraveling the tremendous complexity of the T-B languages of the area is Thomas (1948).
- 13 Hodgson reminds us that this pronominal complexity "when viewed in connection with the paucity of true conjugational forms [recalls] the fine remark that 'rude people think much more of the actors than of the action'" (1856:135).
- 14 As far as I know this paper contains the only reference to the term 'pronominalization' in all of Hodgson's linguistic corpus. From his causal use of the term, however, I would doubt that it was his own innovation.
- 15 There are exceptions to this generalization among the pronominalized languages which Hodgson dealt with, such as Limbu with verbal prefixes, though he does not discuss these. He does, however, mention that Altaic and Finno-Ugric have noun possessive suffixes.
- 16 Hodgson's examples for this construction, taken from many different languages, all show the transitivizer with some type of dental stop. However, in his Dravidian examples this morpheme is some sort of past/perfective marker. He implies thereby a historical development in Dravidian of this transitivizer into a tense/aspect marker.
- 17 Information on the history and procedures of the survey can be found in Grierson's preface to the completed work (LSI 1(1):17-24). The project was originally conceived in 1886, organized from 1894-1897 when requests for data were issued, and edited beginning in 1898. Volume 3 in three parts, dealing entirely with T-B was completed and published in 1909. The introductory volume 1(1) did not appear until 1927; it was the last to be issued.
- 18 Earlier published reports of Kanauri, some of which would have been accessible to Hodgson, apparently did not comment on its grammatical characteristics. Hodgson himself never seems to have discovered the fact, in spite of his probable earlier contact with speakers of the Almora languages, while he served as assistant to the Commissioner of Kumaon in 1819-1820.

- 19 The details of tonogenesis in T-B are certainly more complex than this (cf Matissoff 1973), but the overall picture of initial consonants affecting tone is certainly correct.
- 20 "The Tibeto-Burman verb is properly a noun" (LSI 3(1):8). Konow acknowledges Max Müller for the original formulation of this idea.
- 21 Neither Henderson or Maspero makes mention of Namsangia Naga as pronominalized. The information on this language, admittedly very poor for comparative purposes, seems to have been generally passed over.
- 22 Santali is spoken closest to the T-B area of eastern Nepal and Sikkim. It shows more pronominal complexity than other Munda languages and has been rather fully described by Bodding (1929).
- 23 While Bahing is not the nearest language to Munda geographically, it seems to show the eastern Nepal type of pronominalized verb structure at its most elaborate. It has also been generally better described (by Hodgson 1857-1858) than its sister languages. Finally it seems to have fewer morphophonemic alternations than a language like Vayu. I would caution though that these characteristics of Bahing are not necessarily being attributed to the original system.
- 24 An independent possessive pronoun equivalent to 'mine', etc. is formed with the possessive root with the suffix *-ke*; cf wake 'mine'.
- 25 There may be a gender suffix attached to the pronoun to concord with the animate or inanimate gender of the following noun.
- 26 I have adopted the convention of indicating affixal forms by means of a hyphen: *-affix* indicating a suffix and *affix-*, a prefix. Languages with discontinuous affixes are indicated as: *affix- -affix* for an intervening verb, *-affix- -affix* for two suffixes around another intervening suffix, or *affix- -affix-* for two prefixes around some intervening prefix (although this situation has never arisen). Independent pronouns do not use any special mark.
- 27 This chain of relationship seems to stem from the original distinction of a transitive subject affix distinct from an intransitive subject affix (an ergative distinction). The set which duplicates the possessive series is still used with transitive verbs. The neuter verbs, which seem to have been originally a set of causative verbs which became strictly intransitive syntactically at a later stage of Bahing development, also require them. This is indicated by the suffix *-t* an old causative morpheme present in their finite conjugation. This points to an earlier ergative distinction where the subject of an intransitive verb would be marked differently from the subject of a transitive or causative verb. It would appear then that the possessive stems of the independent pronouns derived from this set of transitive subject affixes or vice versa, but for what reason or by what semantic route is still not clear.
- 28 The verbal suffix is a syncretic affix including the semantic notions of time, transitivity, and intentionality of the action. Bodding summarizes the componentry of the verb as follows:

Base word + verbal suffix + object affix + (possessive infix) + finite marker *a* + subject pronoun

The object affix must be animate and in the active voice. Bodding uses the term 'infix' to describe a suffix which is interposed between other suffixes.
- 29 By convention, an arrow linking two pronoun forms indicates a transitive relation of subject acting on or for object (subject → object).
- 30 The sentences can be disambiguated in the noun phrases, if it is not possible to do so from the context.
- 31 Since the structure of Indo-European is more widely known than Munda, I will leave off any detailed examination of it.

- 32 Caughley draws a comparison between Chepang and Mundari concluding that the two show many parallels in their "pronominalising systems". It appears though that the comparison was not sufficiently detailed to uncover the fundamental differences in the syntactic structures of the verb between the two languages. On comparison with other far-removed T-B languages, moreover, Cp very clearly reveals a much neater structural (cf sec. 4.324).
- 33 I am indebted to Chang Kun for the information that Jyarung was indeed pronominalized.
- 34 Morse (1965) describes Rawang as pronominalized although this specific article does not provide detailed information.
- 35 Nocte is an Eastern Naga language (Benedict's Konyak Naga; Voegelin and Voegelin's Tangsa) which if not identical to is at least dialectally extremely similar to Namsangia Naga, originally described by Robinson (1849). Das Gupta gives no reference to this earlier work, however, and makes no attempt to subclassify Nocte within T-B. The actual name 'Nocte' appears nowhere else in the literature.
- 36 The early literature, including the LSI, makes no mention of this language of west-central Nepal. David Watters (personal communication) has suggested that the Kham tribes were formerly ethnically identified with the Magars and that their language, which differs considerably, was simply hypothesized to be Magari (non-pronominalized of Shafer's West Central Himalayish section). Watters, as yet, has not to his own satisfaction been able to subclassify Kham within T-B, partly because he is not convinced by the Munda substratum hypothesis.
- 37 Using Shafer's (1966) classification there are 1) in the Bodic division: Bunan (North-northwest branch of West Himalayish section), Manchati and Kanauri (Northwest branch of West Himalayish section), Vayu and Chepang (West Central Himalayish section), Bahing (Western branch of East Himalayish section), Limbu (Eastern branch of East Himalayish section), Jyarung (Rgyarung section) and Kham (unclassified, see note 36); 2) in the Burmic division: Rawang (Nungish section), Jinghpaw (Kachinish section), Lushai (Central branch of Kukish section) and Tiddim Chin (Northern branch of Kukish section); 3) in the Baric division: Nocte (Nagish section). Benedict's (1972) main divisions sometimes crosscut with Shafer's. For instance Shafer's Bodic division is separated into two groups: Tibeto-Kanauri and Bahing-Vayu. This would have the effect of splitting off the Western Pronominalized group from the Eastern, suggesting 1) that, if true, an outside influence would have to have been independently exerted in both groups or 2) that any commonalities in the verb structure between these two groups must revert to a common stage predating their separation from Proto-T-B, in which case non-pronominalized languages such as Tibetan and Gurung (Tibeto-Kanauri) would also have been pronominalized at earlier stages or 3) that both groups have innovated independently of one another. Voegelin and Voegelin (1973), in a different view, group together all of Shafer's pronominalized subgroups into a category called Gyarung-Mishmi which also takes in non-pronominalized languages (including the Abor-Miri-Dafla group) in a separate subgroup, but excludes Tibetan entirely. (Voegelin and Voegelin are in error in remarking that Jyarung is non-pronominalized and that it is spoken around the Darjeeling area of India (near Sikkim). They no doubt based these conclusions on Hodgson's (1848b) Jyarung data which were collected in Darjeeling from a traveler. Hodgson did not collect sufficient data to recognize it as pronominalized. Another error is the assertion that Monpa is equivalent to Limbu. The two are entirely distinct, Monpa, for example, being non-pronominalized; cf Das Gupta 1968.)
- 38 Hunter's (1868) compendium of lexical correspondences in some 140 Asian languages (about half being T-B) based on Hodgson's life work, is a good source for initial comparison, as it suggests appropriate ways to continue investigation.

- 39 In most, but not all, cases it will be the vocalic element of the proto-root which is in doubt. Consonants generally seem more conservative, though even here, very common phonological processes such as palatalization can operate to confuse the issue. I would stress that data from any language used to establish the root can be disallowed by showing that its phonological history would make the segments on which the comparison was based inappropriate to earlier stages of its development. Hopefully the relatively large number of languages compared will level out some of this uncertainty.
- 40 These terms are not as closed to controversy as might be hoped. In some languages such as Bahing a division is made within the so-called intransitive category between "true" intransitives and a set of verbs without objects which nevertheless require affixes more appropriate to "true" transitive verbs (cf sec. 2.22). The inclusion of a verb in one category or the other seems to be lexically determined.
- 41 The true situation is again oversimplified. For numbers other than singular it is sometimes possible to set off the subject from the object. Michaelovsky (1974) presents a detailed account of the semantic and morphological complexities involved in Hayu (Vayu) transitive verb agreement which puts the issue in sharper focus.
- 42 It seems to be mainly the southern dialect of Jinghpaw that Hanson is describing, although it is difficult to be certain of this. In any event the dialect described by Hertz (1935), which seems comparable to Hanson's Cowrie dialect on a comparison of certain pronominal affixes, does not appear to exhibit these distinctions.
- 43 Not considering the total system of this morphological type can perhaps lead to difficulties when examining pronominal roots across languages. Some seemingly arbitrary decision will have to be made to select one of the tense/aspect concord forms in languages which exhibit this peculiarity, to compare with the roots in a language lacking the distinction. The solution adopted has been to compare only the present(/future) set of roots, which in most situations seems to represent the "unmarked" category.
- 44 It is very difficult to establish unequivocal cognates in the transitive paradigm without having first performed the basic spadework on identifying the pronominal roots in simpler systems. However, a case can possibly be constructed for considering Vayu 3 pl → *_sg -gno-me* and 3 pl → 3 *sg -me* as resembling the two respective Jg 3 pl forms.
- 45 The phenomenon is not restricted to T-B however. It occurs in many North American languages, for example.
- 46 The basic phonological shape of this root indicates a distinction on an equal par with the person distinction and not subordinated to a 1st person category as the incl/excl is usually conceived. In other words the original situation would have had a person distinction consisting of 1st, 2nd, 3rd, incl, and excl, number distinctions not being possible in 1st person. The comparative evidence, which could not be considered here, supports this contention by showing no plural marker reconstructable for 1st person although such an affix can be set up for 2nd and possible even 3rd persons. The demonstration of this view is currently in progress.

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ON THE DATING AND NATURE OF VERB AGREEMENT IN TIBETO-BURMAN¹

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0. Introduction

This paper is part of an ongoing investigation into the nature of grammatical relations² in the Sino-Tibetan language family. The ultimate goal of this investigation is to develop a hypothesis on the typological nature of word order and grammatical relations in the mother language which gave rise to all of the many languages within the Sino-Tibetan language family.³ As the verb agreement (pronominalization) systems⁴ of Tibeto-Burman have been said to be a type of ergative marking, and to have been a part of Proto-Tibeto-Burman grammatical relations, the questions of the dating and nature of the agreement systems in Tibeto-Burman are relevant to the discussion of the nature of grammatical relations in Proto-Sino-Tibetan.

Since the mid-1970s, the question of whether or not a verb agreement system should be reconstructed for Proto-Tibeto-Burman has been a controversial topic, but because of the large amount of work published arguing in favour of reconstructing a verb agreement system for Proto-Tibeto-Burman, especially by James J. Bauman (1974, 1975*a*, 1975*b*, 1979), and Scott DeLancey (1980*a*, 1980*b*, 1983, 1988, 1989*a*, 1989*b*), and the lack of any strong opposition,⁵ many scholars have begun to accept the existence of a verb agreement system in Proto-Tibeto-Burman as received knowledge. DeLancey, in his overview of Sino-Tibetan linguistics (1987), acknowledges controversy concerning other aspects of Tibeto-Burman reconstruction, but presents his reconstructed Proto-Tibeto-Burman agreement system as an established fact. In another paper he states that 'There can no longer be any serious doubt that a system of verb agreement must be attributed to Proto-Tibeto-Burman' (DeLancey, 1988: 1). In the present paper, I will raise several serious doubts about the theoretical and methodological validity of reconstructing a verb agreement system for Proto-Tibeto-Burman, and at the same time argue in favour of the use of

functionally and typologically based theories of grammar, as exemplified by the head-marking/dependent-marking distinction developed in Nichols (1986 and forthcoming) to appear, in diachronic syntax and syntactic reconstruction.

Two separate but related systems of verb agreement have been proposed for Proto-Tibeto-Burman, one suffixal and one prefixal. The essential characteristics of the suffixal system are, according to DeLancey (1989*b*: 317), 'the personal suffixes 1st person *-*ŋa*, 2nd person *-*na*, and a split ergative agreement pattern in which agreement is always with a 1st or 2nd person argument in preference to 3rd person, regardless of which is subject or object.' It is this paradigm that has been discussed at greatest length and the one on which we will concentrate in our discussion. DeLancey (1989*b*) and van Driem (1990*b*) have argued for reconstructing a paradigm of pronominal prefixes for Proto-Tibeto-Burman as well, involving at least three prefixes, two consonantal (*t-*, *k-*) and one vocalic (*a-* or *e-*). We will only touch on this pattern at times, but many of the theoretical questions we will discuss are relevant to both systems. The two main questions I will deal with in this paper then are (a) is there sufficient evidence to allow us confidently to assert that the suffixal pattern is a case of shared retention in those languages that exhibit it, and that it was lost in those languages that do not exhibit it; and (b) is the pattern one of split ergativity; can these agreement systems be used as evidence for reconstructing ergativity to Proto-Tibeto-Burman?

1. Geographic/genetic distribution

An argument often made in favour of a Proto-Tibeto-Burman verb agreement system is that 'this pattern is manifested in at least one language in every recognized sub-branch of the family except for Lolo-Burmese and Karen' (DeLancey, 1988: 1). This is not as strong an argument as it may seem, for two reasons. First, as Thurgood (1984*b*: 3) points out, 'Tibeto-Burman subgrouping is in its infancy; not only does the composition of lower-level units still pose numerous questions, but the composition of higher-level units remains almost completely open.'⁶ With the large number of languages in Tibeto-Burman (Bauman, 1979 puts it at over 200), the small number of languages that have verb agreement systems are nowhere near a majority, and almost all of them are in the Rung (Thurgood, 1984*a*, 1984*b*), Kiranti, or Kuki-Chin-Naga branches of the family. The possibility that these languages form a higher-level grouping cannot be dismissed out of hand. For example, Ebert (1990) has argued for a Kiranti-Rung genetic grouping.⁷ Thurgood (1985) has also given evidence that the Kanauri-Almora group, usually considered a branch of Tibeto-Kanauri (which itself is a grouping within the Bodish branch and the only group within Bodish that has verb agreement systems) is actually genetically closer to the Kiranti and Kuki-Chin languages.⁸ DeLancey (1987) divides Tibeto-Burman into Karenic, Bodic (Bodish and East Himalayan), Baric (Kamarupan and (possibly) Kachin), Burmic (Naxi, Lolo-Burmese, and (possibly) Rung). DeLancey's placement of Jingpo (Kachin) with the Bodic languages, and not the Rung languages, as suggested by Thurgood (1984*a*, 1984*b*), is

questionable (he himself expresses doubt about it). Sun, 1985: 242–247, 1988 and LaPolla, 1987 also argue for seeing Jingpo and the Nungish languages (a branch of Rung) as part of a single branch. Given the possibility that Kanauri-Almora and Jingpo might be better grouped with the other pronominalized languages, then taking DeLancey's analysis as a base, Tibeto-Burman would have only six major sub-branches (the sub-branches being those in parentheses after each branch mentioned above), with three out of the six showing no agreement systems.

Second, the languages with verb agreement systems are almost all geographically contiguous, forming a ring around the edge of the Tibetan plateau from north-west China down along the southern edge of the plateau, including the Himalayan region, forming what Sun (1983*a*, 1985) refers to as an 'ethnic corridor', an area of large-scale language contact, multilingualism, and mutual influence, and a path along which many of the nationalities moved when they migrated south.⁹ Language contact, shared innovation within a subgroup (e.g. Kiranti), or a combination of the two then all are possibilities, yet Bauman (1974, 1975*a*) gives only the following possibilities for the development of the Tibeto-Burman verb agreement systems: native (i.e. Proto-Tibeto-Burman) development, borrowing from Munda (an Austroasiatic group), borrowing from Indo-Aryan, and the Turanian hypothesis (the idea that all of central and eastern Asia's languages except the Indo-European ones are related). He states that 'No other possibilities seem forthcoming, with the doubtful exception of independent innovation wherever the feature appears.'¹⁰ (1974: 118). Yet, first of all, independent innovation in two or more subgroups cannot be dismissed so lightly. As Thurgood (1985: p.378, n. 4) has argued, 'many similarities between closely-related languages are what Sapir [1921/1945, ch. viii] called "drift"; that is, the common starting point provided by a common origin often conspires with universal tendencies to provide parallel but historically quite independent paths of development among genetically related languages.'¹⁰ Second, the other logical possibility, that one or more languages in the family independently developed a verb agreement system and it spread geographically (possibly aided by similar features in local non-Tibeto-Burman languages), has not been explored in any of the literature arguing for a Proto-Tibeto-Burman verb agreement system. Given this possibility, whether a particular grouping of languages has one pronominalized language, especially if that one language is in contact with pronominalized languages in other groups, is not particularly relevant.

Throughout South and South-East Asia we see the spread of areal features (either through outright borrowing, by (morphological) calque, or combined innovation-areal influence) of all types, such as tone systems, phonetic inventories, noun classifier systems, double causativization, and word order patterns,¹¹ yet nowhere is the possibility of areal spread of verb agreement systems within Tibeto-Burman mentioned. Bauman (1974: 144) does mention areal (Lolo-Burmese and Barish) influence as a possible reason why some verb agreement systems *do not* have the complex number distinctions that other languages have; those without such distinctions would supposedly have 'levelled out' the distinctions because of contact with the morphologically simpler languages (see also below, §3.1).

We then have, aside from the Proto-Tibeto-Burman verb agreement system hypothesis, three other possibilities: (a) those languages with verb agreement systems are genetically related on a higher level; (b) a verb agreement system independently developed in one language and spread geographically; or (c) some combination of innovation within two or more subgroups and geographic spread or drift occurred. It is this last possibility that seems most likely given the fact that not all of the systems we find are of the same type (Thurgood, 1985: 337; Caughley, 1982: 206; DeLancey, 1989b: 315).

2. Time depth

Those languages that do not have verb agreement systems, the vast majority of all Tibeto-Burman languages, have *no trace whatsoever* of ever having had one.¹² These languages include four of the five languages which have writing systems more than four hundred years old: Tibetan (seventh century), Burmese (twelfth century), Newari (fourteenth century) and Yi (Lolo; sixteenth century). Tangut (twelfth century), on the other hand, has an optional, morphologically simple, etymologically transparent verb agreement system that shows no signs of age. It is highly unlikely that Tibetan, Burmese, Newari, and Yi would all have lost every trace of their verb agreement systems while Tangut's did not age at all. DeLancey (1989b: 316) discounts this argument because he says 'it rests on the demonstrably false premise that no contemporary language could, in any significant respect, be more conservative than a related language attested from a millennium ago.' Yet the situation is not that simple. For example, Written Tibetan preserves a very archaic set of prefixes and suffixes (unrelated to the set we are discussing here), which has uncontroversially been reconstructed for Proto-Tibeto-Burman, and might even go back to Proto-Sino-Tibetan.¹³ If we were to accept a Proto-Tibeto-Burman verb agreement system along the lines of what DeLancey is suggesting, then we would be in effect saying that Tibetan completely lost that agreement system while retaining remnants of the earlier system of prefixes and suffixes. This would be a hard stretch of the imagination. Van Driem (1991: 532) gives a similar argument to DeLancey's, and states that 'the loss of an inflectional system in one group of languages . . . and its retention in another genetically related group is a widely attested phenomenon', yet the point is that even with all the varying opinions about subgrouping in Tibeto-Burman, there is no controversy that aside from Burmese-Yi forming a branch within Tibeto-Burman, Tibetan, Burmese-Yi, and Newari do not form a group in any sense, so the 'loss' that van Driem speaks of would have to be explained in each individual case. Van Driem (1991: 532) also argues that 'developments in the phonology of many language groups, such as the Draconian restrictions on syllable structure and polysyllabicity, provide typological reasons which readily account for the widespread loss of a verb agreement or other inflectional system.' Yet having such constraints does not account for the 'loss', as those languages that have such systems are subject to the same

constraints, and Old Tibetan was much less affected by such constraints than some of the modern pronominalized languages.¹⁴

Another factor is the etymological transparency and optionality of the Tangut system, and its clear pragmatic function of marking that speech act participant (SAP, i.e. 1st or 2nd person) most affected by/involved in the action of the predication.¹⁵ Kepping (1975, 1979, 1981, 1982, 1989) was the first to discuss agreement in Tangut, and table 1 (below) is taken from her work. Her analysis of the agreement pattern is that (a) the verb agrees only with SAPs, (b) it is optional,¹⁶ and (c) agreement is not related to semantic role unless there are SAPs in both the A and the P roles, in which case agreement is with the SAP in the P role.

From her own study of the Tangut text *The grove of classifications*, Ahrens (1990) has concluded that (a) verb agreement only occurs in quoted speech,¹⁸ (b) agreement is usually with the A and S arguments, not with the P argument; (c) when there are two SAPs involved in a clause, agreement is not necessarily with the P argument. There does not then seem to be a regular correspondence between participant role and agreement marking. In fact, if there is only one SAP in the clause, agreement will be with that SAP even if it is an oblique argument or the possessor of one of the other arguments (Kepping, 1982).

Agreement then in Tangut is related to SAP affectedness ('viewpoint'—see §3.4 below), not grammatical or semantic function. This clear discourse function marking the most salient speech act participant¹⁹ (Ebert, 1987, DeLancey, 1981a, 1981b) and the etymological transparency of most of the Tibeto-Burman verb agreement systems (the independent pronouns become attached to the verb) show that these agreement systems are relatively recent grammaticalizations of discourse prominence.

A possible example of evidence within the history of one language²⁰ for the development of a verb agreement system is the Singpho dialect of Jingpo, mentioned by DeLancey (1989b: 323) as a case of how rapidly a language can completely lose an agreement system. This dialect is 'spoken well to the west of the other dialects', and 'the time of separation of Singpho from its eastern siblings can hardly be even as much as a millennium' (ibid.; see also Grierson (1990: 1, 71) for the dating of this split). It seems more likely that that dialect, out of range of the

Table 1 Tangut agreement patterns and free pronouns

A role ¹⁷	P role	Pronom. clitic	Intransitive	Free pronouns
1	2	-na ²	1sg. -ŋa ²	1sg. ŋa ²
1	3	-ŋa ²	2sg. -na ²	2sg. na ²
2	1	-ŋa ²	3sg. Ø	3sg. Ø
2	3	-na ²		
3	1	-ŋa ²		
3	2	-na ²		
3	3	Ø		

areal features to the east, never developed a verb agreement system at all. If this were the case, it would give us a time depth of less than one thousand years for the development of the Jingpo verb agreement system, just what we would expect judging from the Tangut data.

3. Theoretical/methodological considerations

3.1. Reconstruction methodology

The discussion of Tangut points up a difference in methodology between myself and most of those supporting a Proto-Tibeto-Burman verb agreement system: DeLancey, Bauman, van Driem, and others reconstruct the most complex system possible, attempting to combine all the attested forms and features, and consider those languages that have the most complex systems, such as Gyarung, as the most conservative (DeLancey, 1987: 807-8; 1989b: 318).²¹ For example, Bauman (1974: 134) suggests that a complex system such as that for Nocte, with a tense-aspect split, is closer to the original Proto-Tibeto-Burman verb agreement system than a simpler system such as that of Tangut, which would supposedly have 'levelled out' the tense-aspect system. As pointed out above, Bauman (1974: 144) also argues that the verb agreement systems that do not have the complex number distinctions that other languages have, have 'levelled out' the distinctions because of contact with the morphologically simpler languages.

It is important to note that in arguing that the 'original' Proto-Tibeto-Burman verb agreement paradigm was quite complex (such as in fig. 1, below), and that those languages that have simpler systems (or no systems at all) have lost the 'missing' forms due to phonological attrition or levelling, those scholars are saying that Tangut inherited a complex system, yet through the process of phonological attrition and levelling distilled out a perfectly regular (i.e. morphologically simple), transparent system where the markings on the verb correspond exactly to the free pronouns in phonological shape. This type of teleological development seems to me a very unlikely possibility.

ke-				-ā ~ -ŋ ~ -ŋā					
ni									
2				1s		-u			2p
						3P			
a-	me-	VERB	-nāi	-te	-na	si	-si	-i	
1	pA	STEM	REF	PT	2	dA	dP	12p	
							-a		
ta-/na-				-nya			3	-k	
marked				1s>2				1p	
scenario									

Figure 1 Proto-Tibeto-Burman agreement system as reconstructed by van Driem (1990b: 50-51). (A = agent, d = dual, p = plural, P = patient, PT = preterit, REF = reflexive, s = singular, > = direction of transitive relationship; 1, 2, 3 = 1st, 2nd, 3rd person)

It also seems necessary for us to consider the relationship between Tangut and (at least some of) the modern Qiang languages, all of which have complex agreement systems involving tense/aspect and portmanteau morphemes. One or more of the Qiang peoples, particularly the Muya, have been said to be descendants of the Tangut (Ran, Li and Zhou, 1984: 184-5; Li, 1989: 222; see also Sun, 1991 on the relationship between the Qiang languages and Tangut). If the Muya language (Huang, 1985) is descended from Tangut, then to accept DeLancey and van Driem's view we would have to say that there was originally a complex system, Tangut then distilled out a simple system, and then that language again developed a complex system (presumably identical to, or at least cognate to, the old one). Again we have a very unlikely scenario.

Rather than reconstructing a system that tries to incorporate all of the modern features, we should reconstruct only those features for which we can show no clear line of development, i.e. opaque = archaic; we should reconstruct only those shared patterns for which we can find no motivation.²² Morphology is built of grammaticalizations (cf. Hopper, 1987; Thompson, 1988), so we should strip back the layers of grammaticalization from the grammar until we can go no further. What is left is what we should 'reconstruct'.

3.2. Grammaticalization

The methodological difference just mentioned also highlights a difference in the understanding of the way grammaticalization works. I follow Lehmann (1985) in assuming that we can determine the degree of grammaticalization of a sign by reference to how autonomous it is. The parameters involved in the autonomy of a sign are its semantic and phonological weight (integrity and scope), the degree of cohesion it has with other signs (i.e., its paradigmaticity and bondedness), and its syntagmatic and paradigmatic variability (mobility vis-à-vis other signs). The parameters and processes of grammaticalization are then as in Fig. 2 (Lehmann, 1985: 309).

Grammaticalization involves the 'attrition' (loss of integrity) of a sign, so that as grammaticalization progresses, there is a lessening in the phonological and semantic weight (including demotivation) of a sign. Along with attrition there is the concomitant 'paradigmatization', 'obligatorification' (loss of paradigmatic variability), 'condensation' (reduced scope), 'coalescence' (increased bondedness), and 'fixation' (loss of syntagmatic variability) (Lehmann, 1985: 305-9).²³ We see advanced stages of all of these processes in the complex verb agreement system languages, such as the Kiranti languages,²⁴ but only the beginning stages of it in Tangut. This is part of the reason why among the verb agreement systems that do exist in Tibeto-Burman languages, Tangut should be considered the most archaic and least grammaticalized. Arguing against this view, Van Driem (1991: 531) states that 'Tangut looks prima facie just as much like a degenerated and simplified Kiranti [agreement] system as it does like a primitive and rudimentary Kiranti system', yet if the Tangut system had gone through thousands of years of

parameter	weak grammaticalization	—process	> strong grammaticalization
integrity	bundle of semantic features; possibly polysyllabic	—attrition	> few semantic features; oligo- or monosegmental
paradigmaticity	item participates loosely in semantic field	—paradigmaticization	> small, tightly integrated paradigm
paradigmatic variability	free choice of items according to communicative intentions	—obligatorification	> choice systematically constrained, use largely obligatory
scope	item relates to constituent of arbitrary complexity	—condensation	> item modifies word or stem
bondedness	item is independently juxtaposed	—coalescence	> item is affix or even phonological feature of carrier
syntagmatic variability	item can be shifted around freely	—fixation	> item occupies fixed slot

Figure 2 The parameters and processes of grammaticalization (from Lehmann, 1985: 309)

degeneration and simplification, being subject to the kinds of grammatical processes outlined above, why are the affixes identical in phonological shape to the free pronouns, and why was the system still optional at the time the texts were written?

3.3. Head-marking vs. dependent-marking

Based on a careful survey of sixty languages, Nichols, 1986 outlines the facts and implications of a typological distinction between languages where the morphological marking of grammatical relations, if there is any, appears on the head of a phrase or clause, such as in Hebrew and Hungarian, and those where it appears on the dependent of the head, as in English and Japanese. For example, in the Japanese sentence below (from Nichols, 1986: 61, cited from Kuno, 1973: 129), the dependents are all marked for case, while the head is unmarked (the markers are preceded by 'M', the head by 'H'):

- (1) *Boku*^M *ga* *tomodati*^M *ni* *hana* *hana*^M *o* *agaeta*^H.
 1sg. SUBJ friend DAT flowers OBJ gave
 'I gave flowers to my friend.'

In the next example, from Tzutujil (Mayan, from Nichols, 1986: 61, cited from Dayley, 1981: 216), the nouns are unmarked, while the head has markers that indicate the person, number, and syntactic function (by the order of the markers) of the nouns:

- (2) *x*^M *Ø*^M *kee*^H *tij* *tzyaq* *ch'ooyaa*⁷.
 ASP-3sg.-3pl.-ate clothes rats
 'Rats ate the clothes.'

The difference between head-marking and dependent-marking morphology provides a functional explanation for certain aspects of grammar and word order (see Nichols, 1986, forthcoming for details; see also Van Valin, 1985, 1987 for the implications this distinction holds for grammatical theory).

Nichols did not make reference to any languages in Tibeto-Burman, but all of the Tibeto-Burman languages that do not have verb agreement systems are solidly dependent-marking (i.e., they have marking on the nouns for case or pragmatic function); those languages with verb agreement systems, a type of head marking, also have many dependent-marking features (of the same types as the non-pronominalized languages). The question, then, is which is older, the dependent-marking type or the head-marking (actually mixed) type? Based on a separate survey of 86 languages in fifteen families, Nichols found that morphological marking type is 'a conservative, stable feature in languages' (p. 89), such that almost all of the changes she found in the groups she studied 'involved accommodation to areal patterns' (p. 98). The most common change she found was the development of head-marking (as in the clisis of pronouns in Romance). Nichols found that in several respects 'head-marking patterns appear to be favored and universally preferred' (p. 101). She suggests that based on her studies, '... in the event that we have two clearly related languages with clearly cognate morphology, one of them strongly head-marking and one strongly dependent-marking, we should reconstruct the dependent-marking type' (p. 89). As this is the situation we have in Tibeto-Burman, we then have a typological argument for not reconstructing a verb agreement system for Proto-Tibeto-Burman. Two further arguments, also based on typological data, support this view.

There is a continuum across the pronominalized Tibeto-Burman languages in terms of the strength of head-marking. We can see for example the beginnings of head-marking in Angami Naga (Giridhar, 1980), where only kinship and body-part terms are head-marked for possession (and only certain stative verbs have person agreement), and its full development in Gyarong (Qu, 1984), where all nouns (and verbs) can be head-marked. This is in concord with Nichols's observation that the development of head-marking of nouns for possession will begin with cases of inalienable possession. We see the same process of dependent- to head- or double-marking (and not the opposite) through cliticization of pronouns occurring in other language families, such as the Oregon Penutian groups (Silverstein, 1979), and the Pama-Nyungan languages of Australia. In the latter, just

as in Tibeto-Burman, there is 'cliticization of pronouns . . . and expansion of the head-marked treatment of inalienable possession' (Nichols, 1986: 99).²⁵

There are many ways for head-marking patterns to develop: 'they may arise as isolating languages become agglutinating, and pronouns are cliticized to verbs . . . or they may develop from dependent-marking languages, through migration and clisis' (Nichols, 1986: 88). It is just such cliticization of pronouns to verbs that we see in the Tibeto-Burman languages that have verb agreement systems. We can see the development of very similar verb agreement systems in other parts of Asia (e.g. in Turkic and Mongolian languages—Comrie, 1980*a*, and in eastern Siberian languages—Comrie, 1980*b*), and in North America and Australia, as mentioned above. Dependent-marking, on the other hand, evolves only 'through extensive use of boundary shifting . . . so that the adposition becomes an affix on its former dependent', as occurred in the western languages of the Uralic family (Nichols, 1986: 88). We see no evidence of this process in Tibeto-Burman morphology. The dependent-marking system, or at least a non-head-marking system, must then be the original pattern.

3.4. The question of ergativity

Every major work on ergativity (e.g. Silverstein, 1976; Comrie, 1978, 1981; Dixon, 1979; Kibrik, 1985) defines ergativity in terms of semantic roles (i.e. A, S, and P).²⁶ A generally accepted minimum definition of ergativity is a system in which the S and P arguments are consistently marked²⁷ one way while the A argument is marked differently. In a split-ergative system, this type of marking is restricted to a particular temporal or referential domain, but the marking of semantic role is consistent within the relevant domain. The definition of split ergativity given by DeLancey (e.g. 1989*b*: 317; see above, §0) as marking person regardless of semantic role or syntactic function does not seem to be in accord with the generally accepted view of ergativity defined in terms of semantic role.

DeLancey (1989*b*: 318) states that the Gyarong paradigm is a split-ergative system, 'in that agreement is sometimes with object, i.e. in an ergative pattern, and sometimes with subject, with the choice determined by the person of the two arguments'.²⁸ Yet this statement is deceptive, as agreement in Gyarong is with 1st person any time a 1st person is involved, regardless of its semantic or syntactic function.²⁹ It is not proper then to speak of, for example, the Gyarong or Tangut verb agreement systems as ergative or split ergative systems, as they are clearly not marking semantic role or syntactic function, but simply discourse prominence.³⁰ DeLancey himself (1989*a*: 52), in speaking of the supposed Proto-Tibeto-Burman verb agreement system, says, 'Note that there is no evidence suggesting the original existence of case distinctions in the agreement suffixes, which index simply the presence of a 1st or 2nd person argument of the verb. While some case distinctions can be found in some of the modern East Himalayan languages, they are clearly secondary developments.' Kepping, who also supports the idea of Proto-Tibeto-Burman ergativity, says that 'verbal agreement

too [as well as noun marking] gives us no grounds for assigning Tangut to either the nominative or the ergative type' (1979: 267). Kepping's (1979, 1989) solution to this is to call Tangut a 'mixed' ergative-accusative language. This is, I assume, due to a (mistaken) assumption that there can only be two types of language, ergative and accusative, and so if it isn't clearly one or the other, it must be a mixture of these two types (see Klimov, 1986: 107 on the 'dubiousness of the notion of "mixed" type'). If we compare the Tangut verb agreement system with that of for example Dyirbal, an Australian language known for having an ergative system split according to person, it becomes very clear that the Tangut system is one based on person, not on semantic role, and is quite different from anything normally referred to as 'ergative'. In Dyirbal, 1st and 2nd person pronouns take nominative/accusative marking, while all other types of NP take ergative marking (from Dixon, 1979: 87):

A	-Ø	-ŋgu	-ŋgu	-ŋgu
S	-Ø	-Ø	-Ø	-Ø
O	-na	-Ø	-Ø	-Ø
	1st and 2nd person pronouns	3rd person pronouns	proper names	common nouns

Compare Tangut, where, when it is manifested, agreement is always with the SAP pronoun regardless of semantic role:

A	-ŋa ²	-na ²	-Ø
S	-ŋa ²	-na ²	-Ø
O	-ŋa ²	-na ²	-Ø
other	-ŋa ²	-na ²	-Ø
	1st person pronouns	2nd person pronouns	3rd person nouns and pronouns

Van Driem (1990*a*: 40), in discussing the different Kiranti 1st person singular agreement suffixes, states that 'The only common semantic denominator between the first singular morphemes . . . is first singular involvement.' Again, no evidence of ergativity. Boyd Michailovsky (1988: 111-113) explicitly demonstrates that the verb agreement system in Hayu is also clearly not ergative (though the language has ergative marking on the nouns), as agreement is with whichever argument is highest on the person hierarchy 1st person > 2nd person > 3rd person, *regardless of case role*.

In terms of methodology there is also the problem that in most of the papers which attempt to reconstruct a Proto-Tibeto-Burman verb agreement system, comparisons are done on highly simplified and selected parts of total agreement systems,³¹ and little is said of how the affixes are really used.³² For example, Bauman (1979: 423) gives the paradigms in Table 2, below, for Vayu (Hayu) and

Table 2 The Vayu and Chepang agreement forms for intransitive verbs and transitive verbs with 3rd person subjects (from Bauman, 1979: 423)

	<i>Vayu</i>		<i>Chepang</i>	
	<i>Intr. subj.</i>	<i>Trans. obj.</i>	<i>Intr. subj.</i>	<i>Trans. obj.</i>
1sg.	-ŋo	-ŋo	-ŋ	-taŋ
dl. incl.	-chik	-chik	-tayhoa	-tayhoa
dl. excl.	-chok	-chok	-ŋoa	-taŋoa
pl. incl.	-ke	-ke	-tayhi	-tayhi
pl. excl.	-kok	-kok	-ŋi	-taŋi
2sg.	-ʌ	-ʌ	-te	-te
dl.	-chik	-chik	-te- ja	-te- ja
pl.	-ne	-ne	-te- y	-te- y

Chepang, to show the 'ergative patterns of intransitive-transitive alignments'. Bauman (*ibid.*) states that 'Ergative patterns of agreement . . . are most clearly seen in languages like Vayu and Chepang, where the set of affixes which marks the person of intransitive subjects is identical or nearly so to the set which marks transitive objects in corresponding persons (provided the subject is 3rd person)'.

It is this parenthetical aside at the end of Bauman's statement that is the key to the logical error in Bauman's argument. Just as we have seen in Tangut, in Vayu and Chepang the basic pattern of agreement is with any SAP in the sentence, regardless of role, if the other participants in the clause are non-SAPs, so of course his 'ergative' pattern will only work when the subject is a non-SAP, and the single SAP in the clause is the object. I could use the same type of chart, but based on the SAP as subject instead of object, as evidence that these languages are of the nominative type, as the marking then would be the same for the intransitive and transitive subjects. This type of paradigm comparison then is of no use in trying to prove ergativity.

The type of agreement system we are talking about here is very clearly one based on person rather than syntactic function or semantic role.³³ If we accept Du Bois' (1985, 1987) association of absolutive marking with the information status 'new' and nominative marking with discourse pressures to mark the topic, then this should be seen as closer to a nominative system rather than an ergative one, since the clitic pronouns of the verb agreement systems are typical of the most unmarked topics (Lambrecht, 1986). Dixon (1979: 92) points out that as cross-referencing systems are basically pronominal, 'We expect them to be on a nominative/accusative pattern, since this characterizes pronouns, at the extreme left of [Silverstein's (1976) person] hierarchy.' Nichols (1986: 114) has suggested that

Head-marked patterns contribute to a flat syntax which minimizes intra-clause and inter-clause structure, freeing a language to concentrate on the grammaticalization of discourse prominence and cohesion. In fact it

turns out that it is precisely for head-marking languages that a number of traditional grammatical questions prove to be somewhat moot, because pragmatic and discourse relations (rather than strictly syntactic relations) are being grammaticalized.

In fact, Tibeto-Burman verb agreement systems represent a coherent and stable kind of system, one where agreement is based on person rather than clause syntax or semantics, and there is no need to explain them as degenerate ergative systems (see §4, below).

This type of marking based on person-number-animacy categories rather than grammatical or semantic relations, is what Nichols (*forthcoming*) refers to as 'hierarchical'. We find the same type of system in some North American Indian languages (e.g. Algonquian—Bloomfield, 1946; Nootkan—Whistler, 1985). Whistler (1985: 244) points out that this type of marking 'makes sense if one considers that it constitutes giving the natural "thematicity" of a SAP formal priority over its semantic role in explicit coding on the predicate.' DeLancey himself, in his earlier work (1980*a*, 1980*b*, 1981*a*, 1981*b*), developed a concept of 'viewpoint' based on the inherent saliency of the SAPs (i.e., that the 'most natural viewpoint for the sentence is with the SAP' (1981*a*: 638)),³⁴ yet still insists that the Tibeto-Burman verb agreement systems are split-ergative systems. As the older agreement systems are clearly this type of pragmatically-based grammaticalization of the discourse prominence of SAPs, they are no justification for reconstructing an ergative morphological system for Proto-Tibeto-Burman.³⁵

4. Conclusions

Bauman (1979: 430) suggests that there is a drift away from what he has defined as ergativity, but not towards accusativity, rather towards 'non-ergativity', as there are no unequivocally accusative Tibeto-Burman languages. He sees this 'non-ergativity' as the endpoint of historical change in Tibeto-Burman. I propose the opposite: that Tibeto-Burman *began* as a morphologically simple 'role-dominated' (Foley and Van Valin, 1977) language, similar to Chinese (see LaPolla, 1988*a*, 1988*b*, 1990), with which we must eventually link it. The various daughter languages later developed various means of coding either pragmatics (Tangut), syntactic function (Kham, Kuki-Chin), or semantic role (Tibetan), or some combination of these three. On this view, the typical Lolo-Burmese role-dominated system (epitomized by Lahu—see Matisoff, 1973) is closest to the original Proto-Tibeto-Burman system of grammatical relations, rather than being the most degenerate, as assumed by those proposing a Proto-Tibeto-Burman verb agreement system.³⁶

I would like to emphasize that I am not attempting to discredit any of the work DeLancey, van Driem, and others have done in reconstructing proto-agreement systems for those language groups that have clearly cognate systems. My contentions are only (*a*) that we do not have sufficient evidence to allow us confidently to assert that the suffixal pattern is a case of shared retention in those languages that

exhibit it, and that it was lost in those languages that do not exhibit it, so the dating of those systems that can be reconstructed for certain subgroups must be later than the Proto-Tibeto-Burman stage, and (b) that most of the systems we find are not of an ergative nature, and do not reflect semantic or syntactic relations, but all seem to have grown out of pragmatic pressures to mark the salient participants involved in the speech act. I have also here argued, using the question of a Proto-Tibeto-Burman agreement system as an example, that in doing morphological reconstruction, we should not build up morphological systems, and often end up engaging in 'paradigm stuffing', but should strip back the layers of transparent grammaticalization to arrive at an opaque core. Typologically and functionally based theories which point out the direction of grammaticalization allow us to do exactly that.

Notes

- 1 A shorter version of this paper appeared as LaPolla (1989). I should like to thank again all those who helped in the production of that paper (Scott DeLancey, Gary Holland, James A. Matisoff, Martine Mazaudon, Boyd Michailovsky, Johanna Nichols, Graham Thurgood, and Robert D. Van Valin, Jr.), and also Kathleen Ahrens, Søren Egerod, Alice C. Harris, and my colleagues in the Linguistics Section, especially Chu-Ren Huang, Ren-kui Li, Jackson T-S. Sun, Chih-chen Jane Tang, and Pei-chuan Wei, for their valuable comments on an earlier draft of this paper. Any mistakes or errors of judgement are of course my own.
- 2 'Grammatical relations' is here meant to include syntactic relations (manifested as the syntactic functions 'subject', 'direct object', etc.), semantic relations ('agent', 'patient', etc.), and pragmatic relations ('topic', 'focus', etc.). It is assumed that semantic and pragmatic functions are inherent in all languages, whether or not they are marked, though not all languages grammaticalize syntactic functions.
- 3 An outline of this investigation and its first results are given in LaPolla (1990).
- 4 By 'verb agreement system' I am only referring to the marking of particular participants in the clause with clitic pronouns, what Bloomfield (1933: 191-4) referred to as 'cross-reference', not to evidential systems like that in, for example, Lhasa Tibetan. The term 'pronominalization' is used to refer to the emergence of this type of system through the cliticization of personal pronouns, and so the languages that have undergone that process are sometimes referred to as 'pronominalized'. As we will see, this type of marking is not always related to syntactic function or semantic role, so 'person marking' would be a more appropriate term for this type of system, but I will adhere to tradition and use 'agreement' and 'pronominalization' instead.
- 5 Benedict (1983: 96) mentions in a footnote that pronominalization in Tibeto-Burman should be interpreted as being a relatively late innovation, and other scholars (e.g. Caughley, Nagano) have discussed the verb agreement systems they are familiar with as innovations, but no one has systematically analysed and refuted the arguments presented by those who support reconstructing a Proto-Tibeto-Burman verb agreement system.
- 6 See Shafer (1955, 1966), Benedict (1972), DeLancey (1987), Sun (1988), and Dai, Liu and Fu (1989) for five very different analyses of genetic relations in Tibeto-Burman. See also Burling (1983: 1) on how some of the traditionally used groupings, such as 'Naga', 'North Assam', and 'Kachin' (and we could add the newer 'Kamarupan') 'seem to label little more than geographically contiguous groups for which no genuine linguistic reality has been demonstrated.'
- 7 She shows, for example, that there is a particular direction marking system in common among some Kiranti and Rung languages, and, in talking about the relationship

- between Gyarong and the Eastern Kiranti languages, says 'there is no evidence for direction marking of the Kiranti-Rung type anywhere outside those groups ... The direction system, together with the distribution of the *t/-k-* prefixes, makes it seem likely that the ancestors of the Kiranti and the Gyarong once were at least neighbors participating in the *u/-u* direction marking and the prefixing wave' (p. 16).
- 8 See also Grierson (1909, vol. III), for particular characteristics shared between the eastern (e.g. Kanauri) and western (e.g. Kiranti and Kuki-Chin) Himalayan pronominalized languages not shared by the Tibetan languages, and Watters (1975) for discussion of the 'remarkable similarities' (p. 50) between the pronominals and subject marking systems of the eastern and western (now including Kham) Himalayan pronominalized languages.
 - 9 The area covered by these languages is relatively compact, and not large. For example, all of the Kiranti languages are spoken in an area of eastern Nepal only about 140 kilometers wide (see Michailovsky, 1975: 184 for map).
 - 10 Later in the same work, in a bracketed note, Thurgood's tone is a bit stronger: '[Note: it is already clear that at least some of the innovation patterns here are due at least in part to parallel but independent development.]' (p. 399). See also the discussion of Australian languages in footnote 25 below.
 - 11 See Emenau (1956) for evidence from India that 'linguistic features, especially those of morphology and syntax, can diffuse across genetic boundaries' (p. 16). See also Gong (1989) on the possibility that the system of postpositions reconstructable for parts of Tibeto-Burman is borrowed from the Altaic languages.
 - 12 By 'trace' here, I mean some remnant of an originally full system which no longer has any agreement functions, possibly some phonological alternation in the verb stems, or unexplained verbal suffixes, or a system that has degenerated into simple verb agreement (Bloomfield's 'congruence') rather than person marking, as in the change from the Latin person markings to the French verb agreement forms.
 - 13 The original function of many of these fossilized affixes is not yet clear. See Wolfenden (1929) and Benedict (1972) for two different analyses.
 - 14 As van Driem himself (1991: 527) says, 'In view of the complex morphologies of a great number of Sino-Tibetan languages, the total or near total lack of morphology in a large number of Sino-Tibetan languages, such as Chinese, requires an explanation.'
 - 15 Van Driem (1991: 528-9), argues that agreement cannot be with the most affected 'actant', and gives two Tangut sentences as proof. In each sentence the patient of the verb meaning 'to kill' is a third person ('wife'/'wives' respectively) and agreement is with a second or first person possessor (i.e. the husband/husbands) of the patient. Van Driem feels that the wives in these sentences are the most affected 'actants', and as agreement is not with them, 'It would be inaccurate, if not misogynous, to argue that the patients indexed by the verbal agreement endings are the most affected actants' in those sentences. The reason for van Driem's argument is unclear, as no one has argued that agreement is with the most affected 'actant'. Agreement is only with SAPs, and in each of the sentences van Driem cites there is only one SAP, so agreement is with that SAP.
 - 16 Van Driem (1991: 525) misrepresents the Tangut system by stating that 'involvement of a third person actant is marked by zero in all Tangut verb forms'. Third person actants are unmarked, but this is not the same as saying they are marked by zero; as the agreement affixes do not obligatorily appear on each verb, or even on the majority of verbs in the Tangut texts, and only one SAP participant is marked, even when there are two in the sentence, it is wrong to assume that Tangut non-marking is equivalent to marking by a morpheme with a zero phonetic realization. Van Driem's statement (1991: 525) that 'A transitive verb agrees with its patient unless the patient is marked by zero' is also a misrepresentation of the facts, and is in fact nonsensical. It is equivalent to saying that 'agreement is with the patient except when it is not with the patient'.
 - 17 Kepping uses the terms 'subject' and 'direct object', yet as we have no evidence that these syntactic functions existed for Tangut speakers, I will use A, S, and P instead. These

- symbols refer to the three major types of argument: S, the single argument of an intransitive verb; A, the argument which prototypically would be the agent of a transitive verb; and P, the argument which prototypically would be the patient of a transitive verb (Comrie, 1978). Kepping also posits a 1st and 2nd person plural agreement marker, *ni*², but Nishida (1987: 20) considers this to be a subjunctive particle. If Kepping is correct, then if a single clause had both 1st and 2nd person plural referents, this morpheme would be ambiguous. This fact would seem to preclude any analysis crucially involving semantic role or syntactic function.
- 18 Supporting Ahrens's view is the fact that this system does not seem to have been used in anything like the majority of clauses in the Tangut texts that Kepping studied, and Kwanten (1982) did not find any trace of it in two Tangut texts he studied. Possibly because of the scarcity of this pattern, two other Tangut scholars, Nishida (1964-66) and Sofronov (1968), earlier analysed Tangut as a non-pronominalized language (both cited in Kepping 1975 and Kwanten 1982). (Nishida has since (1987) changed his view and accepted the concept of agreement in Tangut, though he disagrees with Kepping on some of the particulars.) Ahrens's conclusion on this point might also simply be a reflection of the lower frequency of SAP referents in non-conversational discourse.
 - 19 The coding of speaker-hearer involvement is marked in various ways aside from this particular agreement pattern in many Tibeto-Burman languages; see for example Toba (1980), and Watters (1980) for two other systems within Nepalese Tibeto-Burman languages. See Silverstein (1976, 1981) on the cross-linguistic implications of the person saliency hierarchy, and the common grammaticalization of 'the perspective from which a state of affairs is predicated of referents, the most "natural" being that which grows out of the configuration of the ongoing speech event', the 'maximally supposable entities' of which are the SAPs (Silverstein 1981: 243).
 - 20 There is one other case, that of Tiddim Chin (Henderson 1957), but I am not sure what to make of it. In Literary Tiddim Chin there is no trace of the proposed Proto-Tibeto-Burman suffixal agreement system, though there are pronominal prefixes for both nouns and verbs. Colloquial Chin, on the other hand, prefixes nouns, but suffixes verbs, as in Kiranti. (Cf. the closely related Sizang (Siyin) dialect (Stern, 1963), which has the same prefixing system, but no suffixing system, and the evidence (Ahrens, 1990; see above) that in Tangut pronominalization only occurs in quoted discourse.) The problem is we do not know for certain which of the two styles is the more conservative.
 - 21 See for example DeLancey's comment in discussing the prefixal paradigm: 'If the modern languages do retain their prefixes from an older paradigm, then that paradigm must have been more complex than any of its attested reflexes' (1989b: 331).
 - 22 Such as with the reconstruction of second-position pronouns in Indo-European. Cf. the following quote from Meillet (Watkins, 1969: 17) (pointed out to me by Gary Holland):

La grammaire comparée doit se faire en utilisant les anomalies — c'est à dire les survivances — bien plus que les formes régulières . . . Les traités de grammaire comparée ont souffert de ce que, pour la restitution de l'état initiale, l'importance attribuée aux formes normales des états de langue historiques est trop grande.

- 23 Cowgill (1963) also argues (based on Indo-European evidence) that there is a direct relationship between the morphological complexity of a set of affixes and its antiquity.
- 24 Kiranti languages will often have as many as eight suffixal slots, as well as two or more prefixal slots, many portmanteau morphemes, tense or aspect distinctions, and complex morphophonemic rules (see Ebert, 1990, van Driem, 1990a).
- 25 The similarities between the Australian and the Tibeto-Burman situation are striking: in the following discussion of Australian pronominalization, Dixon (1980: 363) could just as easily have been discussing the situation in Tibeto-Burman:

It is clear that the bound-form pronouns have developed from free forms ... relatively recently, and that this process of evolution must have taken place

independently in several different regions. Having begun in some language within a certain area this development then diffused to neighboring tongues.

- Just as in Tibeto-Burman, Australian languages have 'a propensity towards developing bound pronominal forms, but ... this is further advanced in some languages than others' (ibid.). Cf. also Dixon's map of the spread of pronominalization in Australia (p. 364). The Australian facts are also clear evidence that van Driem is simply wrong in stating that this type of contact induced spread is 'unattested' (1991: 532).
- 26 See also Dryer's statement (1986: 841) that 'The ergative/absolute and Subject/Object distinctions differ in that the former is linked to semantic roles, the latter to discourse/pragmatic function'. See Givón (1980) and Klimov (1984) on seeing ergative morphology as being semantically based on the contrast of agent vs. non-agent.
 - 27 We are speaking here only of morphological ergativity; syntactic ergativity has no necessary correlation with morphological ergativity (Comrie, 1981: 65ff.). We are also not talking about the ergative nominal morphology ('case marking') found in many Tibeto-Burman languages, a type of dependent-marking; I am dealing here only with marking on the verb, a type of head-marking. The two are quite different. (See §3.3 above for definitions of marking types. See also LaPolla (1991) for discussion of nominal morphology in Tibeto-Burman.)
 - 28 Another problem with DeLancey's analysis is that while in some languages agreement may be regularly with the P (or other non-A) role NP when there are two SAPs in the clause, in some other languages, such as Qiang and Deng (Kaman), agreement in that situation is consistently with the A role NP (Sun, 1983b).
 - 29 This is generally true also for Nocte (Das Gupta, 1971—cited in DeLancey, 1981a), Muya (Huang, 1985) and Dulong (Sun, 1983b).
 - 30 Nagano (1984, 1987) discusses the possibility of seeing the Gyarong *u-* prefix as a type of ergative marker, as its distribution is the same as the nominal ergative marker, but he does not see the person markers as ergative marking.
 - 31 In doing cross-linguistic comparisons, DeLancey generally gives only the singular paradigms, but if we look at the complete paradigms we often see that the paradigm is very language specific in that it transparently reflects the independent pronouns. Compare for example the Gyarong independent pronouns and the intransitive verbal affixes (ICog-rtse dialect—Nagano, 1983: 106):

person	affix	pronoun	person	affix	pronoun
1sg.	-ng	nga	2sg.	-n	no
1dual	-ch	chi-gyo	2dual	-Nch	ji-gyo
1pl.	-y	yo	2pl.	-ny	nyo

The affixes we find in the verbal person-marking systems are in most cases also clearly related to the nominal possessive affixes. Compare the nominal and verbal affixes from the Suomo dialect of Gyarong (Jin et al. 1958):

person	noun affix	verb affix	person	noun affix	verb affix
1	ŋə/ŋa	ŋ	1pl.	ji/ja	i
2	nə/na	n	2pl.	ni/na	n _L
3	wə/wa	u	3pl.	ndʒə/ndʒa	wu/u

We then have three possibilities: (a) the entire verbal paradigm, plus the nominal paradigm, of each language is descended from Proto-Tibeto-Burman; (b) both paradigms reflect the same innovation of pronominalization within each language or language group; (c) each language just inherited the first and second singular forms of the verbal paradigm, then fleshed out the rest of the forms (possibly one hundred forms, see Ebert 1990 for the Chamling paradigm) based on its own free pronouns. Only comparative research on full paradigms will allow us to decide which of these possibilities is the most likely one.

- 32 Van Driem (1991: 531) claims that in my earlier paper (LaPolla, 1989) I provided only a portion of the Tangut agreement system, while in fact my explication of the system is more complete than his, as he leaves out the crucial fact that the system is not only not obligatory, but is in fact rare in the Tangut texts (see n. 18 above).
- 33 See Hale and Watters 1973: 209-17 for a discussion of person markers on the verb as 'focus' (topic) markers. The type of topicality we are talking about here is not a simple one, as it is an intersection of discourse or sentence topic with the inherent topicality/saliency of SAPs. That is, the marking of discourse topic is constrained by the person of the arguments involved.
- 34 See also the quote from Silverstein in n. 19 above. Delancey's 'viewpoint' is similar to Kuno's (1976, 1987) 'empathy' hierarchies, which Van Valin (1990) reduces to a single principle 'E(more topical NP) > E(less topical NP)', i.e., empathy is with the more topical NP.
- 35 In some languages in the Tibeto-Burman area and in North America there is a secondary marking of the direction of the transitive action, but this is almost always etymologically separate from the person marking, and in some cases even this direction marking is sensitive to discourse thematic factors rather than purely reflecting semantic role (Whistler, 1985: 245).
- 36 There are a number of other facts about the Tibeto-Burman languages that also lead to this conclusion, including commonalities with Old Chinese, but they are outside the scope of the present paper. (See LaPolla, 1990, ch. v, for a brief discussion of some of them.)

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PARALLEL GRAMMATICALIZATIONS IN TIBETO-BURMAN LANGUAGES

Evidence of Sapir's 'drift'

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1. Introduction

In chapters seven and eight of his book *Language*, Sapir talked about what he called 'drift', the changes that a language undergoes through time. He characterized it this way:

... [L]anguage is not merely something that is spread out in space, as it were—a series of reflections in individual minds of one and the same timeless picture. Language moves down time in a current of its own making. It has a drift . . . The linguistic drift has direction. In other words, only those individual variations embody it or carry it which move in a certain direction, just as only certain wave movements in the bay outline the tide. The drift of a language is constituted by the unconscious selection on the part of its speakers of those individual variations that are cumulative in some special direction. This direction may be inferred, in the main, from the past history of the language.

(1921:150/155)

Dialects of a language are formed when that language is broken into different segments that no longer move along the same exact drift. Even so, the general drift of a language has its deep and its shallow currents; those features that distinguish closely related dialects will be of the rapid, shallow currents, while the deeper, slower currents may remain consistent between the dialects for millennia. It is this latter type that Sapir felt is 'fundamental to the genius of the language' (p. 172), and he said that 'The momentum of the more fundamental, the pre-dialectal, drift is often such that languages long disconnected will pass through the same or strikingly similar phases' (p. 172). One example of such a situation that Sapir

discusses is the development of plurals of the type *mouse* : *mice*, *foot* : *feet* in both English and German (*Maus* : *Mäuse*, *Fuss* : *Füsse*), even though there is no evidence of this type of plural in the common parent of these two languages (see p. 172ff. for details).¹

In the Tibeto-Burman family of the Sino-Tibetan language stock we also have examples of this type of parallel drift. We often find that a specific type of grammaticalization appears in different sub-groups of the family, even sometimes using the (etymologically) same morpheme(s), though there is evidence that that particular grammaticalization arose independently in each of the languages (or language groups). In this paper I will give examples of six such types of grammaticalization ('anti-ergative' marking, ergative marking, direction marking, causative marking, person marking, and existential verbs), and argue that the fact that so many languages in the family often grammaticalize the same types of grammatical categories, and often use the same morphemes to do it, is a result of the influence of the drift that is 'fundamental to the genius of the language', the common core or nature that these languages share as a result of them having a common origin. That is, certain characteristics of the common starting point of these languages influenced the path of development of each language, and this caused the parallel developments. I will go one step further than Sapir and suggest that just as the direction of the drift 'may be inferred . . . from the past history of the language', we can trace back along that direction to infer from the drift the nature of that common starting point.

2. Anti-ergative and ergative marking

From a survey of 'object' marking in one-hundred-twenty-six reliable grammars or descriptions of languages and dialects in the Tibeto-Burman family,² it was found that twenty-two languages had no nominal object marking, twenty languages had nominal morphology consistently marking the patient as object, regardless of whether the clause included another non-agent argument (i.e. was either transitive or ditransitive), and eighty-four languages had a type of marking where the patient in monotransitive clauses is often or always marked with the same postposition as the goal, beneficiary, or other non-actor argument in ditransitive clauses. Following are examples of this type of marking from three Tibeto-Burman languages:³

(1) Lahu (Northern Thailand; Matisoff 1973:156-7)

- a. nə thà? tâ dɔʔ.
1sg OBJ NEG.IMP hit
Don't hit me.
- b. li? chi nə thà? piʔ.
book that 1sg OBJ give
Give me that book.

(2) Kokborok (Bangladesh; Karapurkar 1976:54-5)

- a. buɾuɾy-čhikla-rəg-nə rəhór-di.
girl-young-many-OBJ send-IMP
Send the young girls.
- b. bə-ta-nə may ča-ru-di.
pron.pref.-elder.brother-OBJ rice eat-give-IMP
Give food to your elder brother.

(3) Kham (Nepal; Watters 1973:44, 46, 54)⁴

- a. nga: zihm nga-jxy-ke.
1sg house 1sg-build-PAST
I built a house.
- b. no-e ka:h-lay poh-ke-o.
3sg-ERG dog-OBJ beat-PAST-3sg
He beat the dog.
- c. no-e nga-lay cyu:-na-ke-o.
3sg-ERG 1sg-OBJ watch-1sg-PAST-3sg
He watched me.
- d. no-e nga-lay bxhtanji ya-na-ke-o.
3sg-erg 1sg-OBJ potato give-1sg-past-3sg
He gave a potato to me.

To discuss just one of these examples in depth, we can see that in (3a) the marker *lay* is not used, and this is because the relevant referent ('house') is not animate; in (3b) *lay* marks an animate patient; in (3c) it marks a human patient; and in (3d) it marks a human recipient. I will refer to this type of marking as 'anti-ergative' marking, as the crucial function of this type of marking is to mark an animate argument that might otherwise be interpreted as an actor as being something other than an actor. In this way it is the opposite of the type of ergative marking we find in some of these same languages, which marks an argument as being an actor.⁵ In those languages that have both types of marking, it is often optional whether to use one or the other or both, but the marking is often not systemic, as it is used only to disambiguate two arguments when that becomes necessary due to the semantics of the referents, the actions involved, or the pragmatic viewpoint (see for example Matisoff 1973:155-8 on Lahu *thà?*, Wheatley 1982 on Burmese *kou*). It is especially common for overt marking (either ergative or anti-ergative) to be necessary when the most natural (unmarked) topic, the agent, is not the topic, and instead appears in the preverbal focus position.

We find this type of postpositional anti-ergative marking in the following languages and dialects:⁶ Achang, Longchuan (*te*⁵⁵); Achang, Xiandao (*te*⁵⁵); Adi, Milang (*m/um*); Adi, Padam (*əm~m*); Akha, Lampang (*əŋ*); Anong, Muguja (*kha*³¹); Apatani, Reru/Mudan Tage (*mi*); Bai, Jianchuan (*no*³³); Baima, Baima

Commune (*tša*⁵³); Balti, Baltistan (*la*); Bengni, Na (*ñi:/m*); Bokar, Smin-gling (*m~ham/me*); Bola, Kongjia village (*ʒe*³¹); Bunan, Bhaga Rwer (*rog/dog/tog/kog/zhog*); Burmese, Rangoon (*kou*); Central Monpa, Dirang Ke (*ga*); Chamling (*lai*); Chang, Tuensang (*to/cha*); Chaudangsi-Byangsi (*ja*); Chepang, Eastern (*kay*); Daofu, Chengguan (*gi*); Darang, Xiachayu (*we*^{55~we³¹); Dhimal, Darjeeling Terai (*ēng*); Dulong, Dulonghe (*le*³¹); Ersu, Zeluo Commune (*va*⁵⁵); Galong, Kombong (*ém~m*); Geman, Xiachayu (*ji*^{35~wi³⁵); Gurung, Ghacok (*lai*); Hill Miri, Tamen/Raga (*m/em/ém*); Idu, Chayu (*go*³¹); Jingpo, Enkun (*hpe*⁵⁵); Jinuo, Manka/Mandou (*a*³³); Jirel, Jiri-yarsa (*la*); Johari (*cəbəŋ~cubəŋ*); Kaman (Miju), Parsuran Kund (*wi*); Kham, Taka (*lay*); Khoirao, Thanga (*yō*); Kinnauri, Lower Kinnaur (*pəŋ~u~nu*); Kokborok, Debbarma (*no*); Ladakhi, Lower (*la*); Lahu, Black (*thà?*); Langsu, Yunqian (*ʒe*³¹); Lhomi, Chepuwa (*lag*); Lisu, Bijiang (*te*⁵⁵); Lyusu, Muli (*wə*⁵³); Menba, Cuona (*le*³¹); Menba, Motuo (*ga~ŋa~ea*); Miji, (Dhimmai) Nafra (*ru*); Mikir, Hills-Karbi (*phan*); Miri, Shaiyang (*em*); Muya, Shade district (*le*³³); Namuzi, Muli (*də*⁵⁵); Naxi, Western (*to*⁵⁵); Newari, Dolakha (*ta*); Newari, Kathmandu (*(ya)to*); Nishi (Dafla), Leli (*ŋam~am*); Nishi (Dafla), Yano (*em~ne*); Nocte, Hawa-jap (*nang*); Nusu, Middle Bijiang (*na*³⁵); Pattani, Shansha (*bi/ting*); Pumi, Jinghua (*tei*^{55/bie⁵⁵); Pumi, Taoba (*pe*³⁵); Qiang, Taoping (*zie*^{33/zō³³); Queyu, Xiaozhan (*ku/ʒa*); Rawang (*hka*); Sangkong, Xiaojie (*la*³³); Sharchhokpa-lo (Tsangla), Kanglung (*ga*); Sherpa, Chunakpu (*laa*); Shixing, Lanman (*si*^{55,33 /xō⁵³); Singpho, Bordumsa (*phe/ang*); Tagin, Taliha (*a~am/nga-ngam*); Tamang, Bagmati Anchal (*ta*); Tamang, Murmi (*dā/tā*); Tangsa, Jogli (*ma*); Tangsa, Kimsing (*ma*); Tangsa, Longcang (*mo/ma*); Tangsa, Moklum (*ma*); Tangut (?In); Tankhur Naga, Ukhrul (*ri*); Thulung, Mukli (*lāi*); Tibetan, Classical (*la*); Tibetan, Lhasa (*la~vowel lowering, tone change*); Zaiwa, Xishan Zaiwa (*le*^{55/ʒe⁵⁵). These languages represent the Burmish, Loloish, Jingpo, Nungish, Tibetan, West Himalayan, Tani, Mishmi, Qiangic, East Himalayan, Barish, and Naga branches of Tibeto-Burman, and cover almost the entire Tibeto-Burman geographic area.}}}}}}

In a number of these languages the patient argument is generally unmarked, but the dative or dative/locative marker can sometimes be, or is often, used for human patient arguments, as in Balti, Bodo (Standard Plains Kachari), Bunan, Dhimal, Gurung, Magari, and Tamang. In those languages with anti-ergative marking, that marking is most often (27 of the 84 languages with this type of marking) isomorphic with the locative or allative marker, which undergoes metaphorical extension to human patient or goal arguments, or the marking is derived from some sort of locative noun through grammaticalization (e.g. Lahu *thà?*, derived from the locative noun *thà?* 'upper side; top surface'—Matisoff 1988:676). From the total survey of 126 reliable grammars or language descriptions, 84 languages showed some evidence of the anti-ergative pattern, 20 languages with nominal morphology (postpositions) did not show the anti-ergative marking pattern,⁷ and 22 had no postpositional 'object' marking.⁸ Out of the 104 languages that have some type of 'object' marking, then, fully eighty percent show the anti-ergative pattern of marking.

From the fact that most of these latter languages have grammaticalized different morphemes to mark the anti-ergative arguments, we can assume that this marking (at least as we find it synchronically attested in these languages) is not of great time depth. That the marking is very recent can be seen in the fact that while it is possible to reconstruct forms for some low-level groupings such as Tani or Tibetan, in other branches even closely related languages have different anti-ergative markers (e.g. Lahu (tháʔ), Akha (áŋ)), or differ in terms of having anti-ergative marking or not (e.g. Akha, which has anti-ergative marking, and Hani, which does not). On the other hand, the fact that so many languages grammaticalized the same type of function suggests that either anti-ergative marking was a fact of an earlier stage of this family and all or most of the original markers have been lost or renewed, or there was something about the proto-language that caused the daughter languages to grammaticalize the same type of function. A third possibility is that this feature is an areal trait, and is not constrained by genetic boundaries. We have no evidence that there was anti-ergative marking at some earlier stage that was lost, and I have not found evidence of non-Tibeto-Burman influence in terms of this marking on Tibeto-Burman languages inside the People's Republic of China,⁹ therefore I believe this is a case best explained in terms of the second possibility, that is, it is a prime example of Sapir's 'drift'.

A separate survey of 145 languages and dialects (LaPolla 1993a) turned up 106 with agentive (ergative) marking. A comparison of the forms used for this marking gave results similar to that for anti-ergative marking. That is, though this type of marking could be reconstructed to some branch level units (e.g. Proto-Bodish), there was no form that could be reconstructed to Proto-Tibeto-Burman or even to the higher level units within Tibeto-Burman such as Baric or Bodic. The use of agentive marking in many of the languages is also similar to anti-ergative marking in being non-paradigmatic. That is, its use depends on the speaker's determination of the need for emphasis or clarity, and is not part of an obligatory paradigm. For example, Li & Wang (1986:78) give the following choices of word order and marking for expressing the meaning 'You(pl.) teach us' in Hani, the differences being purely pragmatic:¹⁰

- (4) a. no⁵⁵ja³³ ŋa⁵⁵ja³³ jo⁵⁵ me³¹.
2pl 1pl OBJ teach
b. ŋa⁵⁵ja³³ jo⁵⁵ no⁵⁵ja³³ me³¹.
1pl OBJ 2pl teach
c. no⁵⁵ja³³ ne³³ ŋa⁵⁵ja³³ jo⁵⁵ me³¹.
2pl ERG 1pl OBJ teach
d. ŋa⁵⁵ja³³ jo⁵⁵ no⁵⁵ja³³ ne³³ me³¹.
1pl OBJ 2pl ERG teach
e. no⁵⁵ja³³ ne³³ ŋa⁵⁵ja³³ me³¹.
2pl ERG 1pl teach
f. ŋa⁵⁵ja³³ no⁵⁵ja³³ ne³³ me³¹.
1pl 2pl ERG teach

In cases where there is no likelihood of confusion, the agentive marker need not be used (Li & Wang 1986:98). This pattern of use is quite common in Tibeto-Burman.

As in many Tibeto-Burman languages, the agentive marker used in Hani is isomorphic with the ablative, or source, marker, and this is its probable origin, which by metaphorical extension comes to be used for marking agents, the 'source' of the action (cf. DeLancey 1981, LaPolla, to appear). Another common pattern of isomorphy related to agentive marking is that of the instrumental and agentive markers.¹¹ In terms of the anti-ergative marking, the most common pattern of isomorphy is that between locative/allative and anti-ergative (LaPolla, to appear). What we have then in many Tibeto-Burman languages are parallel extensions leading to the use of locative or allative markers for marking non-agents, and the use of ablatives or instrumentals for marking agents.

The development of anti-ergative and ergative marking in so many Tibeto-Burman languages then is evidence for a particular type of common starting point or motivation in Proto-Tibeto-Burman. Something about Tibeto-Burman languages or the people that use them led to these parallel developments. The question then is, how do we characterize this common starting point? If we are to reconstruct it for Proto-Tibeto-Burman, what exactly is it are we to reconstruct? I have suggested (LaPolla 1992a, 1993a) that, at least in these Tibeto-Burman languages, ergative and anti-ergative marking systems are not so independent, in the sense that both follow from a single motivation: the disambiguation of semantic role. In many of these languages the actor marking and the anti-ergative marking have the same type of use and distribution; in transitive sentences either ergative or anti-ergative marking, or both, can be used. The marking is simply for semantic disambiguation.

Those languages that have postpositions, but do not have the anti-ergative marking pattern (e.g. Tujia, Hani) generally mark NP's by strictly semantic principles. That is, a locative/goal (when marked) will always be marked the same way, and a patient/theme (when marked) will always be marked the same way, and there are no relation changing (or 'promotion') rules (e.g. passive, dative, antipassive). We then have two types of marking in Tibeto-Burman. Both are semantically based, but one (ergative and patient marking) is based on what semantic role a referent has,¹² and the other (anti-ergative marking) on what semantic role a referent does not have. The development of both types of marking can be said to be related to the importance of semantic role, pragmatic viewpoint, and animacy to the users of these languages.

3. Direction marking

Wolfenden (1929) first pointed out how common what he referred to as 'directive' systems are across Tibeto-Burman. This verbal category involves the morphological or syntactic marking of the motional component of the action represented by

the verb, usually also including deictic specification of direction. In an insightful paper on the cycle of analysis-synthesis-relexification that we often find in the grammaticalization process, Scott DeLancey (1985) gives evidence that though direction marking is quite common in Tibeto-Burman, and so would appear to be reconstructable to Proto-Tibeto-Burman, no attested system can actually be traced back to the Proto-Tibeto-Burman stage. A separate survey of 145 languages and dialects of Tibeto-Burman done by the present author showed DeLancey's conclusion to be correct. What we find is independent grammaticalization of the same type of direction marking, often using the (etymologically) same morphemes, in related languages.

One example that DeLancey gives is in the Kuki-Naga branch of the family. DeLancey shows that at the stage of Proto-Kuki-Naga the motion verbs (*ra 'come', *wa 'go', *g-wang 'come, ascend') did not constitute a syntacticized class; they concatenated freely with other verbs, either following or preceding those verbs. After the split to Proto-Naga and Proto-Kuki, in Proto-Naga these verbs developed into a grammaticalized class of auxiliary verbs that followed the main verb, and in Proto-Kuki they grammaticalized into preverbal position. Thus DeLancey (1985:373) states that 'it is clear that the syntacticized directive construction developed independently in Proto-Naga and Proto-Kuki, and some languages in each branch have proceeded, again independently, to the stage of complete morphologization'.

We find in Jingpo (a language not closely related to the Kuki-Naga languages) the grammaticalization of the reflex of *ra into a direction marker as well. Jingpo has a general motion verb *sa wa*, which can take (as can other motion verbs) the deictic postverbal particles *r-* 'hither' (< *ra) and *s-* 'hence' (Example from DeLancey 1985:370):¹³

- (5) a. McGam gat de? sa wa s-ai
 market to go hence-PART
 MaGam went off to market.
 b. MaGam gat de? sa wa r-a? ai.
 market to go hither-3rd PART
 MaGam came to market.

Another example given by DeLancey is the independent grammaticalization of the reflexes of the Proto-Lolo-Burmese verb *ay 'movement hence' into a directive marker in various Loloish languages, as in Lahu *qay* 'go' and in Nujiang Lisu *ge* 'go', both from *ga + *ay.

Here I have given only used DeLancey's examples, yet this phenomenon is very widespread in Tibeto-Burman (see for example Sun 1981 on direction marking in the Qiangic languages). Though this phenomenon is common cross-linguistically, it is not obligatorily developed by every language, so it is interesting that so many Tibeto-Burman languages have developed this type of direction marking.

4. Causative marking

In a large number of Tibeto-Burman languages we find two types of causative, one marked by a prefix on the verb, a difference in the voicing and/or aspiration of the initial consonant, a change in tone, or a combination of two or three of these types of marking. This type of causative is seen as the remnants of a Proto-Tibeto-Burman *s- causative prefix and/or a voicing contrast in the proto-language, and is not productive in most of the modern Tibeto-Burman languages. The second type of causative marking is what these languages resorted to after the common prefixing strategy was no longer productive.¹⁴ This is to take a verb meaning 'send on an errand, entrust with a commission', 'make', or 'give' and use it in construction with a main verb to create a causative construction. Following are examples from Lahu (7a -ci-) and Burmese (7b -se¹¹-) (from Matisoff 1976:418):

- (7) a. Johnny thà? qay-ci-ve.
 OBJ go-CAUSE-PART
 Make Johnny run.
 b. Johnny ko¹¹ θwa⁵⁵-se¹¹-tə¹¹.
 OBJ go-CAUS-PART
 Make Johnny run.

Though the forms used in these two languages for this construction are cognate, the pattern cannot be reconstructed to the Proto-Lolo-Burmese level (though the morphological causative can), so it must have been independently grammaticalized in each of the languages. We find this same structure in many other languages as well, both inside and outside Lolo-Burmese. Here are the forms used for this type of causative in 73 other languages and dialects within Tibeto-Burman (the dialect name, if available, follows the language name): Achang, Longchuan (xu⁵⁵); Achang, Xiandao (ʃaŋ³¹); Apatani (kenəŋ); Bai, Jianchuan (sɛ̃³³); Baima, Baima Commune (nbe¹³); Balti, Purki (cuk); Bokar, Smingling (mo:); Bola, Kongjia village (nə̃⁵⁵); Chang, Tuensang (ti); Chaudangsi-Byangsi (phin/phun); Chepang, Eastern (Maiserang Village) (tak); Chin, Cho (Hko) (hlak/pui/nak/si); Chin, Sizang (Siyin) (sa:k); Chiru, Manipur (masak); Cuona Menba, Mama Commune (tho⁵³); Daofu, Chengguan (və/nə vi/sphrə); Darang, Xiachayu district (koŋ³⁵); Darmiya (phun); Dulong, Dulonghe (su³¹dzu¹⁵³); Ergong, Dasang (pu); Ersu, Zelu Com-mune (ʃu⁵⁵); Garo, Garo Hills-Chisak/Awe (at); Geman, Xiachayu district (ka⁵⁵); Guiqiong, Maiben Commune (ku³³); Gurung, Ghacok (laba); Hani, Haya (bi³³); Hayu, Murajor (piŋ); Idu, Chayu (tia⁵⁵); Jingpo, Enkun (sha³¹ ngun⁵⁵); Jirel, Jiri-yarsa ('cyutq); Kachari (Bara), Darrang (hũnũ); Kaman (Miju), Parsuran Kund (halak); Khaling, Solu-Khumbu (mu); Kham, Taka ((pxrin./jxy)nya); Khambu, Darjeeling (so/su/mit); Kinnauri, Lower Kinnaur (šennig); Kokborok, Debbarma (ru); Ladakhi, Central (Leh) (čug); Ladakhi, Lower (chhukches); Langsu, Yunqian (lɔ²⁵⁵); Leqi, Zhongxin (lɔ²⁵⁵); Lhomi, Chepuwa (čhun); Lisu, Bijiang (tsɿ⁴⁴); Lisu, Thailand (tye); Lotha, Wokha District (tök); Lyusu, Muli (su⁵³); Magari,

Nepal Darbar (-k-); Manipuri (hən); Mizo (Lushai), Dulien (tii 'do' + Stem I Stem II + tiir 'to send on an errand'); Muya, Shade district (te' ə³³); Namuzi, Mulli (ngæ³³/ngæ³³ŋ³¹/ŋ³¹); Nasu, Hetaojing (tsi³³); Newari, Classical (kal); Newari, Kathmandu (kəl/k); Nocte, Hawajap (thuk); Nusu, Middle Bijiang (tei³⁵); Pumi, Jinghua (skie⁵⁵); Qiang, Taoping (zɿ³¹); Rangkhol, North Cachar (pek); Rawang (la~lwa); Rong (Lepcha) (kón/mát/tho); Sangkong, Xiaojie (pi³¹); Sgaw Karen, Delugong (ma³³); Sherpa, Chunakpu (ji(t)/ci(t)); Shixing, Lanman (xi⁵³); Sunwari, Sabra ('paysh); Tagin, Taliha (mu); Tamang, Bagmati Anchal (la); Taron (Digaru) (gō/kwō/masei); Thado, Yongba Langkhong (pā/pi/sā); Yi, Xide (ŋu⁴⁴); Zaiwa, Xishan (lɔ⁵⁵); Zhaba, Tuanjie township (dzy³⁵); Zhaba, Zatuo (tʂ' u³³).

As with the anti-ergative and ergative marking we can see that though a few forms may be cognate, the vast majority are not, and no form is reconstructable to Proto-Tibeto-Burman. Even among the very closely related languages and dialects of Northern Burmish we find radically different forms used for causative marking: Longchuan Achang xu⁵⁵, Xiandao Achang ʂaŋ³¹, Bola nō⁵⁵, and Leqi Langsu lɔ⁵⁵. In each case we have the independent grammaticalization of a free verb into a post-verbal causative marker. This then is another case of parallel innovation.

5. Person marking

In three or four of the major branches of Tibeto-Burman we find a type of person marking on the verb complex that developed as a result of a copy of the independent pronouns becoming affixed to the verb complex (see LaPolla 1992b).¹⁵ The etymological transparency of most of the Tibeto-Burman verb agreement systems shows that these agreement systems are relatively recent grammaticalizations, and the evidence points to independent grammaticalization in several different branches of the family. Here we will present a few examples where the etymological transparency is particularly clear in order to make this point.

The earliest example we have of person marking is in Tangut, a dead language which dates back to the eleventh century. In Tangut the verbal suffixes have the same phonetic form, including the tone, as the free pronouns (adapted from Keping 1979; third person is not marked).¹⁶

Table 1 Tangut person markers and free pronouns

	Free pronouns	Verb suffixes
1sg	ŋa ²	-ŋa ²
2sg	na ²	-na ²

In the Kuki-Chin branch of Tibeto-Burman we find a person-marking system very similar to that in Tangut. In this system we find the Proto-Kuki-Chin pronouns *kai '1sg', *naŋ '2sg', and *a-ma '3sg' grammaticalized into the person marking prefixes *ka-, *na-, and *a- respectively. Yet from the fact that the system

is prefixal, and the fact that the pronouns that were the source of the prefixes are not the same as the Tangut forms (at least the 1sg and 3sg forms), and from the fact that the languages are remote from each other genetically (i.e., are remote sub-branches within Tibeto-Burman) and geographically, we can say that this system clearly developed independently of the Tangut system.

A middle case is the Kanauri-Almora branch, which has person marking that is suffixal, like the Tangut system, but has a first person suffix derived from an innovative pronoun somewhat similar to that in Kuki-Chin. The forms are *-ga (< *gai), *-na (< *naŋ) (there is no third person agreement suffix). We can still be confident of the independent origin of this system, though, because the source of the first person affix is different from that of Tangut, and though it may be similar to that of the Kuki-Chin system, it is a suffixal system. These points make it sufficiently different from both of the systems presented above to allow us to state confidently that it is an independent innovation (see also Thurgood 1985).

A fourth case of clear independent development is the person marking system of Angami Naga (Giridhar 1980). In Angami, only 'stative verbs expressive of emotional or mental states, processes, [and] attributes' are marked for person (p. 59). The person marking involves prefixes clearly derived from the independent pronouns. The verbal prefixes are also isomorphic (except for the tone on the 1st person prefix) with the pronominal genitive noun prefixes (p. 22ff):¹⁷

Table 2 Angami Naga person markers and free pronouns

	Free pronouns	Verb prefixes	Noun prefixes
1sg	ā	ā-	ā-
2sg	nō	ŋ-	ŋ-
3sg	puô	puô-	puô-

Following are examples of the use of the verb prefixes:

(8)	ā	ā-ní	bá	puô	puô-ní	bá
	1sg	1sg-happy	part	3sg	3sg-happy	part
	I am happy.			He is happy.		
	nhîcûnyô	puô-dôvi	nō	ŋ-dôvi		
	boy	3sg-clever	2sg	2sg-clever		
	(The) boy is clever.			You are clever.		

Again we see that not only is this a prefixing system, unlike the Tangut system, but it also derives from a set of free pronouns unique to Angami.

A fifth case is the person marking prefixes of Mikir (Hills Karbi; Jeyapaul 1987). Again we have a prefixing system, but one quite different from those discussed above:

Table 3 Mikir (Hills Karbi) person markers and free pronouns

	<i>Free pronouns</i>	<i>Verb prefixes</i>
1sg	ne	ne-
1pl excl.	netum	ne-
1pl incl.	itum~etum	i~e-
2sg	naŋ	naŋ-
3sg	alaŋ	a-

That this system is a recent development can be seen not only from the fact that the free pronouns and the prefixes are so similar in form, but also from the fact that the verb prefixes retain the inclusive/exclusive distinction of the free pronouns.

One last example is from the Delugong dialect of Sgaw Karen (Dai et al. 1991:400; third person is unmarked):

Table 4 Sgaw Karen person markers and free pronouns

	<i>Free pronouns</i>	<i>Verb prefixes</i>
1sg	ja ³³	jä ³³ -
1pl	pu ³³ we ⁵⁵ θe ³¹	pü ³³ kä ³¹ -
2sg	na ³³	nä ³³ -
2pl	θu ⁵⁵ we ⁵⁵ θe ³¹	θü ⁵⁵ kä ³¹ -

This system of verbal prefixes is very clearly of recent origin, being in the singular simply unstressed copies of the free pronouns, and unique to this dialect of Karen.

These are just a few examples of this phenomenon, but they suffice to make the point that Tibeto-Burman languages seem prone to this particular kind of grammaticalization.

While some languages have developed person marking on both verbs and nouns, there are a few languages that have developed person marking only on nouns, and here again we find independent parallel developments. Consider the following two paradigms:

Table 5 Meitei person markers and free pronouns (Yabu 1992:2)

	<i>Free pronouns</i>	<i>Noun prefixes</i>
1sg	'äi	'i-
2sg	näŋ	na-
3sg	ma	mä-

Table 6 Rouruo person markers and free pronouns (Sun 1985:70)

	<i>Free pronouns</i>	<i>Noun prefixes</i>
1sg	ŋo ⁵⁵	ŋu ⁵⁵ -
2sg	ŋau ³¹	ŋu ³¹ -
3sg	tu ³⁵	tu ³⁵ -

It can be seen from these paradigms that the prefixes in the two languages do not reflect a common source, as in each language the noun prefixes very clearly developed from the free pronouns of that particular language. Person marking, either on the verb, the noun, or both, can then be said to be yet another example of Sapir's 'drift'.

6. Existential verbs

One type of parallel innovation we see within Tibeto-Burman which is not a type of marking per se, is the development of an animate/inanimate distinction in the system of existential verbs. A large number of Tibeto-Burman languages have more than one existential or locative verb, with the difference being (if there are only two, as in Idu—Sun 1983:72) a difference between animate (Idu i⁵⁵) and inanimate (Idu kha⁵⁵). In other languages there may be as many as seven different verbs, for animate vs. inanimate, abstract vs. concrete, location within a container vs. location on a plane, etc. For example, Hani has a general existential dza³³, an existential for people and animals dzo⁵⁵, an existential bo³³ for people and their organs, do³¹ for liquids, de³¹ for general animates, ky³¹ for existence within a group, and one existential verb, so⁵⁵, which is used only in the poetic language (Li & Wang 1986:54). In Queyu there are seven existential verbs (Wang 1991:61): tji⁵⁵, for animals; tɛy¹³, for location in a vessel or certain area; ɤo³¹, for non-movable objects; ɛi¹³, for movable objects; lo¹³, for an object mixed up in another object; nu¹³, for abstract objects; and tje¹³, for possession by a person. In Zaiwa (Xu & Xu 1984:80-81) there are six existential verbs, two of which are specialized for animate beings and can be causativized: nji⁵¹, which seems to mark the existence or long term location of animate beings and has the causative form nji⁵¹; luŋ⁵⁵, for short term location of animate beings and has the causative form luŋ⁵⁵; vo⁵⁵, for possession by a person; tjo²¹, for inanimates; po⁵¹, for containment within a vessel; and toŋ⁵¹, for roads and footprints. While some of the categories of existential verbs correspond among the languages, particularly within Lolo-Burmese, such as 'containment in a vessel or area' (Hani tɛy¹³, Zaiwa po⁵¹), 'possession by a person' (Hani tje¹³, Zaiwa vo⁵⁵), the forms used in these languages are clearly not cognate.

These are just a couple of examples picked at random, but the phenomenon is very widespread in Tibeto-Burman. While it may be possible within a particular lower level grouping to reconstruct one or two of these verbs, it is not possible to reconstruct a single one of these distinctions or the verbs that represent them to Proto-Tibeto-Burman. We then must conclude that this too is a case of parallel innovation, and a clear indication of the importance of animacy/mobility in the minds of Tibeto-Burman speakers.

7. Conclusions

Each of these types of grammaticalization is common in a number of language families. Person marking of a very similar type to that in Tibeto-Burman is seen

for example in Australia, even with independent origins in different areas (see Dixon 1980:363), and in North America (see Mithun 1991); many Indo-European languages (e.g. French) grammaticalized a similar type of causative to the one we have discussed here (though preverbal); having semantic differences among existential verbs is also not rare (e.g. Japanese); and ergative and anti-ergative (see Dryer 1986) marking is seen in many areas around the world as well. What is significant here is that so many of the languages of a single family all grammaticalized these same types of marking, and independently of each other.¹⁸ It might be argued that the basic typology of these languages is the same, and so leads to these types of grammaticalization (e.g., the development of locative postpositions from pronominal genitive constructions), but the basic typological features of these languages are after all part of the heritage of the parent language, and so part of what has influenced the 'drift' that these languages have followed. Even so, there are many languages with similar typological features that do not have these same tendencies. For example Japanese is very similar typologically, and does have an animate/inanimate distinction in existential verbs, but has not grammaticalized ergative, anti-ergative, or pronominal marking.¹⁹

A second point is that generally features of a language that we know to have developed independently of related languages after the breakup of their common ancestor are not considered useful in understanding the nature of the proto-language,²⁰ but I am arguing here that by studying parallel drifts we can infer something about the proto-language, in this case Proto-Tibeto-Burman, and its speakers. One characteristic we can infer from these common grammaticalizations is that the semantic distinction between agentivity and non-agentivity, and the associated features of animacy and saliency of the speech act participants, were fundamental to the organization of the proto-language speakers' world view. While it appears from the available evidence that the proto-language itself did not have any relational morphology,²¹ the speakers of the different languages created after the break up of Proto-Tibeto-Burman seem to have retained the same world view, leading to parallel grammaticalizations and metaphorical extensions of existing morphology.

What we need to reconstruct in Proto-Tibeto-Burman then as the common starting point which led to the development of all the types of marking we find in Tibeto-Burman is a simple semantically based concept of grammatical relations. By this is meant a language where the organization of discourse involves only semantic and pragmatic relations, and there has been no grammaticalization of syntactic functions such as 'subject' and 'direct object'.²²

Notes

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- I would like to thank all those who commented on the earlier drafts, particularly Søren Egerod, Dah-an Ho, Paul Jen-kuei Li, James A. Matisoff, Yoshio Nishi, Jackson T-S. Sun, Graham Thurgood, and Julian Wheatley.
- Malkiel (1981) argues that the concept of drift should be separated from the concept of parallel independent development. He suggests the use of 'slope' to refer to the latter. He bases this view on his interpretation of the relationship between Sapir's discussions of drift in Chapter 7 and in Chapter 8. Malkiel argues that the discussion of the depth of drift and the relationship of this depth to parallel independent developments in Chapter 8 'reads almost like an afterthought' (p. 550) to Chapter 7, saying 'Sapir impressionistically tosses off a few supplementary ideas ...' (p. 550) in discussing the depth of drift, and that the remarks about depth and parallel development are 'tangential' (p. 551) to the main idea of drift. His main evidence of this is the fact that Sapir did not mention this aspect of drift in his 1933 article 'Language'. My own view of this is that while it is possible to talk about drift in a single language without reference to parallel developments, it is not possible to talk about parallel developments in related languages without reference to something like the concept of drift (assuming parallel independent developments in related languages is of a different nature than that in unrelated languages). For this reason I feel Sapir's discussions of drift and its depth are two aspects of a single cohesive argument. That the depth concept was not mentioned in the 1933 article is insignificant, as the one short mention of drift in the article was not in a context where the mention of parallel developments would have been relevant.
 - LaPolla 1992a presents an earlier study of the same type based on a somewhat smaller database. See that paper for more extensive discussion.
 - These examples are also presented in Dryer 1986, where this phenomenon is discussed as 'primary object marking'.
 - In those Tibeto-Burman languages that have person marking (verb agreement) systems there may be some overlap where the person marking system and the nominal marking seem to both be marking the anti-ergative argument (as in this example, which led Dryer (1986) to claim that the person marking system also marks anti-ergative arguments—his 'primary objects'), but the person marking systems in many Tibeto-Burman languages are based on person hierarchies (1p > 2p > 3p, or 1p/2p > 3), not on semantics or grammatical relations (see LaPolla 1992b).
 - The term 'anti-ergative' may be somewhat infelicitous, as, like the term 'ergative' itself, it may lead the reader to credit these particles with more of a paradigmatic nature than they actually have, but I will continue to use 'anti-ergative' in this paper, as this term is already somewhat established in the literature (e.g. Comrie 1975, 1978, LaPolla 1992a), and clearer than Blansitt's (1984) term for this phenomenon, 'dechticaetative'. I also do not use the term 'primary object' because Dryer (1986) defines 'primary object' as a grammatical function. The use of this type of marking in most of the Tibeto-Burman languages that have it is not of the nature of a grammatical function, and in some languages it is also not limited to marking 'objects'.
 - Following is the language name followed by the dialect, if available, and the postposition used to mark an anti-ergative argument.
 - The languages in my database with nominal morphology not showing the anti-ergative marking pattern are (language, dialect) Angami, Kohima; Ao, Chungli; Balti, Purki; Chin, Cho (Hko); Garo, Garo Hills-Chisak/Awe; Hani, Haya; Kabui, Langthabal; Kachari, Darrang; Kachari, Hajo, Kamrup; Khami, Chittagong Hill Tracts; Manipuri; Nasu, Hetaojing; Newari, Classical; Rangkhoh, North Cachar; Rong (Lepcha); Sunwari, Sabra; Tujia, Northern dialect; Yakha, Darjeeling District; Yi, Xide; and Zhaba, Zatu.
 - The languages in my database showing no postpositional 'object' marking are (language, dialect) Anal, Anal-Namfau; Bantawa, Middle Kirant; Chin, Sizang (Siyin);

- Thado, Yongba Langkhong; Chiru, Manipur; Darmiya; Dumi, Khotang; Gazhuo, Baige; Hayu, Murajor; Idu, Ceta; Karen, Kayah, Eastern; Karen, Sgaw, Moulmein; Khambu, Darjeeling; Ladakhi, Central (Leh); Limbu, Phedappe; Lotha, Wokha District; Mizo (Lushai), Dulien; Rengma, Unza; Rouruo, Tu'e township; Sema, Zunheboto; Taraon; and Zhaba, Tuanjie township.
- 9 There is some evidence that a few of the languages in Nepal may have been influenced by Nepali. For example, Allen (1975:92) says that the Thulung patient/dative form is a loan from Nepali, and says 'There can be no doubt at all that traditionally both the direct and indirect objects have been unmarked.'
 - 10 In Hani *jo*⁵⁵ is used to mark an animate patient argument. Goal and locative arguments are marked with *a*³³.
 - 11 The instrumental marker itself is sometimes an extended use of the ablative marker (40 languages in my database show ablative/instrumental isomorphism). Out of 106 languages and dialects with agentive marking surveyed for the study reported in LaPolla 1993a, 49 have agentive-instrumental isomorphism, 18 have agentive-ablative isomorphism, and 10 have agentive-genitive isomorphism. Agentive-genitive isomorphism is somewhat different from the other patterns, though, in that it is sometimes (e.g. in Lhasa Tibetan) the result of a genitive-ablative form losing the ablative marker through phonological attrition. See LaPolla, to appear, for discussion.
 - 12 See Givón 1984 and Klimov 1984 on seeing ergative morphology as being semantically based on the contrast of agent vs. non-agent.
 - 13 These particles follow the main verb, but are prefixed to person marking or auxiliary particles.
 - 14 Loss of productivity of the older form of causative marking was not a necessary factor in the development of the newer form of causative; even in some languages where the older form is productive an analytical form has developed, though in those cases the two forms usually differ somewhat in meaning, with the analytical form being used for indirect causatives.
 - 15 Here I will only discuss the type of person marking which is often known as 'pronominalization', where the person markers derive from the free pronouns. Within Tibeto-Burman there are several other types of person marking, usually involving different copular verbs or post-verbal particles, as in Zaiwa, Akha, Sangkong, and some Tibetan dialects. While these systems also show interesting parallel developments, such as having marking that contrasts 1st person/2nd person question vs. 2nd person statement/3rd person, they are not as common as the pronominalized systems.
 - 16 There is also a 1st and 2nd person plural marker *ni*?
 - 17 A full paradigm including person marking for dual and plural actants is not given by Giridhar, though as other examples from the grammar include prefixes for the first person dual exclusive and the third plural (given in [i] below), there probably is a full paradigm. If so, then there is even more reason to believe this system was an independent development.

(i)	hiēkō	hiēkō-ñiē	bá	ūkō	ū-númēyiē	bá
	1du.excl.	1du.ex-tired	part	3pl	3pl-angry	part
	We(dual exclusive) are tired.			They(pl.) are angry.		

- 18 Except for person marking and having semantic differences among existential verbs, all of these types of grammaticalization can also be found in Mandarin Chinese: in terms of direction marking we have the use of *lái* (⁶⁰) (< Old Chinese **ra*, cognate to TB **ra*) and *qù* (⁶¹) after the verb to show deictic direction. (Chinese does have a verb *wáng* (⁶²) 'motion towards' < Old Chinese **gwjan*, cognate to TB **g-wan*, though it has not grammaticalized into a direction marker.) In terms of anti-ergative marking we have the *bā* (⁶³) and *bèi* (⁶⁴) constructions (the former marking a non-topical

- anti-ergative argument, the latter a topical anti-ergative argument). In terms of agentive marking we have *yóu* (⁶⁵), which, just as in many Tibeto-Burman languages, is also a marker of 'cause' or 'source'. And in terms of causative marking we have the grammaticalization of *shǐ* (⁶⁶) 'to send (on a mission)' into a causative auxiliary.
- 19 See also Meillet 1918, particularly pp. 107-110, for more on the causes of independent parallel developments.
 - 20 Though of course the types of innovations we have discussed here can be used for subgrouping if enough languages share that innovation. See for example the use of a particular paradigm of direction marking prefixes for the subgrouping of the Qiangic languages in Thurgood 1984.
 - 21 While I have not found any evidence of Proto-Tibeto-Burman relational morphology, there is evidence that certain types of derivational morphology, such as the **s*- causative prefix and possibly a **-t/-n* suffix, are reconstructable not only to Proto-Tibeto-Burman, but to Proto-Sino-Tibetan. It seems likely the *pa/ma* gender/nominalizing suffixes are also reconstructable to PTB, as are the negative prefixes **ma* and **ta* (the former to PST). (See LaPolla 1994 for discussion of suffixal variation and a list of Sino-Tibetan cognates.)
 - 22 For detailed arguments against the existence of syntactic functions in particular Sino-Tibetan languages, see Andersen 1987 (Classical Tibetan), Bhat 1988 (Manipuri), and LaPolla 1990, 1993b (Chinese). See also the discussions of Lisu in Hope 1974 and Mallison & Blake 1981.

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VERB AGREEMENT IN CLASSICAL NEWAR AND MODERN NEWAR DIALECTS

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1. Classical Newar and Kathmandu Newar verbal morphology

The Newar language is now well known as a Tibeto-Burman language of the Kathmandu Valley, and a number of native and foreign linguists and scholars have contributed to our knowledge of the structural, historical and socio-cultural aspects of the language through research and publications. However, there has not been any in-depth study on the diachronic phonology or morphology of Newar nor any consistent research on the large number of old Newar texts that are available in archives and private collections. The Danish scholar Hans Jørgensen's pioneer studies of the lexicon and grammar of Classical Newar, namely Jørgensen (1936, 1941), are based primarily on the late 17th and 18th century narrative texts. The earliest written text is a palm-leaf document which dates back to the early 12th century (Malla 1990:15-26), and the other scholars who have shed light on some of the vexing problems in the diachronic study of Classical Newar verb system include Kölver and Kölver (1978), Genetti (1990), Tamot (1990), Hargreaves and Shakya (1991), Van Driem (1993a) and Kansakar (1992, 1996).

Based on what is known of the Classical Newar verbal morphology, Van Driem (1993a:33) argues that although Classical Newar retains some traces of the old agreement system presently reflected in the Dolakha Newar dialect of eastern Nepal, "the rudiments of a conjunct-disjunct system characteristic of modern Kathmandu Newar were fully in place in Classical Newar". He also hypothesizes that the Dolakha Newar, which is more similar to Kiranti than to the current system in Kathmandu, is reconstructable for Proto-Newar. Genetti (1990:128-29) however argues against any firm hypothesis "since more extensive data on other Newar dialects and more historical materials are really necessary to decide conclusively

between hypotheses". She also points out that although "Kiranti morphology is much more complex than the simple system of subject agreement in Dolakha ... the presence of any agreement in Newari still suggests a possible old genetic link to this family." DeLancey (1992) also views the conjunct-disjunct system as a secondary development within the context of its historical changes in the Bodic branch of Tibeto-Burman. This issue is one of the most important single questions in Newar linguistic studies today and yet has remained controversial and unsolved.

If this problem were to be settled to the satisfaction of all linguists working in the field, we would have taken a significant step towards resolving another related problem of determining a less ambiguous place for Newar within the genetic classification of Tibeto-Burman. Newar has traditionally occupied a tentative position between the Bodish and East Himalayan sections of the Bodic Division. In an earlier paper (Kansakar 1981) I had pointed out that Newar separated from the "Tibetan" group and the basically pronominalized Himalayan languages at an early period of its history, and it is difficult or at least arbitrary to reconstruct a Proto-system of verb agreement for Newar without adequate evidence. Shakya (1990) also advocates further research on the Newar dialects to allow us to locate the language firmly in its historical and geographical context.

In this article, I discuss materials from Classical Newar in relation to Dolakha and modern Newar dialects to show their historical connections. I also refer to the findings of Genetti, the contribution of Van Driem and native Newar scholars to determine whether there has been a certain trend in development from Dolakha through the earlier and later phases of Classical Newar to the present system in Kathmandu. There is historical evidence to show that Dolakha Newar dates back to over a thousand years, but we have no evidence whatsoever of how the language may have evolved over this long period of isolation from Kathmandu. Genetti (1990:185-93) provides several arguments in favour of reconstructing a Dolakha-type of verbal agreement for Proto-Newar. Her first argument is the presence of a complex agreement system in Dolakha to include not only the indicative, but also the imperative and optative forms. Her second argument is that Classical Newar data as presented by Jørgensen (1941) retain traces of an old agreement system, e.g. the finite past marker <-o> was used with the first and second person; <-am> is normally used with the third person; and <-a> with any person following the quotative speech marker *dhakam*. Her third argument rules out any pronominal source for flexional affixes used in Dolakha.

In Table 1 the finite agreement system as found in the Classical Newar texts dated between 1114 AD to ca 1450 AD provides more complete historical evidence on the development of the older verbal morphology. The texts examined are all authentically dated and therefore form a part of attested data in a historical perspective. Table 1 represents data organized in terms of the conjunct-disjunct (c/d) pattern and verb class distinctions as originally formulated by Jørgensen (1941). According to his classification, the various verb classes are defined by their stem-final consonants, while the variations in the flexional suffixes indicate the evolution in the c/d system of verb marking.

Table 1 Finite verb agreement morphemes in Classical Newar (1114 – 1450 AD)

Verb class	Non-past conjunct (NPC)		Non-past disjunct (NPD)	
I	j > ñ > ny > n	-a	j > y	-u > -a
II	c > y	-a > -e	y	-u
III	y	-a > -e ~ -au	l > y	-u > -au
IV	c > l > y	-e > -a	p > b	-u
	Past conjunct (PC)		Past disjunct (PD)	
I	ñ	-a	w > gw > n	-u > -o > -a
II	tān > y	-a	t > w > k	-u > -a > -a
III	rān > y	-a	kw ~ w > r > l	-o > -a > -u
IV	l > y	-a	lw ~ l > tw	-a ~ > -u

We notice that both the stem-final consonants and the suffixes have undergone radical changes over a period of some 350 years. The c/d marking for the various verb classes under NPC show a clear development from <-a> to <-e> with <-au> as a variation for Class three verbs. The NPD verbs have <-a> and <-u> markings where the latter is found more frequently in the earlier manuscripts. The PC paradigm is the most consistent in the conjunct marking <-a> that is still reflected in present-day Kathmandu. The PD paradigm represents a rather different development in the marking system from <-u> to <-o> or <-a> and in later texts to <-ā> with variations in nasal vowels. A further point of interest in the PD column is the presence of labial glide <-w> as part of the final consonant which reflects the on-going controversy in modern Kathmandu on the status of <-gw-a> vs <-gw-o>. It has for example been claimed that the Devanagari spellings with <-wa> best reflect both the pronunciation and spelling convention in the language: I have however taken the view that sequences such as <-kwa-, gwa-, nwa-, lwa-> etc do not have phonemic status but are phonetic realizations of /ko-, go-, no-, lo-/. If we then accept <-o> as the underlying vowel, it is logical to assign it a historically earlier status. We can thus safely reject <-a> as a finite marker when preceded by a labial glide. The PD opposition <-a, -o, -u> is quite similar to Jørgensen's A I forms <-a, -am, -o> but their grammatical functions are not identical as can be seen in Table 2. When we compare this system with the finite markings observed by Jørgensen (1941) in his study of the 17th and 18th century Classical Newar texts, we obtain the following situation (Table 2):

Table 2 Earlier and later Classical Newar finite morphemes

Classical Newar (12-15th century)		Jørgensen (1941:47-56)
<-u, -o, -a, -ā>	Finite PD	<-am, -a, -o>
<-a, -e, -au>	NPC	<-i, -iwo, -ino>
<-u, -a, -au>	NPD	<-i, -i:>
<-ā>	PC	<-ā>

The development of flexional morphemes is syntactically significant specially in the finite verb. As discussed above, Jørgensen recognized the morph <-am> as a third person marker, the morph <-o> was associated with the first and second, while <-a> was used with any person in direct speech. The attestation of <-u> as a finite marker in the earliest texts between the 12th and 15th centuries is significant as this has been identified by DeLancey (1989:381) as a direction marker at the Proto-TB level, and as a third person patient marker at the Proto-TB and Proto-Kiranti levels by Van Driem (1991, 1993). The earlier data however indicate that the use of the subject as agent or patient overrode the person agreement as attested in the following examples:

- (1) *bhvanta Jayasingharam Mahatha-sa thava kiāja-to tāṇa*
Banepa Jayasinghram officer-GEN his brother-DAT die-3PD
The younger brother of officer Jayasinghram from Banepa died.
- (2) *Sri Anantamalla-deva-sa doya haw-o*
Sri Anantamalla-HON-AGT doyas bring-3PD
Sri Anantamalla brought the doyas (to attack).
- (3) *tipura manigalahatha-ra thakula-to tel-o*
Tripura Manigalaattack-by Thakura-AGT suppress-3PD
Thakura attacked and suppressed both Tripura and Manigala (lit = by attacking).

In example (1) the subject is a third person patient which normally takes <-a> as a finite past verb such as *tāṇ-a* 'died'. It may be noted that the patient *kiāja-to* is a dative subject with the literal meaning of 'death came to the brother' rather than 'the brother died'. It is also possible that the suffix <-to> or <-tva> is commonly used in Classical Newar texts as a honorific marker for deities or high ranking persons. In the examples (2) and (3) the subjects are third person agentives followed by control verbs *haw-o* and *tel-o*. The finite past marker <-o> is clearly not associated with the first and second person as suggested by Jørgensen (1941:60) where he pointed out that "<-o> which on the whole is infrequently found, mostly occurs after the first and second persons in the older MSS, in the younger MSS its use with the third person becomes more frequent". This remark seems to indicate possibilities of historical change based on frequency of attestation in earlier and later manuscripts. This however should not be concluded as evidence that there might have been an early distinction at least between the first and second person as opposed to the third, and this distinction was later lost. If this is so, one would expect to find clearer person marking differentiation in the manuscripts that are much earlier than those analysed by Jørgensen. This has not been the case with the data I have examined and thus far I have not found enough evidence to substantiate Jørgensen's claim. There are however substantial data in the earlier manuscripts to show the correctness of his observation that the morph <-am> is a sentence-final suffix usually associated with the third person, and the finite ending <-a> can be used for both the second and third persons, especially when followed

by the quotative marker *-dhakam* in direct speech. The following examples however show that *<-am>* may not be a finite past morpheme in all cases as it can also be attached to non-finite participial forms.

- (4) *liva liva bvān-am van-āva*
follow follow run-PTP go-PTP
Following (him) by running.

- (5) *rāja bāla-khas babu-nam vān-am tāth-u*
king child-time father-AGT abandon-PTP leave-PD
The king was abandoned by his father while still a child.

In example (4) the expected perfective marker *<-am>* does not occur in a sentence-final position and instead is attached to a non-finite verb *bvān-* with a participial meaning. In example (5) the verb *van-am* is also nonfinite as it does not express perfective action but rather denotes what Jørgensen (62) refers to as “a relative participle used predicatively with a past meaning”. Jørgensen did not make a clear distinction between past tense and perfective action, and hence the suffix *<-am>* is ambiguous as it does not function purely as a perfective marker in earlier texts similar to *-juo* or *-juom* attested very frequently in later manuscripts.

We thus need to view the comparative data given above as development in morphological categories and new grammatical functions. The earlier and later Classical Newar data do not provide convincing evidence of first, second and third person agreement within the *c/d* system that existed during these periods. Given our present knowledge of Classical Newar materials it seems more likely that the system is based more on volitionality of the subject in terms of agent/patient relation, and the transitivity (i.e. the control/non-control) of verbs are the underlying roots of the morphological distinctions in Kathmandu Newar. In an earlier paper (Kansakar, forthcoming) I had referred to a lack of clear distinctions between Newar nouns/noun phrases and verb/verb phrases which result in a wide-spread use of so-called ‘verbal nouns’ in the language. The verb system itself is governed by aspect rather than tense distinctions in past, present and future time. The crucial aspect of a Newar verb is related more to perfective or imperfective action/event rather than its placement at a point in time, inception of action or duration in time like the grammatical functions of the preterite verb in Limbu. The simplicity of the *c/d* pattern as an evidential system seems to be clearly reflected in the texts so far examined although it has been suggested that traces of a verb agreement system can be discovered in the 17th and 18th century manuscripts studied by Jørgensen. The morphological behaviour of some finite Classical Newar verbs within this framework can be illustrated as follows:

- (6) *ji-na thava kinja-to dhāl-a dhun-o*
1s-AGT own brother-DAT say-PST have-PD
I have told my younger brother.

- (7) *ji-panis-ta chisapola-sā bila-o / om*
1s-PLU-DAT 2s(HON)-AGT give-PD
You gave it to us.

- (8) *khadga-n pār-avā moca-kar-am*
sword-INST cut-PTP kill-CAUS-PD
(The king) smote him with his sword and killed him.

- (9) *ji-n thathi-pani chot-a chāe*
1s-AGT such-people send-PD why
Why did I send such people away?

- (10) *chiskar-pani-sen chu kha hlān-ao di-yā*
2 (HON)-PLU-AGT what matter speak-PTPbe(HON)-PC
What matter do you speak / are you speaking?

Example (6) is a conjunct construction with the finite past suffix *<-o>* in the final auxiliary, while (7) has a second person subject-actor which has the verb marked with *<-o / -om>*. This confirms Jørgensen’s observation referred to earlier that the suffix *<-o / -om>* is associated with the first or second person in the earlier manuscripts but later became more frequent with the third person. This view clearly indicates a development from *<-o / -om>* to *<-a / -am>* which most probably functioned as allomorphs in the earlier Classical Newar period (see Table 1). The third person actor-subject in (8) is marked with the PD *<-am>* in the sentence-final verb which expresses perfective action, but as pointed out in example (4) and (5) this suffix may also be used as a participial marker in non-final positions. Commenting on the frequency in the use of *<-am>*, Jørgensen wrote that “*-am* is the usual form at the end of a sentence; it is but rarely found after the 1st and 2nd persons”. Examples (9) and (10) are direct quote question forms where the first person actor in (9) is marked with a PD suffix *<-a>* and in example (10) the second person actor is optionally marked with a participial suffix *<ai>* followed by a honorific PC auxiliary *di-yā*.

Two points are worth noting with regard to examples (6-10). Firstly, the *c/d* verb marking system seems to have been well established from the time of the earliest historical and religious manuscripts to the technical and popular narrative texts of the later period. Jørgensen’s observations may hint at the possible existence of a verb agreement system in Classical Newar but these are based rather loosely on tendencies and shifting frequency of usage in the later 17th and 18th century texts. The earlier materials from the early 12th century onwards do not seem to contain any recognizable verb agreement. The person and number agreement as it presently exists in Dolakha therefore is hardly reflected in the Classical Newar verbal morphology. Secondly, does the ergative case marking of the volitional actor or agent relate to the transitivity of verbs in Classical Newar? In Newar, like in Tibetan, the distribution of ergative case apply to simple and complex clauses with volitional actors. Examples (6-10) all have ergative marking on the first, second and third

person subjects. The verbs show c/d distinction but do not differ in transitivity. In modern Newar and Tibetan, however, the verb encodes a contrast in volition and non-volition for first person but not for non-first persons, as can be seen in (11) for Lhasa Tibetan (DeLancey 1987:57) and (12) for Kathmandu Newar.

- (11) a. *na-a dkaryol bcag-pa-yin*
1s-ERG cup break-PERF/VOL
I broke the cup. (deliberately).
- b. *na-s dkaryol bcag-soñ*
1s-ERG cup break-PERF/NONVOL
I broke the cup. (inadvertently)
- c. *kho-s dkaryol bcag-soñ*
3s-ERG cup break-PC
He broke the cup.
- (12) a. *ji-n kayo tachyā-nā.*
1s-ERG cup break-PC
I broke the cup. (deliberately)
- b. *ji-n kayo tachyā-ta*
1s-ERG cup break-PD
I broke the cup. (accidentally)
- c. *wa-n kayo tachyā-ta*
3s-ERG cup break-PD
He broke the cup.

The Tibetan verb further reflects differences in transitivity in relation to the volitionality of the subject, as can be seen in the following examples (DeLancey 1987:64):

- (13) a. *na-s deb der bzag-pa-yin*
1s-ERG book there put-PERF/VOL
I put the book there.
- b. *na-s deb brlags-soñ*
1s-ERG book lose-PERF
I lost the book.
- c. *kho-s deb der bzag-soñ*
3s-ERG book there put-PERF
He put the book there.

The first person subjects in (13a) and (13b) are both volitional but the markings on the two verbs differ in transitivity. Since this distinction is not applicable

to Newar, we must thereby conclude that ergativity in Classical Newar is not syntactically significant as it relates simply to the volitionality of the subject which is not adequately reflected in the verb marking. Modern Newar however developed other discourse strategies such as intentional and involuntary initiation of action illustrated in (12) which are not attested in the Classical Newar texts so far examined. Other syntactic devices such as verb serialization and complex clause chaining may also be of recent origin as such constructions are quite rare in the Classical Newar corpus of the earlier period. The central fact in Newar syntax is based on what many scholars (Hale and Watters 1973; Kölver and Kölver 1975; Malla 1985; Nagano 1986) have characterized Newar as an 'actor-undergoer' language rather than a 'subject-object' language where verb agreement is with the actor or agent and not the subject. The actor or agent occupies a dominant role in the hierarchy of animacy, viewpoint and attention flow which DeLancey (1980) refers to as 'deictic reference' in the organization of the Tibeto-Burman verb.

2. Dolakha Newar and modern Newar dialects

There is extensive lexical similarity in root morphemes among all Newar dialects, including Kathmandu and Dolakha. The similarity is very high among the Kathmandu Valley and the outlying dialects which share the c/d system. The major differences between Kathmandu and Dolakha are in the area of morpho-syntactic features, especially in the person and number agreement morphology of Dolakha. When dialect boundaries are distinguished by grammatical differences, we expect to obtain problems of intelligibility. A Kathmandu speaker who encounters Dolakha speech for the first time will find that he can comprehend less than 40 % of what is said. This is remarkably low in intelligibility level – a situation that arises primarily from a very different morphological and syntactic arrangements in Dolakha. Watters (1993:94) in analysing the dialect differences between Takale and Gamale Kham, made this interesting observation:

“Each dialect, from the time of its separation from the parent stock, has been free to develop, innovate, and branch off in its own unique way, but always within the bounds of its genetic makeup – a predefined set of common mega-traits inherited from the parent language.”

This view implies that although there are 'points of divergence' and 'points of compatibility' across dialects, some points of 'fundamental identity' are bound to exist in historically related dialects. The nature of relationship between dialects and the processes of change that may have taken place in individual dialects, however, are subject to debate and controversies. Van Driem (1993a:25) for example hypothesises that “the conjunct/disjunct conjugation of Kathmandu Newar apparently derives from the Classical Newar system, whereas the Classical Newar system derives from a more complete verbal agreement system more faithfully

reflected in the Dolakha verb". This view assumes that Dolakha is a conservative dialect that has retained the old agreement system now lost completely in Kathmandu and most other modern dialects of the language. It has also been claimed that the Classical Newar materials discussed by Jørgensen (1941) retain traces of an agreement system presumably derived from Dolakha with possible corelations in pronominal morphology as well (e.g. Kathmandu first person singular pronoun *ji* is comparable to first person singular suffix *-gi* in Dolakha; Kathmandu third person plural pronoun *i-(pī:)* and the third person plural suffix *-hin* in Dolakha). Van Driem (1993) has therefore argued in favour of reconstructing the verbal agreement of Dolakha for Proto-Newar. This conclusion seems to presuppose that Dolakha has retained the earliest form of the language since the Lichhavi period (ca 300 – 879 AD) when the Newars of Kathmandu Valley were reported to have first migrated to the Dolakha district.

We do not however have any evidence of historical changes that Dolakha Newar may have undergone during the past millennium and what was the original form of the Newar verb. If we are to assume that the Dolakha type of agreement evolved into a c/d system in Kathmandu and related dialects, we would first need to explain the development in terms of diachronic data following the separation of the two groups of speakers, and secondly, what time depth can be deduced for the loss of the agreement system in Kathmandu. On the first question, it is fairly certain that Dolakha has been an island surrounded by Kiranti speakers for over a thousand years and we cannot therefore rule out completely the area pressures arising over centuries of close proximity. This raises the question of whether its existing verb agreement system is a remnant of genetic inheritance or the outcome of language contact situation. Van Driem (1993c:50) had however stated that "the wholesale borrowing of an elaborate flexional system such as verbal conjugation is unattested ... and conjugational systems do not spread by diffusion". This of course implies that a language tends to retain aspects of its grammar such as the conjugational system while the phonological and lexical components can be borrowed. This view does not however explain why and how the Dolakha verb remained fossilized over the centuries while Kathmandu underwent drastic changes to the extent of losing its original conjugational morphology.

The evolution from a Dolakha type of agreement to a c/d system of Kathmandu has been recognized as a later development which DeLancey (1992:49) has characterized as "an areal phenomenon arising from the linguistic and cultural influences of Tibetan". The matter of Tibetan influence also is not a straightforward phenomenon as Newar does not duplicate the very complex sets of prefixes and suffixes of written Tibetan although the tradition of writing in Newar dates back to the 8th or 10th century AD. DeLancey goes on to point out that "while the Tibetan and Newari systems are strikingly similar in structure, the morphological exponents do not appear to be cognate". This fact has led him to the conclusion that the c/d system "apparently does not reconstruct for Proto-Tibetan or Proto-Newar". This view on the reconstruction hypothesis apparently recognizes the

original verbal agreement to be a complex system reflected more convincingly in the Kiranti languages and Dolakha Newar than in the highly simplified c/d marking system in Kathmandu. Benedict (1972) had also identified Newar as belonging possibly to the Kiranti nucleus from which it has diverged to a considerable extent.

LaPolla (1993:301) on the other hand argues against the view that the Proto-Tibeto-Burman verb agreement system has degenerated to simpler systems in those languages that have come in contact with morphologically simpler languages. He contends that "those languages that do not have verb agreement systems, the vast majority of all Tibeto-Burman languages, have no trace whatsoever of ever having had one", and goes on to point out "it is highly unlikely that Tibetan, Burmese, Newari, and Yi would all have lost every trace of their agreement systems while Tangut's did not age at all". I drew a parallel case of the clear contrast between Kathmandu and Dolakha Newar which, in the absence of adequate historical evidence especially in the Dolakha dialect, may well turn out that both the systems are outcomes of areal influences.

The question of the conservative vs innovative distinction usually made to refer to Dolakha and Kathmandu may have also to be redefined in terms of the nature of contact with other speakers and discourse use. The Dolakha speakers have obviously been in close localized contact with Kiranti speakers living in a relatively compact area of eastern Nepal, and their pragmatic needs of discourse are also much more pervasive and frequent than the contact of their Kathmandu counterparts with Tibetan, Tamang or the Gurung group of languages. This of course does not mean that there has been a high degree of linguistic and cultural integration between Dolakha and Kiranti, nor did the trade relations of the Kathmandu Newars with Tibetan produce any profound impact on their language and culture. While the scenario epitomised by Benedict's Newar – Kiranti link has been accepted by most western linguists working in the field, the native Newar scholars like Mali (1979/80), R. Shakya (1981), Tamrakar (1981/82), Sayami (1986), Shrestha (1988/89, 1989, 1996) and D. Shakya (1992) who have investigated Dolakha Newar and the outlying dialects intuitively feel that Newar and

Table 3 Conjugation of <yat-> 'to do'. Mali (1979, Shrestha (1989), and Genetti (1990)

	<i>Pr.H</i>	<i>PH</i>	<i>PST</i>	<i>PRES</i>	<i>FUT</i>
1s	yat- <i>a-gi</i>	ya-ku/gu- <i>ī-īu</i>	yat- <i>ki~gi</i>	yat- <i>a-gi</i>	yer- <i>gi~i</i>
1p	yat- <i>a-gu</i>	ya-ku- <i>pe</i>	yat- <i>ku~gu</i>	yat- <i>a-gu</i>	yer- <i>gu~i</i>
2s	yat- <i>a-n</i>	ya-ku/gu- <i>n</i>	yat- <i>mun</i>	yat- <i>a-n~i-na</i>	yer- <i>i-na~mun</i>
2p	yat- <i>a-min</i>	ya-ku/gu- <i>min</i>	yat- <i>min</i>	yat- <i>a-min</i>	yer- <i>i-nan~min</i>
2h		ya-ku- <i>pe</i>	yat- <i>ku</i>	yat- <i>a-gu</i>	yer- <i>i-ta</i>
3s	yat- <i>a-i</i>	ya-ku- <i>ju</i>	yat- <i>cu~ju~u</i>	yat- <i>a-i</i>	yer- <i>e-u~gy-N</i>
3p	yat- <i>a-hin</i>	ya-ku- <i>tan</i>	yat- <i>hin</i>	hyat- <i>a-hn</i>	yer- <i>e-in~u</i>

Kirat are not related by race, culture or language, and the Newars in general have refused to recognize Kiranti as their parent language.

In Table 3 the conjugation of the Dolakha indicative verb <yat-> 'to do' is given, showing the variation provided by Mali (1979/80), Shrestha (1989) and Genetti (1990). The Dolakha verbs have the stem finals /-n/, /-t/, /-r/ or /-l/ which we said earlier are regular for all verb classes in this dialect as compared to their inconsistent occurrences in Kathmandu. The tense morphemes occupy the first suffixal slot after the stem, and this is followed by the flexional suffixes. The main points of difference among the three scholars who have analysed the Dolakha verb system include the following: while Mali presents a simple paradigm of past, present and future, Genetti recognizes habitual past as a distinct category and presents a more complete set of future tense morphemes and second person honorific suffixes which are missing in Mali. Shrestha, on the other hand, makes a two-way distinction between present-habitual present, and past-habitual past stative. She has also argued that variations in suffixal morphemes need to be recognized for transitive-intransitive verbs as well as the distinct sets of honorific and non-honorific imperative forms. Shrestha (1989:41) also stated that "in their finite forms the verbs inflect for tense (past and nonpast), mood (imperative), person (first, second, third), number (singular, plural) and aspect (present habitual, past habitual or stative)".

The Dolakha verb is characterised by two slots, the tense suffixes followed by the person and number morphemes. The stem-final consonant <-t> does not appear in the PH column and <-t> is changed to <-r> in the future column. The present-habitual and past-habitual distinguished by Shrestha (1989) are significantly different in form. Firstly, the stem <-t> is maintained in the present-habitual but not in the past-habitual. Secondly, the present-habitual suffix <-gu> is not devoiced to <-ku> after stem-final <-t> as in the past-habitual paradigm. Thirdly, Shrestha (43) notes that the flexional suffix <-u> in its stative form occurs only with impersonal past-habitual verbs and is not attested in the present-habitual. All her past-habitual examples for the third person singular category such as *ta-u*, *ya-u*, *yak-u*, *kal-gu*, *pyenk-ye-u* 'used to keep, take away, do, scramble (eggs) and kick' are marked with <-u> while Genetti has the allomorph <-ju>. The first person singular is marked as <-gt> in the past by Genetti (and devoiced to <-k> after the stem-final <-t>), and recognizes the number distinction <-gt> and <-gu> for the present but not for the future where the form *yer-i* with zero tense suffix is not marked for number. Genetti's representation of the first person plural and second honorific forms are identical and hence ambiguous for the past-habitual, past and present paradigm, but the second person honorific suffix <-ta> in the future is quite distinct from the rest. Van Driem (1993a:26) has also observed the widespread use of second person honorifics in a number of Kiranti languages such as Limbu and Dumi.

Shrestha and Genetti have both recognized the need to distinguish between transitive and intransitive imperatives and their relation to honorific and non-honorific verb forms (see Table 4). This paradigm is interesting for the clear

Table 4 Dolakha imperative verb forms, expanded from Genetti (1990:163)

	<i>Singular</i>	<i>Plural</i>		<i>Honorific</i>
<i>n</i> -stems				
Trans.	to- <i>ŋ</i>	to- <i>n</i>	'drink!'	tō- <i>sin-isin</i>
Intrans.	ō	o- <i>n</i>	'go!'	ō- <i>sin</i>
<i>t</i> -stems				
Trans.	s̄yat	s̄yat-un	'kill!'	s̄yar- <i>sin-isin</i>
Intrans.	sit	sit- <i>un</i>	'die!'	sir- <i>sin</i>
<i>r</i> -stems				
Trans.	na- <i>u</i>	na- <i>n</i>	'eat!'	nar- <i>sin</i>
Intrans.	yā	yā- <i>n</i>	'come!'	yār- <i>sin</i>
<i>l</i> -stems				
Trans.	pul	pul- <i>dun</i>	'pay!'	pul- <i>di-sin</i>
Intrans.	tul	tul- <i>dun</i>	'fall!'	tul- <i>di-sin</i>

distinctions in transitive-intransitive and singular-plural forms which occur in non-finite imperatives. Genetti also goes on to discuss the historical status of the prefixal morphology of prohibitives and optatives in Dolakha, but of these we shall not elaborate here.

The central question that concerns us here is the distribution of verb agreement systems in other modern Newar dialects. The comparisons that can be made with the available data from Dolakha and numerous Newar dialects spoken in and around Kathmandu Valley may provide insight into the various stages of evolution in the verb agreement morphology of the language. Shakya (1992) has classified the Newar dialects into six groups: (1) Kathmandu and Patan, (2) Bhaktapur, (3) Pyangau, (4) Bandipur, (5) Dolakha, and (6) Pahari (Badikhel). The subject-verb agreement with some variations is evident only in Dolakha and Pahari, while the remaining dialects that are associated closely to Kathmandu/Patan or Bhaktapur have the volitional-evidential c/d system. In a previous paper, Shakya (1990) suggested two major sub-groupings, Kathmandu-Patan, Bhaktapur forming the first group, and Dolakha, Pahari and Citlang as the second group. The first group has c/d and the second group has subject agreement system inflecting for person and number. A subsequent study however has revealed that the Citlang dialect is quite similar to Kathmandu and cannot be grouped with Dolakha and Pahari. Shakya also collected data from the eastern, central and western hill dialects of Newar, but all of them seem to testify to the wide areal spread of the c/d system. It thus turns out that Dolakha and Pahari are the only two dialects to date that have acquired analogous systems in agreement morphology. The flexional morphemes in the two dialects however are not identical, as can be seen in Table 5.

It is clear even with these limited data that Dolakha and Pahari represent different stages in the development of verb agreement. If Dolakha is recognized as the earliest form of the language, Pahari may be a link between Dolakha and Kathmandu.

Table 5 Dolakha and Pahari finite past agreement morphemes, adapted from Shakya (1990:3)

	Dolakha	Pahari	
	Past	Past	Nonpast
1s	nar-gi	nia:-ni	-i
1p	-gu	-rau	-i
2s	-mun	-na	-iu
2p	-min	-rau	-au
3s	-ju	-ri	-ai
3p	-hin	-ri	-ai

But I am taking the view that Dolakha and Pahari may represent innovative systems which have been subjected to intense areal influences over the centuries. The morphological data in Table 5 however reveal different degrees of divergence in the two dialects. Firstly, the Dolakha four-way tense system is reduced in Pahari to a two-way past/nonpast distinction like in Kathmandu. The question of which system is earlier and reconstructable for Proto-Newar is debatable as we do need more historical evidence before definite conclusions can be made. Secondly, Pahari has also lost the stemfinal consonants in some of its verbs, resulting in final long vowels similar to Kathmandu noun and verb stems. Thirdly, the person and number distinctions in the two dialects also differ in vowel and consonant segments, some of which like <-g> (D) / <-ni> (P); <-mun>/<-na>; <-ju>/<-ri> are significant for two reasons: (1) the change from <-u> to <-a> or <-i> on the one hand and the emergence of the conjunct <-a> and disjunct <-a> distinction on the other are also evident in the Pahari data; (2) the nonpast column in Pahari provides further evidence of simplification in the flexional morphemes which are deprived of all the consonants. The vowels too show a marked change from Dolakha <-u> to <-i> and <-i> to <-o> which are diphthongized and nasalized in Pahari. The Pahari morphology therefore seems to represent not a degenerate stage of Dolakha agreement but rather an example of what Watters (1993:109) has referred to as "just another innovative spin-off from an earlier but identical core".

Shakya (1990:5) divides the Newar language spoken outside the Kathmandu Valley into eastern, central and western groups, and relates the eastern dialects to Kathmandu/Patan and the western dialects to Bhaktapur. He established these relationships on the basis of linguistic and cultural links. Among the verb paradigms available in the three groups, the dialects spoken in Bandipur (of the western group) seems the most interesting in terms of speaker-participant (SAP) relationship.

These data reveal three points of interest: (1) the full set of stem-final consonants are retained in the five classes of verbs, and these are more obvious in the perceptive hearer forms than in the speaker paradigm; (2) the suffix <-tāŋ> in the nonpast verbs is consistent in the speaker column which corresponds to <-a - ā>

Table 6 Past/nonpast SAP's verb forms in Bandipur and Bhaktapur Newar dialects

Bandipur				
Past		Non-past		
Speaker	Hearer	'go'	Speaker	Hearer
1 wān<-ā>	wānn<-a>	'go'	wān<-tāŋ>	wānn<-a>
2 by<-a>	bil<-a>	'give'	bi<-tāŋ>	biyenn<-ā>
3 Lwā<-ye>	lwott<-a>	'quarrel'	lwae<-tāŋ>	larayenn<-ā>
4 nhilā<-ye>	nhill<-a>	'laugh'	hnila<-tāŋ>	nhilenn<-ā>
5 dik<-e>	dikull<-a>	'stop'	dikke<-tāŋ>	dikenn<-ā>
Bandipur		Past	Bhaktapur	
Speaker	Hearer		Speaker	Hearer
<-ā>	<-a>		<-āe>	<-a>
<-ā>	<-ā>		<-ā>	<-ā>
<-e>	<-a>		<-ā>	<-ā>
		Non-past		
<-tāŋ>	<-a>		<-e>	<-i>

in the hearer column; and (3) the direct influence of Bhaktapur can be seen in the paradigms of Bandipur where the vowel alternations between <-a> and <-ā> are quite prominent. In other words, the <-a>/<-ā> alternations apply to both the verb stems and the suffixes: /wāŋ-ā/ in Bhaktapur is /wānn-a/ in Bandipur and vice-versa. The nonpast suffixes in Bandipur seem to indicate a major departure from Bhaktapur, i.e. <-e> and <-i> in Bhaktapur appear as <-tāŋ> and <-a> in Bandipur. The suffix <-tāŋ> in particular is not native to the dialects of Kathmandu Valley nor to the Dumre, Ridi and Pokhara dialects of the western group. It may well be a contact-induced form from the Tibetan group or the Gurung-Tamang-Thakali group of languages since we note that /-tan/ or /-tāŋ/ indicates a causative or perfective action in the Tibeto-Burman languages of western Nepal.

3. Conclusion

The following are some of the tentative conclusions arrived at on the basis of available evidence from the historical materials of Classical Newar and modern Newar dialects still spoken in different parts of the kingdom.

- (1) Jørgensen (1941) does not correctly reflect the verb morphology of earlier Classical Newar. The references to person distinctions are not consistent and finds no support in the earlier materials.
- (2) Jørgensen's remarks on the meaning and use of the verbal forms in Classical Newar are based on attested frequency of usage which do not represent absolute distinctions in grammatical functions. His interpretation of the finite

markers <-am, -a, -o>, for example, suggests a historical change rather than a case of synchronic alternation.

- (3) Newar Verb marking system reflects a semantic role of 'agent' and patient' and not a grammatical role of 'subject' and 'direct object'. Agent and patient in Newar are not marked for person or number, and this may well be the situation in the earliest form of the language.
- (4) The vast corpus of Classical Newar literature dating back to the earliest sources testify that the Newars of Kathmandu Valley have made creative use of their language within the framework of a simple evidential system that characterized the languages of the Bodish sub-division of Tibeto-Burman, with the sole exception of the Tibeto-Kanauri group which has verb agreement systems. Thurgood (1985, cited by LaPolla 1992:299) "has also given evidence that the Kanauri-Almora group, usually considered a branch of Tibeto-Kanauri, is actually genetically closer to the Kiranti and Kuki-Chin languages". This shows that verb agreement languages within the Bodish branch constitute only a small minority and it is unlikely that Newar ever belonged to this group.
- (5) Finally, the placement of Newar within the Bodic Division has been ambiguous and controversial since the classification of Tibeto-Burman family by Grierson (1909, Vol III). Van Driem (1993b:294) has attempted to resolve this problem by placing Newar firmly under the East-Himalayan branch along with Kiranti and Kham-Magar. DeLancey (1987:802) on the other hand regards Newar as probably belonging to Bodish among the middle-level relationships within Tibeto-Burman. While Van Driem has argued for a closer genetic relationship of the Dolakha Newar verb with the Kiranti languages, Delancey's view links Newar to the Tibetan dialects both of which have 'aspectually split ergative or active/stative patterns'. The crucial question therefore is whether the c/d system in Kathmandu Newar is a secondary innovation parallel with the other Tibeto-Burman languages of the area and whether we are to regard Dolakha as the only surviving reflex of the parent language. The current work on the morphological structures of the two systems suggests that Kathmandu c/d agreement is a result of 'wholesale borrowing', while Dolakha represents the 'ancient trait' in the form of fossilized verbal conjugation. It is not at all clear at this point why and when a conservative system such as the suffixal morphology was lost in Kathmandu and whether a prefixal system ever existed in Kathmandu and Dolakha. We can argue for a suffixal and/or prefixal agreement system for Proto-Newar. The enclitics attached to modern Newar verbs such as *wone-ki*, *khay-ta* or the causative-noncausative distinctions in *dun-e* 'to collapse' and *thun-e* 'cause to collapse' are often cited as evidence of a previous prefixal paradigm in the language. Assuming that Newar had a prefixal morphology in the remote past, we do not know why Dolakha has not retained it despite its close proximity to the Kiranti languages, some of which have prefixes associated with person and number agreement. Our present knowledge of the diachronic

phonology and morphosyntax of Newar however is neither exhaustive nor deep enough to arrive at definite conclusions, but I am inclined to believe that Dolakha, Pahari and Bandipur represent a continuum in the development of the language exposed to varying degrees of external influences over the centuries and not isolated relics of genetic inheritance. Hale (1982:55-59) in discussing the theory of genetic classification highlights the basic problem of making a clear distinction between the inherited status of shared features or characteristics and those that result from either universal tendencies or areal pressures. For Newar and most cognate T-B languages of the area, the reconstruction methodology may not yet be explicit or adequate enough to establish a definite relationship between the forms in a proto-language and the forms in the daughter languages. What is definitely reconstructable for Proto-Newar is the verb root with its stemfinal consonants. Many scholars working in the field are not yet convinced that proto-Newar has a verb agreement system based on complex morphological and syntactic relations.

Abbreviations

1	first person	NEG	negative
2	second person	NPC	non-past conjunct
2h	second person honorific	NPD	non-past disjunct
3	third person	p	plural
ca	about (circa)	PAST	past
AGT	agent	PAT	patient
c/d	conjunct-disjunct	PC	past conjunct
CAUS	causative	PD	past disjunct
DAT	dative	PH	past habitual
DIR	directional	Pr H	present habitual
FUT	future	PRES	present
GEN	genitive	PTP	participle
HON	honorific	s	singular
IMP	imperative	STAT	stative
INST	instrumental		

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THE HISTORICAL STATUS OF THE CONJUNCT/DISJUNCT PATTERN IN TIBETO-BURMAN

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Abstract

Several Tibeto-Burman languages show a peculiar pattern of distribution of copulas and/or finite verb forms, in which one set occurs with first person subjects in statements, second person subjects in questions, and in complement clauses of *verba dicendi* when the complement and main clause subjects are coreferential, and another set in all other contexts. When the evidence for and against reconstructing the system at the branch or family level is assessed, it appears that this “conjunct/disjunct” pattern is a recent secondary innovation in all of the languages in which it is found. It probably developed independently at least twice, in Tibetan and Akha; its occurrence in other languages may represent Tibetan influence.

In the distribution of the copular verbs and finite verb forms in a number of languages of the Bodic branch of the Tibeto-Burman (TB) family, as well as Akha, which belongs to another branch of TB, we find a distinction among clauses which Hale (1980) has labelled “conjunct” vs. “disjunct”.¹ This morphosyntactic opposition is intertwined with the marking of evidentiality and of a related category, sometimes called mirativity (DeLancey 1989), which indicates whether or not the proposition being related is information which is new to the speaker. While both evidentiality and mirativity are widespread semantic categories, explicitly marked in the morphosyntax of languages from all over the world, the conjunct/disjunct pattern appears to be unique to Tibeto-Burman. My purpose in this paper is to describe the pattern in those TB languages in which it is attested, and to offer some preliminary discussion concerning its origin and age.

The languages which will be discussed in this paper are Tibetan, Monpa, Newari and Akha. Monpa, which appears to be a close relative of Tibetan, is spoken to the east of Bhutan on both sides of the current *de facto* China-India border. Newari, spoken primarily in the Kathmandu Valley of Nepal, belongs to the same Bodic branch of Tibeto-Burman as Tibetan and Monpa; although its place within Bodic remains to be established, it is probably not particularly closely related to Tibetan within this branch. Akha (also called Hani,

spoken in southern Yunnan and northern Thailand, is only distantly related to the Bodic languages; it belongs to the Lolo-Burmese branch of TB, which has no common ancestor with Bodic below the level of Proto-Tibeto-Burman.

Conjunct/disjunct patterns

Kathmandu Newari

The conjunct/disjunct system was first described for Kathmandu Newari in Sresthacharya et. al. 1971:99-100; more complete and systematic discussions are found in Hale 1980, Genetti 1988, Hargreaves 1990, 1991. In Kathmandu there are two verb forms for the past/perfective and non-past tenses. In main clause statements one form, the “conjunct”, occurs with first person subjects, and the other, the “disjunct”, with second and third persons (exx. from Hargreaves 1989ms. Kathmandu examples are given in the transcription used in Malla 1985):

- (1) *ji wan-ā*
I go-PAST/CONJUNCT
'I went.'
- (2) *cha wan-a*
You go-PAST/DISJUNCT
'You went.'
- (3) *wo wan-a*
s/he go-PAST/DISJUNCT
'S/he went.'

The conjunct forms can be used only with predicates whose meanings normally entail volitional control. In Kathmandu, whether or not a given verb allows a conjunct form is for the most part lexically determined, but minimal pairs can be found:

- (4) *ji dun-ā*
I submerge-PAST/CONJUNCT
'I submerged myself.'
- (5) *ji dun-a*
I submerge-PAST/DISJUNCT
'I sank.'

Such data as these appear to represent a simple system of verb agreement, distinguishing first from non-first person (and they are so analyzed in, for example, Korolev 1989:65). But this analysis fails to account for a considerable number of

other data. Under certain circumstances in environments other than main clause statements clauses with non-first person subjects will have conjunct forms with volitional predicates, while questions with first person subject always have disjunct verb forms. Hale's »conjunct/disjunct« terminology is inspired by the use of the endings in complement clauses of *verba dicendi*, where the »conjunct« forms are used with volitional predicates when the speaker and the subject of the complement are coreferential, and the »disjunct« forms when they are not, regardless of person (exx. from Hargreaves 1991):²

- (6) wō: lā na-e dhakā: dhāl-a
he+ERG meat eat-CONJ COMP say-Pst/DISJ
'He_i said that he_i will eat meat.
- (7) wō: lā na-i dhakā: dhāl-a
he+ERG meat eat-DISJ COMP say-Pst/DISJ
'He_i said that he_j will eat meat.

Lhasa Tibetan

The most elaborate versions of the system for which I have data are found in modern Tibetan dialects; I will describe here the system in Lhasa Tibetan. The principal difference between the Tibetan and Kathmandu systems is that in modern Tibetan the system is located in a set of lexical distinctions in the set of copulas; in all modern Tibetan dialects the finite verb endings are based upon the copulas, and inherit their conjunct or disjunct values. (For a fuller discussion of the Lhasa system and its semantics see DeLancey 1985, 1986, and especially 1990b).

Lhasa has a four-term basic copular system (two other verbs which arguably belong to the same synchronic syntactic category are not relevant here). There are distinct conjunct and disjunct equational and existential copulas:

	Conjunct	Disjunct
Equational	yin	red
Existential	yod	'dug

The question of volitional control is irrelevant to the distribution of the copulas, but otherwise they follow the same pattern as conjunct and disjunct forms in Kathmandu: *yin* and *yod* are used with first person in statements,³ with second person in questions, and in complements of verbs of speaking or cognition when the lower and higher subject are coreferential. (All Lhasa examples are given in transliteration):

- (8) nga bod=pa yin
I Tibetan(person) be/CONJ
'I am a Tibetan.'

- (9) kho bod=pa red
he Tibetan be/DISJ
'He is a Tibetan.'

Even on first glance these data seem problematic as an example of verb agreement, since we are dealing with suppletive copular stems rather than alternating inflectional affixes. Further data show that the patterning of the two equational copulas is identical to that of the conjunct and disjunct verb forms in Kathmandu. In questions *yin* occurs with second rather than first person subject:

- (10) khyed=rang bod=pa yin pas
you Tibetan be INTERR
'Are you a Tibetan?'
- (11) nga rgya=mi red pas
I Chinese person be INTERR
'Am I a Chinese?'

And in the complements of verbs of cognition and speech *yin* occurs when the higher and lower subjects are coreferential:

- (12) khos kho bod=pa yin zer=gyis
he+ERG he Tibetan be say-IMPF
'He_i says that he_i is Tibetan.'
- (13) khos kho bod=pa red zer=gyis
he+ERG he Tibetan be say-IMPF
'He_i says that he_j is Tibetan.'
- (14) khos nga bod=pa red zer=gyis
he+ERG I Tibetan be say-IMPF
'He says that I am a Tibetan.'

The existentials follow essentially the same pattern, but with one important variation. An additional semantic parameter, related to evidentially, is involved in their use. (15) and (16) exemplify the same conjunct disjunct pattern as is found with *yin* and *red*:

- (15) ngar dngul tog=tsam yod
I+DAT money some exist
'I have some money.'
- (16) khor dngul tog=tsam 'dug
he+DAT money some exist
'He has some money.'

However, (17) is also a perfectly good sentence, in the context in which the speaker has just reached into his pocket and discovered some money that he had not known he had:

- (17) ngar dngul tog=tsam 'dug
I+DAT money some exist
'I have some money.'

The essential condition for the use of disjunct 'dug in statements with first person subject is that the statement report a fact which the speaker has only just discovered. (Thus such utterances are relatively rare).

This use of 'dug is not strictly evidential, but is an instance of a related semantic category sometimes called mirativity (DeLancey 1989). (Although it is analyzed as evidential in Goldstein and Nornang 1970, the later analysis in Goldstein 1973 is much closer to that presented here). The non-mirative disjunct existential is a composite form, *yod-pa red*:

- (18) khor dngul tog=tsam yod-pa red
he+DAT money some exist-NOM be
'He has some money.'

(There is also a composite equational, *yin-pa red*, which occurs in disjunct contexts and indicates hearsay or inference). The contrast between (16) and (18) is one of mirativity; (16) represent knowledge newly-acquired, typically by direct visual perception, while (18) represents established knowledge, which is not new to the speaker at the time of utterance.

As in many other Tibeto-Burman languages, in Lhasa much of the finite verb morphology represents grammaticalizations of what begin as constructions of a copula with a nominalized clause argument. The verbal endings which include one of the copulas have the same conjunct/disjunct value as the copula:

- (19) ngas byas-pa yin /*red
I+ERG did-PERF/CONJUNCT / *DISJUNCT
'I did it.'
- (20) khyed=rang-gis/khos byas-pa red /*yin
you-ERG/he+ERG did-PERF/DISJUNCT / *CONJUNCT
'You/he did it.'
- (21) nga(s) byed-kyi yin /*red
I(ERG) do-IMP/CONJUNCT /*DISJUNCT
'I will do it.'
- (22) khyed=rang(-gis)/kho(s) byed-kyi red /*yin
you(-ERG)/he+(ERG) do-IMP/DISJUNCT /*CONJUNCT
'You/he will do it.'

In the system of verbal endings the volitionality parameter, irrelevant in the copular system, is manifested as in Kathmandu:

- (23) ngas stag bsad-pa yin
I+ERG tiger killed-PERF/CONJUNCT
'I killed a tiger.'
- (24) ngas stag mthong-song
I+ERG tiger see-PERF/DISJUNCT
'I saw a tiger.'

In the imperfective, built on the existential copulas, the system of the copulas has been imported wholesale into the verb system. The three-way evidential opposition among the existentials, with conjunct *yod*, disjunct *yod-pa red*, and mirative 'dug, is carried over into the imperfective endings, conjunct =*kyi yod*, disjunct =*kyi yod-pa red*, and mirative =*kyis('dug)*. (In negative and interrogative sentences the imperfective disjunct form retains the 'dug which is normally dropped in the affirmative in colloquial speech):

- (25) ngas thang=ka 'gel-gyi yod
I+ERG tangka hang-IMP/CONJUNCT
'I am hanging up tangkas.'
- (26) khos thang=ka 'gel-gyis⁴
I+ERG tangka hang-IMP/DISJUNCT
'S/he is hanging up tangkas.' [based on the speaker's direct perception]
- (27) kho(s) thang=ka 'gel-gyi yod-pa red
S/he(ERG) tangka hang-IMP INDIRECT
'S/he is hanging up tangkas.' [based on report or inference]

In the perfective, the copular forms contrast with several others. The ordinary perfective is formed with the perfective stem of the verb and the suffix *-song*, and marks the clause as reporting something directly witnessed by the speaker, in contrast to the *-pa red* perfective, which indicates a report based on general knowledge. The *-song* category is thus one which has no equivalent in the copular system, which makes no tense/aspect distinction, but the semantics of *-pa red* are roughly equatable with those of the equational *red*, given the different systems within which each functions.

Monpa

In Lu Shaozhun's description of the Cuona Monpa dialect (1986:69-70), we find something very like the Lhasa system. Lu describes two equational copulas: /jin³/, used with first person, and /jin³ te⁴/, used with third; with second person either can

occur, but /jin³ te⁴/ is commoner. There are four existentials: /nem³/, /ne²³/, /de²³/, and /ne²³ kho² de²³/. All are existential/locational. With first person /nem³/ is used with second or third person /ne²³/ or /de²³/ (but /de²³/ is less common). /ne²³ kho² de²³/ is used with third person, where it contrasts with /ne²³/ in degree of certainty: /ne²³/ represents certain knowledge, /ne²³ kho² de²³/ less certain knowledge, not based on direct perception. Thus:

- (28) ne³ le⁴ pu³sA² nAi³ nem³
I PART child two exist
'I have two children.'
- (29) i² le⁴ je³ pu³sA² nAi³ ne²³
You PART also child two exist
'You have two children.'
- (30) pe³ le⁴ pu³sA² sum² ne²³
s/he PART child three exist
's/he has three children.'
- (31) tʂAçi² le⁴ pu³sA² sum² ne²³kho²de²³
Tashi PART child three exist
'Tashi maybe has three children.'

The Monpa tense/aspect paradigm is also based on the copulas. Note that the copular verb endings, like the copulas, show some restrictions as to person:

	Past	Present	Future
1st/2nd person:	-wo ² jin ³	-ri ² nem ³ kho ² nem ³	-cu ² jin ³
3rd person:	-wo ² ne ²³	-ri ² ne ²³ kho ² ne ²³	-cu ² ne ²³

The distribution described for the tense/aspect endings does not precisely parallel that of the independent copulas, but without a more detailed comparison of the Cuona and Lhasa systems than is possible with the available data the significance of this difference is not clear. In any case, we are dealing here with very similar systems.

Other parallels with Tibetan are worth noting. Cuona /jin³/ is obviously both cognate and functionally equivalent to Tibetan *jin*. The second element of /jin³ te⁴/ is harder to identify; its similarity to the existential /de²³/ is obvious, but not of great interest until we can explain the dissimilarities. In any case, it is striking to find the equational /jin³/ in the conjunct past and future verb forms, contrasting with existentials in the present, exactly as in modern Central Tibetan. (It is so striking as to suggest the possibility of structural borrowing).

Lu's report on the Er and Motuo dialects of Monpa (Sun et. al. 1980:98-100) describes a three-term system, with one equational, /gi/, and two existentials: /tʂ'o/, used to report matters which the speaker has known for a long time, and /la/, used to report things which the speaker did not know before, but has just learned. The same distinction is made in two tense/aspect forms which are built on the existentials; the present, which is simply the verb stem followed by /la/ or /tʂ'olo/, and the perfect, which is the verb with past tense suffix followed by /la/ or /tʂ'olo/. In both tenses, /tʂ'olo/ represents information which the participants in the discourse already had, /la/ information that has just become available.

Thus these dialects also show the mirative distinction marked in Lhasa by the distinction between *'dug* and the other existentials. However, this report does not mention any person-based restrictions on the use of either the copulas or the tense/aspect forms. It may be that in Cuona, but not the other dialects, the evidential/mirative system has developed into a conjunct/disjunct system under Tibetan influence; on the other hand without more complete data we cannot be certain that Er and Motuo are not more similar to Cuona than is indicated in the available reports.

Akha

The only clear example that I know of of the conjunct/disjunct pattern outside of the Bodic branch is found in the Loloish language Akha. The parallelism between the Akha system as described by Egerod and Hansson (1974) and that of Tibetan is striking, so much so as to suggest the possibility that the roots of the system may go deeper than Bodic. Etymological investigation of the system (Thurgood 1986) shows that at most of the modern system represents local development rather than inheritance from what, if the system were cognate with one in Tibetan, would have to be PTB. But there remains a core of the system which appears to have a deeper etymology, and which we may speculatively compare with Tibetan facts which we have already discussed.

The Akha system is encoded in a system of sentence-final particles. These are not directly identifiable with synchronic Akha copulas. Akha shows the conjunct/disjunct opposition in pristine form, with one set of particles used in first person statements, second person questions, and third person "indirect reference". The system also distinguishes three other semantic parameters, which Egerod and Hansson label "expected" vs. "non-expected" (often interpretable as "no surprise" vs. "surprise"), "visual" vs. "non-visual", and past vs. non-past, which is sometimes interpreted as "indirect" (i.e. inferential) vs. "direct" (i.e. evidential). Although the "visual"/"non-visual" opposition has no precise parallel in Tibetan, the Lhasa mirative category marked by *'dug* is strongly associated with the notion of direct visual evidence, so much so that Goldstein and Nornang (1970) suggest this as the primary content of the contrast between *'dug* and *yod-pa red* (see Goldstein 1973 for an analysis closer to that presented here). Thus it is not hard

to imagine such a distinction developing out of something like the Lhasa system. The other two parameters of the system match very nicely with Lhasa.

Historical status of the conjunct/disjunct systems

Although it has interesting points of similarity to active/stative case marking (in the formal marking of volitionality) and logophoricity (see Sells 1987), the conjunct/disjunct opposition *per se* is a very peculiar phenomenon, which so far as I know occurs only in Tibeto-Burman. We should therefore be reluctant to suppose too readily that its occurrence in several different closely-related languages is a result of chance independent development, or attributable to general typological tendencies. The immediate hypothesis which needs to be examined is that the attested systems are cognate, i.e. that this apparently unique phenomenon originated only once, and has persisted since in various daughter languages.

However, examination of the available data suggests that this hypothesis cannot be maintained. Three independent lines of evidence combine to suggest that the conjunct/disjunct opposition is a secondary development at least in all of the Bodic languages where it is found. First, while we cannot present a definitive account of the history of conjunct/disjunct marking in any of the languages in which it occurs, the evidence which we can bring to bear on the question strongly suggests that the system is a recent innovation in each of the languages where it is most clearly attested, i.e. it apparently does not reconstruct for Proto-Tibetan or Proto-Newari, and may be internally reconstructible as a development within Akha. Second, while the Tibetan and Newari systems are strikingly similar in structure, the morphological exponents do not appear to be cognate. Finally, in some other Bodic languages we can find certain elements of the conjunct/disjunct pattern without the entire system, and can identify these as likely precursors of the conjunct/disjunct pattern.

The distribution of the conjunct/disjunct pattern

All of the languages discussed here except for Akha belong to the Bodic branch of the TB family. This large and diverse branch consists of three clearly identifiable units: East Himalayan (the Kiranti languages and Chepang), West Himalayan (Kinnauri-Almora), and a unit consisting of Tibetan, the Tamang-Gurung-Thakali languages of Nepal, and Monpa. Newari and Kham are both Bodic, but their affiliations within the branch are not firmly established.⁵

Within this branch, the true conjunct/disjunct system has so far been reported only for the languages discussed here, i.e. several modern Tibetan dialects (but not Classical Tibetan; see below), Kathmandu (but not Pahari or Dolakha) Newari, and Cuona Monpa. A number of other languages are sufficiently well-documented that we can state with assurance that they do not have the pattern; these include Kinnauri and Pattani (Manchati) in West Himalayan, Kham, Gurung and Tamang, Chepang, and several Kiranti languages. (The closest analogue which has been reported for any Kiranti language is discussed below).

In some West Himalayan languages, as in Cuona Monpa, we find a person-based alternation in the copulas and copula-based aspect/evidential forms, with one copula used with 1st and 2nd person and another with 3rd person subjects. Where we have sufficient data to say,⁶ however, these languages do not show the true conjunct/disjunct pattern; i.e. all 1st and 2nd person subject clauses have the same form, regardless of whether the clause is a statement or a question, or the verb volitional or not. I have also not seen any evidence of the shift from one form to another in complement clauses which characterizes the Tibetan and Newari systems. While it is possible that this pattern represents either a precursor of or a secondary simplification of the more complex conjunct/disjunct pattern, I have no comparative grounds at present for deciding which if either of these is the correct interpretation.

Thus, while the comparative data are not sufficient to compel the conclusion that the conjunct/disjunct distinction cannot be reconstructed to the Bodic level, there is at best only a fairly weak comparative case for such a reconstruction. If a hypothesis of Proto-Bodic or any deeper provenience for the conjunct/disjunct pattern were to be maintained, it would require at least a robust case for the antiquity of the feature in the languages where it is found. In the following sections we will see that no such case can be made.

The historical status of the pattern in Tibetan

With the sole exception of Balti, to be discussed below, all modern Tibetan dialects for which I have adequate data appear to have some sort of conjunct/disjunct system. In Shigatse, a Central dialect very closely related to Lhasa, we find the identical set of distinctions in a four-term copula system. One striking difference, however, is in the disjunct equational morpheme; while the other three members of the system are cognate to their Lhasa equivalents, the equivalent of Lhasa red is a distinct etymon, /pie/, which would reflect Proto-Tibetan **C-bas*⁷ (i.e. a root **bas* with some consonantal prefix; Jin 1958 gives the orthographic form *shas*). The rather sketchy data available for other Tibetan languages, e.g. Sherpa (Schoettelndreyer 1980, Woodbury 1986), Lhomi (Vesalainen and Vesalainen 1980), and Ladakhi (Koshal 1979), are sufficient to show that structurally similar systems are widespread, though the semantic details appear to differ even across fairly closely-related dialects.

However, Read (1934) describes a very simple system in Balti, consisting only of existential/locative *yod* and equational *yin*. A cognate to 'dug, *duk-pa*, does occur in Read's grammar, but only in the glossary under the English heading 'sit'; Read cites as an example *tsoqtsod-la dukpa* 'sit on the heels'. In modern Lhasa 'dug is completely replaced in this function by *sdod* 'sit'. The Balti system described by Read is strikingly simpler than the Ladakhi system described by Koshal (1979); while it is quite conceivable that Balti could have a significantly different system from Ladakhi, one would like the opportunity for more detailed investigation. Nevertheless, since Read was aware of the lexeme *duk*, he can hardly have missed its copular function if it had one.

As with the larger Bodic grouping, so in Tibetan the widespread attestation of the various features of the *c/d* complex in the modern Tibetan dialects would suggest the preliminary conclusion that it represents common inheritance at least from Proto-Tibetan. Alongside the dissenting voice of Balti, however, we can cite philological evidence which argues against this conclusion. Nothing suggestive of a conjunct/disjunct system is reported for the Classical language. Chang and Chang (1984) suggest, on the basis of the fact that only the conjunct forms occur in non-finite contexts in Lhasa, that these are original, and the disjunct forms a later development. A strong case can be made that the distinction between the conjunct and disjunct equationals is an innovation. The modern disjunct *red*, unlike *'dug*, does not occur in all modern Tibetan dialects, and appears to be a recent development in the Central dialects where it does occur. It is not attested at all in early literature, and has become acceptable in written Tibetan only in this century (cf. Bacot's characterization of it as "usite seulement dans le langage parlé" (1948:113)). Recall that, although Shigatse does have a disjunct equational, it is not cognate to *red*. One interpretation of these comparative data is that the semantic opposition shared by Lhasa and Shigatse developed after the differentiation of Proto-Central-Tibetan, and that while this semantic development was shared, it was lexicalized independently in the two dialects.

For the existentials the question is somewhat problematic. Comparative Bodic evidence would appear to suggest the antiquity of the disjunct *'dug* form. Lhasa *'dug* represents an etymon widely attested in Bodic in existential function (e.g. Newari *du*, Kinnauri *du(g)*), which suggests some antiquity for both the etymon and the function. But dialectal and philological evidence within Tibetan suggest the opposite. We have seen that *'dug* appears to lack the existential function in Balti, where it is reported only as a lexical verb. In the normal course of semantic change we would expect this lexical sense to be earlier than the more abstract sense found in Lhasa, so the absence of the more abstract sense in Balti is *prima facie* evidence that it never developed there. We can thus take Read's description of Balti as evidence suggesting that the grammaticalization of *duk* postdates the period of common Tibetan.

The implied conclusion that *'dug* was a lexical verb 'sit' until well after the differentiation of Proto-Tibetan is also supported by philological evidence. Classical Tibetan *'dug* retains in earlier texts the sense of 'sit, dwell, reside, stay', which on the basis of this and the Balti data can be identified as the etymological sense of the morpheme, and Jäschke (1881) gives this as the primary sense of the verb. Just as with the equationals, there does not appear to be any evidence for an opposition between *yod* and *'dug* in the earlier texts. The most likely conclusion is that this etymon was a lexical verb in Proto-Bodic; as the 'sit' verb it would be the prime candidate for development into an existential, and it is not implausible to imagine *'dug* having evolved in that direction independently in several of the daughter languages.

Another possibility is that the semantic opposition predates the split of Lhasa and Shigatse, but was independently relexicalized later in both dialects. Classical

Tibetan does have two distinct equational constructions: we find equational clauses both with the copula *yin* and with only two NP's and the final particle *'o*, with no verb, as:

- (32) *dpul='pongs=pa bza=ba dang bgo=ba med=pa zhid go*
 pauper food and clothing not=exist-NOM a
 '[He was] a pauper, without food or clothes.'

Before we can speak with any confidence about the antiquity and origin of the epistemological opposition in Tibetan it will be necessary to determine the functions of these two constructions. While the system as it exists in most of the modern dialects is demonstrably secondary, it remains possible that this represents relexicalization of a previously existing pattern. It is worth noting Francke's (1900) observation that a Ladakhi particle *og*, identified by educated Ladakhis with Classical *'o*, "is only used with the auxiliary *in*, to be, and almost only in the third person." This suggests some version of the conjunct/disjunct opposition. A possible hypothesis is that here, as in other respects, Ladakhi is conservative, and that the *'o* originally was involved in a conjunct/disjunct system. That this is not obvious in the Classical language would then suggest that this system of marking is already breaking down in that stage of the language, presumably being replaced by the nascent copular system. If this should be true it should certainly be possible to find traces of the older system in some older texts.

The historical status of the pattern in Newari

While Kathmandu has an unmistakable conjunct/disjunct system, the generally more conservative Dolakha dialect does not, and available data (Shakya 1990ms) show no evidence of conjunct/disjunct marking in the Pahari dialect. Thus we are faced with the comparative problem of whether to reconstruct the system for Proto-Newari, or to consider it a Kathmandu innovation. In principle the historical attestation of Newari, which includes texts dating to the fourteenth century, should permit a philological solution to the question; at present, however, the only systematic investigation of Classical Newari grammar available (Jørgensen 1941) is based entirely on later, primarily 18th and 19th century, texts.

In Jørgensen's materials we find essentially the Kathmandu system in independent clauses. In relative clauses, however, the morphology reflects a straightforward subject/object system rather than the more subtle conjunct/disjunct system (Hargreaves 1989); in modern Kathmandu, in contrast, the conjunct/disjunct system operates in all finite clauses. While a conclusive evaluation of the Classical Newari evidence must await detailed analysis of earlier materials, the simplest inference from these facts is that not long ago conjunct/disjunct marking in Kathmandu was restricted to independent clauses, and has only recently been extended to embedded clauses. Since the system in embedded clauses is more similar to that

of Dolakha than to that of modern Kathmandu, there is suggestive evidence here that the Dolakha system may be more conservative.

The comparability of the Bodic systems

Another argument against hypothesizing a common ancestor for the Tibetan and Newari systems is that, while the peculiar semantic and syntactic aspects of the system are quite comparable across several languages, the actual forms are not. The two most isomorphic systems that we have seen are those of Lhasa and Cuona Monpa, but just as the comparison of Lhasa and Shigatse shows that at least one aspect of the morphology of the modern systems is secondary, so a comparison of Tibetan and Monpa shows that one or both languages must have innovated most of the marking of the system—the only element common to the two systems is the conjunct *yin* etymon. The Newari system is even less comparable with any of the others. The morphology of the system is of a completely different nature from that in Tibetan and Monpa. There is no evidence that we are dealing here with grammaticalized copulas, and no involvement at all of the copulas in the system—even though one of the copulas, the existential *du*, appears to be cognate to the Tibetan existential *'dug*.

In Kathmandu, as we have seen, the conjunct/disjunct opposition occurs in the tense forms of conjugated verbs, but it is not lexicalized in the copular system, where we find only a two-way opposition between equational *kho* and existential *du*. The morphological opposition is made in the vowel quality of the finite endings, and with some classes in the stem consonant, e.g. *syata* (past disjunct), *syana* (past conjunct) 'killed'. It is, of course, perfectly conceivable that these forms represent eroded reflexes of forms that do have their ultimate origin in grammaticalized copulas, but there is no evidence for this. Since the distinction is not encoded in the contemporary Kathmandu copulas, the hypothesis that the opposition in the verb endings originated in a copular distinction would entail that the contemporary copular system is a later development, with the earlier copulas now preserved only in the verb endings.

In Dolakha, the conjunct/disjunct opposition is not found in either the copulas or in the finite verb (Genetti 1988, 1990). Since Dolakha has the same two copulas as Kathmandu, these copulas presumably date back to Proto-Newari. If we accept Genetti's conclusion that the Kathmandu system is secondary, then it cannot trace back to a distinction in the copular system, for the contemporary Kathmandu copulas are then older than the *c/d* opposition in the verb. This would make the Kathmandu system unique among those systems currently attested.

The ultimate validation of any hypothesis that a form or structure is reconstructible to some earlier level is a successful reconstruction. Given the available data it is difficult to be optimistic about the possibility of any such reconstruction for conjunct/disjunct marking even at the level of Proto-Tibetan, much less at any deeper level.

The historical status of the pattern in Akha

Documentation for the majority of Lolo-Burmese languages is not yet sufficient for us to state definitively whether Akha is unique within this branch in its possession of a conjunct/disjunct system. However, no similar pattern has been described from this branch, and in those languages which are well-enough documented that we can make a confident determination (particularly Burmese and Lahu) there is no trace of it. Moreover, Thurgood (1986) suggests Akha-internal etymologies for most of the exponents of the Akha conjunct/disjunct system, suggesting that in Akha as in Tibetan the system as we see it synchronically attested is a secondary and relatively recent development.

The Akha forms are as follows:

	Non-past		Past	
	exp	non-exp	exp	non-exp
conjunct	má	é	mà	è
disjunct	mé	á	mè	à
visual	ɲáa	ɲá	ɲàá	ɲà
non-visual	mía	nja	miá	njà

Thurgood has identified sources within Akha for most of the elements of the system. The 'visual' forms in /ɲ-/ Thurgood interprets as a grammaticalization of the 1st person pronoun, originally connected with a higher predicate of perception or cognition. These forms are also reminiscent of, though not identical to, the equational copula *ɲá*, which is in turn related to a widely-attested copular etymon (cp. Jinghpaw locational *nga*, the archaic Tibetan existential *mnga*, etc.). Thurgood's etymology is plausible, but should not be accepted without reservation until we understand more fully the semantics, distribution, and origin of the locative copular etymon represented by Akha *ɲá*. The non-visual forms *nja* and *njà* Thurgood connects with the modal morphemes *nja* 'able to' and *njà* 'will'. He suggests equating the other non-visual forms with the concessive particle *mi^a* in the closely-related Lisu, although the semantics of the equation are less compelling than for his other etymologies.

For the other elements Thurgood proposes PTB-level etymologies. The expected disjunct /*mɛ/* he identifies as an old copula. The non-expected conjunct/disjunct opposition between /*e/* and /*a/*, according to Thurgood's analysis, contains the oldest morphological material in the system. The /*a/* appears to reflect the original unmarked sentence particle (whether or not it ultimately traces to a 3rd person form, as Thurgood suggests), while Thurgood identifies the /*e/* with Tibetan *yin*.

Conjunct/disjunct systems as an areal phenomenon

Thus we have several reasons for rejecting the hypothesis that the attested manifestations of the conjunct/disjunct pattern represent common inheritance. Given that the mirative category is not particularly unusual cross-linguistically, and that

there is reason to believe that the conjunct/disjunct opposition has its origins in this category, the hypothesis of completely independent parallel evolution cannot be rejected out of hand. But the peculiarity of the phenomenon and its geographic localization suggest an areal development; and the Bodic data which we have examined would suggest that it is one of fairly recent date. The system is found in Tibetan and in Monpa, which is both closely related to and under considerable cultural influence from Tibetan (and most strikingly in the northern Cuona dialect, which in other respects shows the greatest degree of Tibetan influence). But the evidence from Tibetan textual data, and from the comparative dialect data, all suggest that the system has developed in Tibetan within the last thousand years.

In Newari, the distinction has apparently never existed in developed form in the Dolakha dialect. Here again, if we interpret the Dolakha evidence as arguing against the attribution of the c/d system to Proto-Newari, then we are dealing with a phenomenon less than a millennium old. The system in Kathmandu may well be interpreted as a borrowing, since it does not appear to be rooted in a preexisting evidential distinction. Again here an areal explanation is plausible, for there was considerable commercial and cultural intercourse between Lhasa and Kathmandu from the earliest historical times until very recently. Thus we find the system in those Bodic languages-Monpa and Newari-where we have independent evidence of Tibetan influence, while it is not attested in those-particularly the East Himalayish languages-where there is little evidence for an extensive history of Tibetan influence.

It seems unlikely that an areal explanation can be extended to Akha, since it has no very prominent geographical or cultural connections to Tibetan or the other languages discussed here. Any final conclusion on the question is premature at present, however, since many of the languages spoken in between Akha and Tibetan and Monpa are as yet too poorly documented to allow us to definitively establish the geographical distribution of conjunct/disjunct patterns or other novel grammatical features.

The roots of the conjunct/disjunct system

The Lhasa conjunct/disjunct/evidentiality system is the most elaborate that I know of at present. I take several characteristics of the Lhasa system to define the true conjunct/disjunct system. First, there is an evidential system including a "mirative" distinction between sentences which relate information which is part of the speaker's established representation of the world and those which relate information which the speaker has not yet assimilated. The peculiar development which constitutes the conjunct/disjunct system per se is a grammaticalization of the interaction between this mirative distinction and person, such that the non-mirative forms occur in conjunct contexts, and the mirative forms elsewhere. Conjunct contexts are: with 1st person actors in statements and 2nd person in questions; and in complements of verba dicendi, when the actors of the higher

and lower verbs are coreferential. Finally, in a full-fledged system such as that of Lhasa the same formal devices are used in the verbal system to distinguish volitional from non-volitional predicates.

I have argued elsewhere (DeLancey 1985, 1986, 1990b) that these three phenomena are not strictly independent. We can show both in Lhasa (DeLancey 1985, 1990b) and in Kathmandu (Hargreaves 1991) that the restriction of the indication of volitionality by the choice of conjunct forms to 1st person reflects the fact that the conjunct/disjunct opposition is fundamentally evidential. It is clear that the conjunct/disjunct pattern in the copulas is a grammaticalization of what would be the natural tendency, once the mirativity contrast has come to be explicitly marked, for statements about 1st person to represent old, and about non-1st persons to represent new, knowledge. We can infer from this a path of development in which the distinction begins as a mirativity opposition in the copula system. The crystallization of a conjunct/disjunct pattern represents the grammaticalization of a pragmatic association between mirativity and person, and this in turn is the natural source for the opposition in the finite verb.

Logophoric verb agreement in Dolakha and Sunwar

Both the conservative Dolakha dialect of Newari and Sunwar, a language of the Kiranti subbranch of Bodic, show another point of contact with the c/d complex. Verba dicendi in these languages take finite complement clauses, and in such clauses the verb may show 1st person agreement when the subject is coreferential with the higher subject (i.e. where Lhasa or Newari would have a conjunct form) and 3rd person agreement otherwise (i.e. in disjunct contexts). Genetti (1990:153) gives the following Dolakha examples:

- (33) rekā-n ji-n rājā-ta nāplat-ki haŋ-an hat-cu
Reka-ERG I-ERG king-DAT meet-1sPst say-PART say-3sPst
'Reka_i said "I_i met the king".
- (34) rekā-n ji-n rājā-ta nāplat-cu haŋ-an hat-cu
Reka-ERG I-ERG king-DAT meet-3sPst say-PART say-3sPst
'Reka_i said that I_j met the King.

Compare the parallel Sunwar examples:⁸

- (35) mere-m go-m kyarš 'saŋ-tu de 'tuŋ-šo tsha
s/he-ERG I-ERG goat kill-P3s/3s COMP know-NOM exist
'S/he knows that I killed a goat.'
- (36) mere-m mere-m kyarš 'saŋ-tu de 'tuŋ-šo tsha
s/he-ERG s/he-ERG goat kill-P3s/3s COMP know-NOM exist
'S/he_i knows that s/he_j killed a goat.'

- (37) mere-m mere-m kyarš 'saŋ-ta de 'tuŋ-šo tsha
s/he-ERG s/he-ERG goat kill-P1s/3s COMP know-NOM exist
'S/he_i knows that s/he_i killed a goat.'

We cannot simply interpret examples like (35) and (37) as direct quotation, for the verbs of the complement clauses do not agree with the subjects. However, this pattern differs from the true conjunct/disjunct opposition in two major respects. First, at least in Sunwar, this pattern is not obligatory; in my elicited data it is equally possible for the verb to agree with its subject without reference to the higher clause. More importantly, in main clauses the Dolakha and Sunwar verb suffixes function as straightforward agreement, i.e. main clauses with 2nd person subject, whether statements or questions, have 2nd person agreement.

While verb agreement is not ordinarily sensitive to volitionality in Dolakha (and never in our Sunwar data to date), Genetti reports occasional text examples which show an additional adumbration of the conjunct/disjunct system. A particularly clear example is (Genetti 1990:151):

- (38) ji-ŋ sir-eu ji chana nāpa tuŋ sir-i
I-EMPH die-3FUT I you (GEN) with TOP die-1FUT
'I will die. I will die with you.'

The heroine of the story here is commenting on her hopeless position, and the 3rd person agreement in the first clause appears to emphasize her complete lack of control.

Speculations on the origin of conjunct/disjunct systems

The attested distribution of the system is as follows: what I take to be the primary pattern, with the distinction lexicalized in the copulas and secondarily found in verb endings based on copular constructions, is described for all attested modern Tibetan dialects except Balti, and for Cuona Monpa. A secondary pattern, with the distinction marked in finite verb forms but not in the copula system, is found in Kathmandu and in Akha. No trace of a c/d distinction is found in Tamang or Gurung, nor is it reported for most of the other languages of Nepal, although Dolakha Newari shows hints and shadows which might or might not be traces of an earlier system, and Sunwar shows a set of semantic distinctions which look as though they might develop into a conjunct/disjunct system. Some West Himalayan languages show a pattern which might possibly be interpreted as evidence of an earlier conjunct/disjunct pattern, but no strong case can be made for this interpretation.

Tibetan data suggest that the pattern is a later development there. It is clear that the modern Tibetan exponents of the conjunct/disjunct distinction represent developments since Old Tibetan. The Lhasa disjunct equational *red* does not occur in the oldest texts, and even in recent centuries was considered a colloquialism by

prescriptive grammarians. Moreover, in the closely-related Central dialect of Shigatse, which has a c/d system very similar to that of Lhasa, *red* does not occur; the disjunct equational is *sbas*, which does not occur in the standard dictionaries and has no evident etymology. Both of these facts show that *red* is a recent introduction to the Lhasa copular system, which allows the inference that the distinction coded by the *yin/red* opposition is likewise an innovation.

The most elaborate development of the system so far attested is that of Central Tibetan. This may indicate that the Dbu-Gtsang speech community is the original home of the c/d distinction. If our current understanding of the distribution of the feature is correct, we can hypothesize an origin in some variety of Tibetan, certainly postdating the breakup of Proto-Tibetan, and very likely within the last millennium. We could then interpret the development of the system in Kathmandu Newari and Cuona Monpa as secondary developments facilitated by Tibetan influence.

As we have noted, however, it is difficult to extend this line of explanation to Akha. If we accept Thurgood's etymology for the Akha /e/ vs. /a/ opposition, then it may be that the core of the Akha system traces back to a very old opposition between an unmarked sentence type and a copular construction with **yin*. This would appear parallel to the Old Tibetan opposition between *yin* and the sentence final particle 'o. In that case we begin to have a case for attributing the seeds of the conjunct/disjunct opposition to PTB. Firm conclusions about the nature of this original opposition must be deferred pending further data from other languages and from the investigation of early Tibetan texts, but the evidence we have suggests an evidential or mirative rather than a fully-grammaticalized conjunct/disjunct opposition. Then we apparently must accept the conclusion that the grammatical conjunct/disjunct pattern, peculiar as it may be, did indeed develop independently from an original evidential or mirative opposition at least twice, in Bodic and in Akha.

Notes

1. An earlier version of this paper was presented at the 22nd International Conference on Sino-Tibetan Languages and Linguistics at the University of Hawaii, October 7, 1989. The preparation of this paper, and much of the informant work on Newari, Sunwar, and Lhasa and Shigatse Tibetan referred to here, were supported in part by the U.S. National Science Foundation under grants BNS-8711370 and BNS-8910221. I am grateful to my language consultants, Yungdrung Manang and Ngawangthondup Narkyid (for Lhasa Tibetan), Yangzom (for Shigatse), and Tangka Raj Sunuwar (for Sunwar).
2. The use of the "conjunct/disjunct" terminology for the system as a whole originates in Hale's attempt to unify the various conditioning environments by treating statements and questions as complements of abstract performative verbs, so that for these too we can speak of the lower subject being coreferential or not with the higher.
3. But see Chang and Chang 1984 for examples from text with *red* used with first person. I have not been able to elicit any such examples for detailed study.
4. The disjunct imperfective is generally written with **dug*, which is present in negative and imperative constructions, but in spoken Lhasa the copula is omitted in the affirmative.

5. Newari appears to be most closely related to East Himalayan. Watters (1975) suggests a particular relationship between Kham and West Himalayan, though the significance of some of his evidence is debatable (see DeLancey 1988).
6. I am grateful to Anju Saxena for valuable data on Kinnauri and Pattani.
7. I make here the standard simplifying assumption that the rules for relating Shigatse pronunciation to orthographic forms represent a summary of the phonological changes from Proto-Tibetan to the modern dialect.
8. The Sunwar data were elicited from Mr. Tangka Raj Sunuwar, a student at the University of Oregon.

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LAHU NOMINALIZATION, RELATIVIZATION, AND GENITIVIZATION

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Source: John P. Kimball (ed.), *Syntax and Semantics, Vol. 1* (New York: Academic Press, 1972), pp. 235–57.

Introduction

James McCawley is reputed to have said a while ago that if one were to penetrate deeply enough into the workings of English grammar one could come up with the answers to “all questions of interest for linguistic theory” without bothering to look at any other languages. Presumably, McCawley meant that to plumb the depths of any single language—whether English, Yiddish, or Lahu—would provide us with all the answers. Yet even this modified claim is false, as this paper is partly intended to demonstrate. In fact, we would like to lodge a counterclaim: Any language, if studied deeply enough, will supply us with new insights into questions of general theoretical interest; and some of these, at least, will be questions that could not possibly have been raised from the study of other languages.

Lahu is a language of southeast Asia belonging to the Lolo-Burmese family of the Tibeto-Burman branch of Sino-Tibetan. I have been working on Lahu and related languages since 1965, with fieldtrips to Thailand in 1965–1966 and 1970. The most intriguing and exasperating word in Lahu is the particle *ve*, which serves not only as the marker of genitive constructions and relative clauses, but also as a clause nominalizer. These are construction types that may not at first seem to be particularly closely related in languages like English. However, once the connection has been pointed out for a language in which it is obvious and overt, parallel phenomena can be discovered in other languages [see pp. 254–256], and we are challenged to find some theoretical basis for the relationship. We shall observe that in other languages where there is an overt connection between *nominalization* and relative–genitive constructions, there is a strong tendency to treat whole sentences as nounlike objects.

Lahu nominalization by means other than *ve*

Lahu has a rich array of devices for converting clauses into nounlike structures that can then be embedded into larger sentences. These devices are nominalizing particles that are postposed to the clause. All of them except *ve* have clear-cut meanings, and present no particular problems of analysis.

A Lahu clause is defined as a VP plus any (perhaps zero) preceding NPs that are associated with it [LG 2.1].¹ A structure is functioning as a noun if it may be followed by a member of the class of noun-particles (P_n s), crucially the accusative P_n *thàʔ* [LG 3.8].

Agentive nominalizations [LG 6.13]: *pā, ma; šē-phā, šē-ma*

A clause may be turned into a noun of agent (“the clauser; the one who clauses”) by one of several particles, most productively by *pā*. Thus:

- (1) *qhɔ-qhɔ-lə-qhɔ | mǎ tǎʔ e gǎ*
‘(They) don’t want to climb up into the hills.’²
- (2) $\{ \{ qhɔ-qhɔ-lə-qhɔ | mǎ tǎʔ e gǎ pā \} | qòʔ e phèʔ ve \} yò$
‘Those who don’t want to climb up into the hills may go home.’

Sentence (2) as a whole is nominalized by the *ve* at the end (see p. 246). Despite the relative clause in the English gloss, the embedded clause is clearly functioning as a unitary derived noun: ‘the not-wanting-to-climb-up-into-the-hill-ers.’ This is obvious when the clause is of simpler structure, so that the English translation tends to be a single noun: *šā | bɔʔ* ‘shoot animals’ / $\{ šā | bɔʔ pā \}$ ‘hunter’; *lə | lèʔ* ‘ask to eat’ / $\{ lə | lèʔ pā \}$ ‘beggar’, etc.

Locative nominalizations [LG 6.14]: *kǎ*

The particle *kǎ* has the power to convert a clause into a noun of location (“the place where one clauses”):

- (3) *yɔ | yù tǎ*
‘He has taken (it).’
- (4) *khǎʔ thǎʔ | { yɔ | yù tǎ kǎ } ɔ̄ | qòʔ te ò*
‘(He) has already put the crossbow back where he had taken it from.’

In (4), the nominalized clause is followed by the locative P_n *ɔ̄*. When the *kǎ* clause is of simple enough structure, a single noun usually serves for an English

translation: *mī* 'sit'/{*mī kà*} 'stool, chair'; *te cā* 'cook'/{*te ca kà*} 'kitchen'; *cha hō* 'sell one's vulva'/{*cha | hō kà*} 'brothel.'

Purposive nominalizations [LG 6.15]: *tù*

The verb-particle *tù* indicates that the verbal event is hypothetical, unrealized, or future oriented. Often it is used to mark purpose clauses that are not nominalizations, but rather structures that stand in an adverbial relationship to the higher sentence. We diagram such clauses by enclosing them in inward-pointing arrows.

- (5) {*ηà* | → *mà²-pāw=šī* | *ca hō tù* ← *lā ve*}*yò*
'I've come to sell (my) coconuts.'

Sometimes, however, especially when the main verb is *cò* 'have, be there,' a *tù* clause functions as a noun of purpose ('that which is for clausing; that which is to be claused'):

- (6) *ò-ví-ò-ni thà?* | *qò? qò? lā*
'(I) am speaking once again to my brethren.'
(7) {{*ò-ví-ò-ni thà?* | *qò? qò? lā tù*}*thō* | *cò šō ve*}*yò*
'There are still things (for me) to say once again to (my) brethren.'

When the nominalized clause is simple enough, a single English noun is often the best translation: *cā* 'eat'/{*cā tù*} 'food'; *cì* | *šī?* 'brush teeth'/{*cì | šī?*} 'tooth-brush'; *gā²-mu* | *dō?* 'hit chicken feathers'/{*gā²-mu | dō?*} 'badminton racquet.'

Temporal nominalizations [LG 6.12]: *thā*

The temporal particle *thā* 'when' is often used to mark a non-nominalized clause that stands in an adverbial relationship to a higher sentence:

- (8) *yō* | *šī e*
'He died.'
(9) *yō* | *šī e thā* || *ηà* | *yā-nē* | *phē?* *šō*
'I was still a young man when he died.'

Sometimes, however, when the time in question is focused upon as the main center of interest in the sentence, rather than being an ancillary modifier of the verbal idea, a *thā* clause may function as a temporal noun ('the time when clause'):

- (10) {*yō* | *šī e thā thā?* | *ηà* | *qha-dē?* *dō-nō šō*
'I still clearly remember the time he died.'

In (10), the nominalized clause is followed by the accusative *P_n thā?*.

Ve as a subordinator

Before going on to consider the role of *ve* as a nominalizer, it is time to examine its occurrences as a subordinator of modifying material to nounheads.

Genitival subordination

Ve is regularly used to indicate that one nominal nucleus (*v*) is modifying another within the same NP in a genitival relationship [LG 3.7]. The possessor nucleus (*v_p*) precedes the possessed head (*v_h*); thus: *ηà ve mí-cho* 'my shoulder-bag'; *šī²-cē ve ó-qō* 'the top of the tree'; *qhā²-šē ve ó-qā* 'the headman's buffalo'; *mà²-pāw=šī ve ó-qu* 'the shell of the coconut.'

Under certain favorable circumstances, particularly when the *v_p* is a pronoun, genitive *ve* may be deleted with no change in meaning [LG 3.75]: *ηà* □ *ò-mí=ma* 'my wife', *gē-ša* □ *ò-bo* 'the grace of God'; *nò* □ *phī* 'your dog.' The deleted constituent is symbolized by an empty box.

When the general context is clear, or to avoid repetition of a nucleus mentioned elsewhere in the discourse, the *v_h* may be deleted: *v_p + ve + v_h → v_p + ve + □* [LG 3.76]. These residual structures still behave like nouns and may be followed by *P_ns*. They have the same semantic relationship to full genitive constructions that English pronominal expressions like *mine*, *yours*, and *Noam's* bear to their corresponding possessive adjectives plus noun (*my mango*, *your jackfruit*, *Noam's durian*). Thus:

- (11) *ηà ve* □ | *nò ve* □ *a-ké* | *yì jā*
'Mine is much longer than yours.'

Into the empty box one may freely stick any appropriate noun (*á-tà* 'stick', *nā?* 'rifle', *nī-qhē?* 'penis').

Relative subordination

A relative clause (RC) is embedded in a larger sentence in such a way that it modifies the particular noun of the sentence to which it is preposed. The marker of this subordination is *ve* [LG 6.4]:

- (12) [*yā²-qō* | *jū qay ve*] *a-pi=qu chi* | *a-šu le*
N_{rh}
'Who's this old lady that's walking along the road?'

- (13) [*vā? qhe* | *chu ve*] *Pichō-pā ó tē gā* | *nò ve ó-chō lā*
'Is that Shan man over there who's fat as a pig your friend?'

- (14) [vâ²=ó-qō thà² | cō tā ve] yā-mī=ma lē | qhā²-šē=ma yō
 ‘The woman **who boiled the pig’s head** is the headman’s wife.’
- (15) [qhā²-šē=ma | cō tā ve] vâ²=ó-qō | mē jā
 ‘The pig’s head **the headman’s wife boiled** is yummy.’

The noun in the higher sentence that is modified by the RC is the relative head or N_{rh} (*a-pi=qu* ‘old lady,’ *Pichō=pā* ‘Shan man,’ *yā-mī=ma* ‘woman,’ *vâ²=ó-qō* ‘pig’s-head’). In general, when the verb of the RC is an intransitive action verb—like *jū qay* ‘walk’ in (12)—or an adjective—like *chu* ‘be fat’ in (13)—the N_{rh} is its underlying subject. When the verb of the RC is transitive—like *cō* ‘boil’ in (14–15)—the N_{rh} is either its underlying subject (14) or object (15). Sometimes there is ambiguity, when it makes sense to interpret the N_{rh} either as the subject or as the object of the RC: [*šī ve*] *chō thà² | tā qō² pī* (a) ‘Don’t tell (it) to the people who know (it)’ [N_{rh} is subject]; (b) ‘Don’t tell (it) to the people (we) know’ [N_{rh} is object]. In any case, no RC may contain a noun that is coreferential with the N_{rh}; that is, the underlying subject or object in the RC that is equivalent to the N_{rh} is obligatorily deleted on the surface.

So far, there is nothing very remarkable about the role of *ve* in these constructions. There is an obvious analogy between the possessor nuclei of genitive expressions and relative clauses. Both are structures that are semantically subordinate to a nounhead (v_h or N_{rh}), and in fact, there are other languages where the same particle is used to mark both relationships. A notable case is the Mandarin *.de*, used both in genitives (*woo .de kuay.tz* ‘my chopsticks’; *feiji .de chyan.tour* ‘the front of the airplane’) and in relative clauses ([*may | shu .de*] *ren_{Nrh}* ‘the person who sells books’; [*tsornq Meei.gwo | lai .de*] *feiji* ‘airplanes that come from America’).

Nominalizing *ve* in nonfinal clauses

Clauses in Lahu are either final or nonfinal. A final clause (Cl_f) is the last clause of its sentence. Simple sentences comprise a single (therefore final) clause. Nonsimple sentences contain at least one nonfinal clause (Cl_{nf}). A sentence is complex if it contains a Cl_{nf} embedded within the Cl_f, and compound if it has a Cl_{nf} conjoined to the Cl_f [LG 2.1]. The various types of Cl_{nf}s differ from one another and from Cl_fs with respect to the kinds of unrestricted particles that may follow them [LG 4.72, 5.43 et passim]. These details need not concern us here. However, it is convenient to begin our discussion of nominalizing *ve* with those cases where the *ve* clause is nonfinal, since it is here that its nounlike nature is most apparent to our alien eyes.

Embedded *ve* clause followed by a noun particle [LG 6.115]

The clearest cases are those where the *ve* clause is followed by a P_n—morphemes that otherwise occur only after natural nouns (or clauses nominalized by one

of the particles discussed above, pp. 238–240). The P_ns that may occur after *ve* clauses are *pa-to* ‘causal’ and (more importantly) *thā²* ‘accusative.’ Thus, analogously to (16)–(18), where natural nouns are marked by these P_ns, we have (19)–(21):

- (16) qhā²-šē *pa-to* | *he* | *tú má phè² šē*
 N P_n
 ‘Because of the headman, (he) can’t fire (his) fields yet.’
- (17) ð-šī *thā²* | *nò* | *mā ġa mò lá*
 N P_n
 ‘Didn’t you see **the blood**?’
- (18) ð-mī=ma *thā²* | *nò* | *mā šī šē lá*
 N P_n
 ‘Don’t you know **(his) wife** yet?’
- (19) {*yō* | *he* | *mā ġa phō pò šē ve*} *pa-to* | *he* | *tú má phè² šē*
 ‘Due to the fact that he still hasn’t finished clearing his fields, he can’t fire them yet.’
- (20) {ð-šī | *tō² la ve*} *thā²* | *nò* | *mā ġa mò lá*
 ‘Didn’t you see **that blood was coming out**?’
- (21) {*yō* ð-yā=pā | ð-mī=ma | *bà tù ve*} *thā²* | *nò* | *mā šī šē lá*
 ‘Don’t you know yet **that his son is going to divorce his wife**?’

As the glosses indicate, the meaning of nominalizing *ve* is much more abstract than those of the other nominalizing particles (pp. 238–240 above). *Ve* adds nothing to the meaning of its clause other than the gift of nounhood itself, and is in fact as semantically colorless as the English complementizer *that*. For want of a better term, we may call *ve* an indicative nominalizer, understanding by this nothing more than the semantically unmarked nominalizer.

Ve clause not followed by any particle [LG 5.21, 6.11].

Most of the time, the syntactic–semantic relationship of the nonfinal *ve* clause to the rest of its sentence is not signalled overtly by any particle, as in (22)–(27):

- (22) {{*nò-pa ve* ð-*khō* | *mā na ve*} | *dà² ve*} *lá*
 ‘Is it good **not to listen to your father’s advice**?’
- (23) {*ŋà-hi thā²* | *Kālā-phu=khō* | *mā lá chē ve*} | *cí-kā* | *cò jā*
 ‘**(Your) continuing to teach us English** is very important to us.’
- (24) {*ŋá nālī* | *mā gà ve*} | *nī chi mini²* | *cò šš*

'It's twenty minutes to five' ('As for not reaching 5:00, there are still twenty minutes').

(25) {*nò kà²* | *là ve*} | *ηà* | *ha-lè já*
'I'm very happy **that you came too.**'

(26) {*nò* | *i-ká²* | *lò pí ve*} | *ηà* | *mā sī*
'I didn't know **that you could swim.**'

(27) {*γò ve khi-še thà²* | *pí* | *chè² lá ve*} | *γò* | *bà² já cè*
'He got very angry at **the mosquitoes' biting him on the feet.**'

In all sentences of this type, it is possible to insert a topicalizing unrestricted particle after the *ve* clause. Furthermore, in sentences like (25)–(27), where the *ve* clause may alternatively be considered the object of the higher verb, the P_n *thà²* may be inserted after it.

Where semantically appropriate, as in (23) or (27), the causal P_n *pa-to* may also freely be inserted ('Because of your continuing to teach us English, [you are] very important to us'). The point is, there is still no doubt that these clauses are functioning as nouns, even when a P_n is not overtly present.

Ve clause followed by a P_{unf} [LG 6.110]

An unrestricted particle (P_u) is a morpheme of abstract meaning that may occur either after nouns or verbs. P_u s are thus more powerful than noun particles, which occur only after nouns, or verb-particles ($P_{v,s}$), which come only after verbs. A subclass of these are the nonfinal unrestricted particles ($P_{unf,s}$), which occur only in nonfinal position, either after the verb of a nonfinal clause or after a noun that does not come last in its sentence. Sentences whose last structure is a NP (rather than a VP) are minor sentences. See, for example, sentence (14). The presence of a P_{unf} in the middle of a sentence, therefore, is not a criterion for deciding whether a preceding structure is nominal or verbal. Nevertheless, since we find $P_{unf,s}$ after natural nouns, naked verbs, and *ve* clauses, and since the meaning of $V + P_{unf}$ is indistinguishable from that of $V + ve + P_{unf}$, it is clear that the only difference between these two is that provided by the nominalizing power of the *ve*. In other words, $V + ve + P_{unf}$ is more like $N + P_{unf}$ than like $V + P_{unf}$. Consider (28)–(30).

(28) with the conditional P_{unf} *qo*

a. *Lāhū-yá qo* | *i-mū* | *mā ġa cí qay hé*
N P_{unf}

'If (he's) a Lahu, he probably won't be able to go on horseback.'

b. *mū-cha* | *cha qo* || *i-mū* | *mā ġa cí qay hé*
V P_{unf}

'If the sun is hot, (he) probably won't be able to go on horseback.'

c. {*mū-cha* | *cha ve*} *qo* | *i-mū* | *mā ġa cí qay hé*

'If the sun is hot, (he) probably won't be able to go on horseback.' ('If it is a sun-being-hot . . .')

(29) with the concessive P_{unf} *thò*

a. *γá-é thò* | *ó-qò* | *dà² já*

N P_{unf}

'Although (he's) a child, he's got a good head' ('the head is very good').

b. *γò* | *mò já thò* || *ó-qò* | *dà² já*

V P_{unf}

'Although he's very old, he's got a good head.'

c. {*γò* | *mò já ve*} *thò* | *ó-qò* | *dà² já*

'Although he's very old, he's got a good head.' ('Although it is a his-being-very-old . . .')

(30) with the topicalizing P_u sequence *tí qo lè*

a. *ηà tí qo lè* | *γà²-to pí à*

N P_u P_u P_u

'As for me, I'd be awfully embarrassed!'

b. *ηà* | *á-thà* | *mà² tí qo lè* || *γà²-to pí à*

V P_u P_u P_u

'As for me playing the jewsharp, I'd be awfully embarrassed!'

c. {*ηà* | *á-thà* | *mà² ve*} *tí qo lè* | *γà²-to pí à*

'As for me playing the jewsharp, I'd be awfully embarrassed.'

Note that the difference in structure between (30b) and (30c) cannot be captured in English translation, since English *as for* requires us to nominalize the following clause anyway. In general, we regard utterances like (28b), (29b), (30b) as ordinary compound sentences, where the Cl_{nr} is merely conjoined to the Cl_s , not embedded within it as in (28c), (29c), (30c).

Ve deleted from the nominalized clause [LG 5.11]

Sometimes, especially when the *ve* clause is quite short and the sentence as a whole is not very complicated in structure, the *ve* itself may be deleted:

(31) {{*là²* | *tha* (ve)}} | *šé è qay ve*}

'The hand-clapping was boisterous.'

(32) {*qhà²-še* | *te* (ve)} | *dà² à mē*

'The way the headman does it is really fine!' ('The headman's doing it . . .')

(33) é || {*a-pi* | *qhē* | *tè²* (ve)} | *nù à*

'Whew! **Grandma's farting** sure stinks!'

It is hopeless to try to formulate precise conditions for the deletability of this *ve*, just as it would be to try to specify exactly when English *that* may be omitted from relative clauses (*the man [that] I know*).

**Ve in final clauses—nonembedded
nominalizations [LG 4.711, 6.118]**

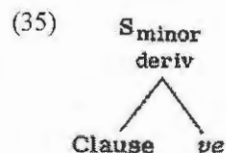
We come now to a phenomenon that is quite alien from the point of view of standard average European languages but surprisingly widespread elsewhere—the nominalization of entire sentences that are embedded in nothing larger than themselves.

Ve appears in the final clauses of Lahu sentences with enormous frequency. [For additional examples, see sentences (2), (5), (7), (22), and (31) above.]

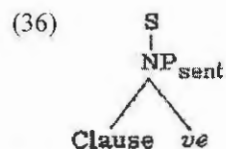
- (34) {yɔ̌ | vɛn qhɔ̌ | mɔ̌ | ca hɔ̌ qay ve}
'He went/goes/will go to town to sell some things.'

As the gloss of (34) shows, *ve* has nothing to do with tense. So what is it doing in sentences like this? It is tempting to take refuge in such empty labels as indicative, general, neutral, or actualizable. The situation is actually more straightforward. The verbal event is being objectified, reified, viewed as an independent fact, endowed with a reality like that inhering in physical objects—in short, *nominalized*. It is standing on its own, and is not a constituent of any sentence higher than the one to which it belongs itself.

In formalizing this interpretation, it is important to avoid setting up an overly complex underlying structure when a simpler one would do just as well. Perhaps the most comfortable solution would be to recognize two types of minor sentences—natural and derivative. A natural minor sentence [e.g., sentences (12), (13), (14)] has a natural noun phrase as its final constituent. A derivative minor sentence is one that has been nominalized by a *ve* in its final clause:



Alternatively, one could recognize sentential noun phrases:



In any event, it is necessary to guard against being misled by attempts at English translation of these structures. It may help us to understand a sentence like:

- (37) {yɔ̌ | là tù ve}
'He will come.'

by glossing it with painful literality as 'It is the case that he will come' or 'It is a he-will-come case.' But this does not mean that we have to assume that there is some higher verb floating around with the meaning "be the case."

Ve-clauses plus P_{uf}s

Final *ve*-clauses may be followed by final unrestricted particles (P_{uf}s), morphemes of abstract meaning which come at the end of sentences, supplying information about the speaker's propositional attitude toward the sentence as a whole [LG 4.72]. The P_{uf}s may be roughly subdivided semantically into several categories—declarative, dubitative, interrogative, persuasive, quotative, and interjectory. They occur equally well after naked verbs and after the final NP in natural minor sentences. However, analogous to the situation described above (p. 244) with respect to P_{unr}s, sequences of V + *ve* + P_{uf} are more like N + P_{uf} than like V + P_{uf}:

- (38) with the declarative P_{uf} yò
- a. yɔ̌ | qhâ²-sɛ yò
 N P_{uf}
 'He (is) the headman.'
- b. yɔ̌ | qay yò
 V P_{uf}
 'He's going!'
- c. {yɔ̌ | qay ve}yò
 'He's going' ('It is a his-going').³

- (39) with the dubitative P_{uf} hé
- a. yɔ̌ | qhâ²-sɛ hé
 N P_{uf}
 'He('s) probably the headman.'
- b. yɔ̌ | qay gâ hé
 V P_v P_{uf}
 'He probably wants to go.'
- c. {yɔ̌ | qay gâ ve}hé
 'He probably wants to go.' ('It's probably a his-wanting-to-go').

- (40) with the interrogative P_{uf} lâ
- a. yɔ̌ | qhâ²-sɛ lâ
 N P_{uf}
 '(Is) he the headman?'
- b. yɔ̌ | qay lâ
 V P_{uf}
 'Is he going?'
- c. {yɔ̌ | qay ve}lâ
 'Is he going?' ('Is it that he's going?').

Citation forms of verbs

Perhaps the clearest situation where a verb is treated as a nounlike object is when it is cited in isolation—metalinguistically, as it were. Just as we cite verbs with the nominalizer *to*, so the Lahu invariably cite them with *ve*: *qay ve* 'to go'; *chu ve* 'to be fat'; *sí ve* 'to twist.' Consider the following:

(41) {{ *qay ve* } | *Kâlâ-phu=khô* | *qhà-qhe qo' ve* } *le*
'How do you say "to go" in English?'

(42) { << { *qô' dâ' ve* } >> *qô' qo* || << { *dê dâ' ve* } >> *qô' ve* }⁴
'"To have words with each other" means "to quarrel with each other."'

As a general rule of thumb applicable throughout the Tibeto-Burman family, whenever one discovers the particle used in verb citation, one can be sure of having discovered the most important nominalizer of the language (see pp. 250–251).

Ve and negation

After a non-negated verb, *ve* is actually more conspicuous by its absence than by its presence [LG 4.711]. It is as if the Lahu verb were so brimming with potency that it must be gelded by nominalization in order to avoid giving the sentence a special mark of emphasis:

- (43) a. { *ηà-hi* | *tê ge* | *qay ve* }
'We go/went/will go together.'
b. *ηà-hi* | *tê ge* | *qay*
'Let's go together!'; 'We go together!'; or 'We'll go together!'

However, the situation is reversed when the verb is negated by preposing the adverb *mâ* 'not' to it:

- (44) a. *yô* | *mâ hâ*
'He's not tired.'
b. { *yô* | *mâ hâ ve* }
'He's not tired!'

Here, the power of the naked verb is sufficiently attenuated by the negative adverb, so that nominalization by *ve* is no longer necessary to avoid special emphasis. It is now the presence of *ve* that is semantically marked. To negate the verbal event and reify it at the same time is to give extra force to the negation.

Natural nouns are negatable in Lahu by preposing them to the VP *mâ hê'* 'is not the case' [LG 6.111]:⁵

- (45) *yô* | *Lâhū-yâ* | *mâ hê'*
'He is not a Lahu.'

Since they are nounlike entities, *ve* clauses may be negated the same way:

- (46) { *yô* | *hâ ve* } | *mâ hê'*
'He's not tired'; 'His being tired is not the case.'

Note that both (46) and (44b) are more emphatic than (44a). In the case of (44b), one is nominalizing a negation; in the case of (46), one is negating a nominalization.

Citation forms and nominalizers elsewhere in Tibeto-Burman

As hinted above, Lahu is by no means alone in its penchant for nominalizing whole sentences. This is in fact a pervasive tendency throughout the Tibeto-Burman family.

Burmese

In modern Burmese, verbs are cited with the particle *te*: *hpya' te* 'to cut'; *thwà te* 'to go'; *pein te* 'to be thin.' This same particle appears with great frequency in clause final position, where the standard grammars misinterpret its true function and characterize it by such vacuous labels as nonfuture or general: (e.g., Okell, 1969, p. 119).

- (47) { *côu* | *mâ-hpyei nain lóu* || *dâ né* | *hpya' te* }
'Because he couldn't undo the rope, he cut it with a knife'
('It is a case of his-cutting-it-with-a-knife-because-he-couldn't-undo-the-rope').

The proof that *te* is really a nominalizer is that *te* clauses may be followed by the accusative particle *kou*, which otherwise occurs only after natural nouns:

- (48) { *hkinbyà* | *hvi te* || *mâ-hyi te* } *kou* | *be hne* | *thi mālè*
'How will I know whether you're there or not?'

Jinghpaw [Kachin]

In Jinghpaw (an important Tibeto-Burman language spoken in northern Burma), verbs are cited with the particle *'ai*: *lú 'ai* 'to have'; *hkráp 'ai* 'to weep'; *lagú 'ai* 'to steal.' This particle occurs with tremendous frequency in clause final position:

- (49) { *Jinghpô' 'á' māsà* | *myüt* | *kabà 'ai* }
'Jinghpaw people are proud at heart.'

Appositional *ve* clauses [LG 6.31].

There does exist one situation where a *ve* in a final clause affects only that clause and not what comes before. This happens when two *ve* clauses stand in apposition to one another:

- (56) {yó | qó² ve} | {šó-pō | qay ve}
 'What he said was, he'd go tomorrow.'

Such sentences are analogous to appositions involving natural NPs:

- (57) khá²-pà-mē-cí-cá-kwì | ηá² tē cā yō
 'The racket-tailed drongo (is) a kind of bird.'

Nominalizing *ve* versus relativizing *ve* [LG 6.47]

When a *ve* clause is followed directly by a noun, there is often ambiguity according to whether the clause is interpreted as modifying that noun or not. Consider the following sentence:

- (58) a. {tē-qhā²-tē-lò | šī ve} | {a-pì=qu | šī e ve}yō
 'What the whole village knows is, the old lady has died.'
 b. {[tē-qhā²-tē-lò | šī ve] a-pì=qu | šī e ve}yō
 N_{th}
 'The old lady whom the whole village knew has died.'

In (58a), the sentence is understood as consisting of two appositional *ve* clauses, such that the noun *a-pì=qu* 'old lady' has no connection with the preceding nominalized clause *tē-qhā²-tē-lò | šī ve* 'that which the whole village knows'. In (58b), on the other hand, *a-pì=qu* is taken as the nounhead of what precedes, so that the *ve* clause is not a nominalization at all, but rather a relative clause. In actual speech, there would be no problem in keeping the interpretations apart; a pause before *a-pì=qu* is sufficient to remove the ambiguity of the sentence in favor of the first reading.

Nominalizing *ve* versus *ve* in right relative clauses [LG 6.497].

Under certain conditions, it is possible to shift a relative clause (*ve* and all) to the right of its N_{th}, with little or no change in meaning [LG 6.49]:

- (59) a. {[cō tā ve]vā²=ó-qō thā² | qhō | te tā ve}le
 N_{th}
 'Where have you put the boiled pig's head?'
 b. {vā²=ó-qō [cō tā ve] thā² | qhō | te tā ve}le
 N_{th}
 'Where have you put the boiled pig's head?'

Sometimes it happens to make sense to interpret a given noun either as the head of a right-shifted relative clause or as being included within a nominalized *ve* clause:

- (60) a. šī²-cē [mā mu ve] kà² | thu bà phē² ɔ
 N_{th} RRC P_{unf}
 'You may chop down even the trees that are not high.'
 b. {šī²-cē | mā mu ve}kà² | thu bà phē² ɔ
 'Despite the fact that the trees are not high, you may chop them down.'

Under interpretation (60a), the P_{unf} *kà²* 'even' is in constituency with the natural noun *šī²-cē* 'trees,' which is in turn modified by the switched relative clause. In (60b), *kà²* 'even though, despite' is in constituency with the entire predicative clause *šī²-cē | mā mu ve* '(It is the case that) the trees are not high.' See pp. 244–245 for similar examples of P_{unf}s in constituency with preceding *ve* clauses.

Subordination and nominalization

The question we now face is whether there is any plausible way we can relate the nominalizing power of *ve* to its function as a subordinator (pp. 240–242). It might be claimed at this point that this is a pseudo-issue. Maybe *ve* represents the conflation of two separate particles that now happen to be pronounced the same way through historical accident? In the first place, there is no evidence for such a claim. But more importantly, there are many other languages, including some that do not even belong to the Sino-Tibetan superstock, where the same morpheme is used for both functions. This cannot be accidental. At the same time, it is not easy to explain. We are in no position to offer a definitive solution here, but we will content ourselves with presenting some evidence from other languages.

**Particles in other languages having dual subordination/
nominalization function***Japanese*

The behavior of the Japanese particle *no* is strikingly similar to that of *ve*. It is, first of all, the marker of genitive subordination: *ki no eda* 'branch of a tree'; *azi no moto* 'the wellspring of taste' (monosodium glutamate); *hi no kuruma* 'chariot of fire'; *zaibatu no zitoryoku* 'the real power of the corporations.' Unlike *ve*, however, *no* is not used to connect relative clauses to their heads; the verb of a RC is attached to its N_{th} by simple juxtaposition ([*kinoo tabeta*,_v] *ninzi*_{N_{th}} 'the carrots (we) ate yesterday').

The other role of *no* in Japanese grammar is that of a nominalizer:

- (61) {issyookanmei ni | hataraku no} wa | karada ni | doku | desu
 P_n
 'Working with all one's might is poison for the body.'

- (62) {haha ga | kaette kuru no}o | matte orimasu
P_n

'I'm waiting for my mother to come back.'

In these sentences, the *no* clause is nonfinal. But colloquial Japanese, like Lahu, has a strong tendency to nominalize whole sentences by using *no* in the final clause:

- (63) {kimi mo | iku no}ka
P_{uf}

'Are you going too?' ('Is it a you-going-too thing?')

- (64) {atasi mo | asobitai no}yo
P_{uf}

'I want to play too!' [women's speech]

- (65) {mada aru no}

'Are there still some left?'

Sentences like (63)–(65) are certainly to be derived from fuller, less colloquial structures where the *no* clause is followed by the copula *da/desu* (the so-called *no desu* construction of standard grammars of Japanese), so that {iku no} | *desu ka* 'Are (you) going?' ('Is it a your-going?') is analogous to natural-noun sentences like *mookoo-syuuheki* | *desu ka* 'Is it an epicantheal fold?' Nevertheless, the propensity for copula deletion here does make Japanese look a great deal like Lahu.

Mandarin

As discussed above (p. 242), the particle *.de* is used as a subordinator both in genitive constructions and in relative clauses. In conjunction with the copula *sh* (the so-called *sh . . . de* construction), it also serves to nominalize clauses:

- (66) *ta sh*{leang dean jong | daw .de}

'He arrived at two o'clock' ('He is a two-o'clock-arrive thing'),

analogous to natural-noun sentences of the form N₁ *sh* N₂:

- (67) *ta sh yanggoei.tz*

'He is a foreign devil.'

According to Benjamin Ts'ou (private communication), it is often possible to omit the copula *sh* from this construction in colloquial speech. It seems likely that the ancestor-particle to *.de* in classical Chinese, *iy*, also had a dual subordinating nominalizing function.

Jinghpaw

As discussed above, the Jinghpaw particle *'ai* is used as a nominalizer in verb citations, nonfinal clauses, and final clauses. Exactly as in Lahu, this particle is also used as a subordinator in relative clauses: [*ʔai hpéʔ* | *kərum 'ai*] *məšə*_{N_{rh}} 'the person who helps me'; [*nta šhätaw kalaw ai*] *hpün* 'the wood (we) use for houseposts' [Hertz (1935) p. 51]; [*kəbà 'ai*] *hpün* 'a tree that is big.'

It seems certain that the Jinghpaw particle used in genitive subordination, *'áʔ* (*Jinghpòʔ 'áʔ məšə* 'a person of the Jinghpaw'), is historically connected to *'ai*, with the final -ʔ analogous to the creaky tone acquired by the Burmese particle *te* in attributive position (next section).

BURMESE

We have seen above how the Burmese particle *te* is used in verb citations and nominalizations. But it is also used to connect relative clauses to their heads, in which position it assumes the creaky tone (*té*): [*thutóu* | *mə-yauʔ hpù thei té*] *əyaʔ*_{N_{rh}} 'a place they have never been to.'

Summary

The above remarks are admittedly very sketchy. Here are some even sketchier ones. Alan Stevens (personal communication) reminds me that the Indonesian affix *-nja* may have either possessive or nominalizing force. Margaret Langdon (personal communication) has pointed out some fascinating parallels between my findings and phenomena she has discovered in the Yuman languages of southern California and Arizona. The details of the relationship between nominalization and subordination vary from language to language, and a much more thorough study is needed. In any event, this is a topic worthy of the attention of anyone who is truly interested in putting speculations about universal grammar on an empirical basis.

Notes

- 1 Bracketed references are to the author's "Lahu Grammar," to appear in the series University of California Publications in Linguistics.
- 2 To obviate somewhat the need for tedious interlinear glosses, the following diagrammatic conventions are used: a solid vertical line (X | Y) separates a NP from a VP; a broken vertical line separates two NPs belonging to the same clause (X | Y); a double vertical line separates two clauses conjoined in the same sentence (X || Y). Nominalized clauses are enclosed in braces, and relative clauses in square brackets. The diacritics over Lahu vowels are tone marks [LG 1.6].
- 3 As the glosses of (38) indicate, it is more usual (and semantically colorless) to have the *ve* than not. When *ve* is absent, the verb retains an 'untrammelled verbality' which manifests itself as an additional nuance of emphasis. See the discussion of *ve* and negation, p. 249 below.

- 4 We diagram embedded clauses governed by verbs of utterance like *qô?* 'say' by enclosing them in angular brackets [LG 6.3].
- 5 *hê?* is a defective verb that always occurs negated (except in disjunctive questions). It is probably related to the noun *hê?* 'omen; true harbinger,' and is certainly cognate to the functionally parallel Burmese verb *hou?* (< Old Bs. *hut*). In positive identity statements Lahu (like many other languages) requires no verb at all: *yô | Lâhū-yâ yô* 'He is a Lahu.' To say there is an underlying copula here would be to destroy the analogy between *ve* clauses and natural minor sentences.
- 6 This example is taken from H. F. Hertz (1935, p. 58), and is left in his orthography.

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A LINGUISTIC IMAGE OF NATURE

The Burmese numerative classifier system*

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1. Two Burmese classificatory systems

When I left Burma in 1961, after three years of study, my Burmese language teacher gave me a small paper-bound copy book, carefully written in his fine hand, in which all classes of things are listed, abstract as well as concrete, in this world and out of it.¹ The book was to be my guide for continuing my study of Burmese, a syllabus of future studies. The small encyclopedia begins with sets of two and grows, as if paralleling the growing complexity of one's experience, to larger and larger sets. The initial sets are sometimes obvious, like the two parents or the two strengths (strength of arm and strength of heart), sometimes more esoteric pairs, like the two worlds (the zero world - in which buddhas, monks, supernatural beings, etc. do not appear, exist or flourish, and the non-zero world - in which the above appear, exist, and flourish). The sets in my book continue to sets of eighteen, though other lists go on to larger sets. To understand the sets, my teacher said, is to understand the world, both inner and outer, seen and unseen. They represent, taken together, a taxonomy of the phenomenological universe of the Burmese.

Furthermore, each set in itself is a structure - a kind of plot from a universal plot: book - around which to build a discourse. That is, a sermon is built around, say, the four cardinal virtues (love, attention, happiness, indifference), a political speech around, for instance, the three kinds of mistakes (those resulting from lack of memory, from lack of planning ahead, or from misguided beliefs), and a play around some other appropriate set, perhaps the four false hopes (hoping to get rich by reading treasure maps, hoping to get healthy by reading medical literature, hoping for wisdom by following a learned man, and hoping for a girlfriend by dressing up). These sets are assumed *a priori* to any discourse as impersonal

structures to which nature, both human and non-human, properly and appropriately corresponds. A true sermon, a wise foreign policy, or a well-constructed drama will be rooted in one or more of them. One can contemplate these sets with continual fascination and increasing insight, as one learns to see things in a Burmese way.

Within the language in which these sets are expressed, however, is a second kind of classification, a second phenomenological universe, rather more obscure than the first. The title of each set includes three linguistic constituents: a noun phrase, a numeral, and a classifier or numerative expression. For example, *mi' ba hnə 'pa*, "parents 2 'pa". Here 'pa is one of a set of words, commonly called classifiers or numeratives, by which nouns are specified and counted, somewhat like a *tin* of sardines, a *brace* of partridges, or thirty *head* of cattle in English.² Like the encyclopedic sets, Burmese linguistic classifiers are part of a system for organizing experience. In each, certain semantic polarities appear over and over again: inner versus outer, round versus straight, for instance.³ What is striking is that the same semantic polarities do not appear in both systems. Encyclopedia sets, for instance, do not classify things on the basis of shape or size. Numerative classifiers, on the other hand, do distinguish shape and relative size, but they do not give particular relevance to sex or color, which are important in the semantics of the sets. Thus, the two systems of classification – encyclopedic sets and numerative classifiers – are to some extent complementary in the structures they establish.⁴

The two systems differ in other ways, as well. One system, the sets, appears to represent overt knowledge; they are easy to discuss – indeed, their primary value is that they are good to talk about. The other, the classifiers, represent covert knowledge; they are hard to talk about and the meanings of the individual classifiers – as independent words – are often obscure, just as *head* in "head of cattle" and *brace* in "brace of partridges" are obscure in English. It is often difficult for a non-specialist to say why a noun takes one classifier rather than another. Why not a head of partridge and a brace of cattle? There are historical reasons, but none available to the average man, who just accepts such things as facts.

2. Taxonomy and paradigm

The major difference between the two systems, however, is that they are different *kinds* of systems, taxonomic and paradigmatic. In the past both have been approached as taxonomies. In the case of numerative classifiers, the investigator lists words classified under a single classifier, searches for the common semantic element in the list and then posits that element as the meaning of the classifier. Thus, one classifier in Burmese is used with the sun, airplanes, the ocean, and needles, among other things. One may contrive a common meaning here, either for the whole class, or for part of the class, in which case there are some irregular or exceptional members of that class. This approach is backwards, both heuristically and phenomenologically: it leads to awkward results and people who use classifiers don't appear to think that way. The point here is that each numerative classifier is not independent of the others, nor is it derived inductively. Numerative

classifiers are, rather, polarities in a structure one learns to apply to experience – a cultural artifact, not a crude natural science.

The numerative classifier system, then, is not a folk taxonomy, in which items are classified on the basis of objective features, but rather a system much more like a paradigm, in which items are located relationally. Library cataloguing systems or botanical keys are instances of taxonomic systems: each book or plant has a unique place within the hierarchical system. A paradigmatic system, on the other hand, is not inherently hierarchical, nor does each item have a unique place. Examples of paradigmatic systems are sets of pronouns or kinship systems, in which a given individual does not fit in just one place in the system, but is, rather, part of a shifting set of relationships, depending on who is speaking to whom, about what. A taxonomy is constructed on the principle of genus and differentia, a paradigm on the principle of reciprocal relationships, or, to use poetic terms, one might say taxonomies are metonymic, paradigms metaphoric.

Classifiers do not subclassify word classes in any syntactically relevant way.⁵ They do not operate like, for instance, noun subclassifications in English, which are syntactically relevant. In English, nouns are subclassified as singular, mass, or plural. In other Indo-European languages nouns are masculine, feminine, or neuter. These are two very different subclassification systems (number and gender) but they are all essentially taxonomic and syntactically relevant: they are overtly marked and serve to classify words. Thus the noun *rivers* in English is plural. *Rivières* in French is plural and feminine, while *Flüsse* in German is plural and masculine. Covert English gender, on the other hand, is paradigmatic and, hence, metaphoric. A river can be referred to as he, she, or it, depending on who is speaking to whom about what. A particular river can be considered as masculine, feminine, or neuter on different occasions, by different speakers. In a technical discussion, the river will probably be referred to as *it*; in a more personal description as *he* or *she*. The same water changes gender in Pittsburg, where the feminine Allegheny River (*she*) merges with the neuter (sometimes feminine) Monongahela (*it*) and becomes the masculine Ohio River (*he*).⁶ One might write context sensitive syntactic rules specifying choice of gender in these contexts, but these rules would suggest that the choice is more determined than it actually is. It would be better to present the contextual constraints which describe how the speaker may relate to the river (and the hearer) in different contexts.

Covert gender, rather than number or overt gender, is typologically close to Burmese numerative classification. Both have to do with the universe of discourse in which a word is being mentioned. In Burmese, a given noun may be included appropriately in several different places in the classifier system. Furthermore, original classifications are possible in poetry and in other contexts in which linguistic invention is expected.⁷ The use of classifiers in Burmese – like the use of covert gender in English – is in part an art and not just a grammatical convention. People have varying degrees of skill in using them. There is, for instance, no

single classification for river (myi?) in Burmese. The choice depends upon the universe of discourse. One might speak of a river in at least eight contexts:

myi? tə ya?	'river one place' (e.g., destination for a picnic)
myi? tə tan	'river one line' (e.g., on a map)
myi? tə hmwa	'river one section' (e.g., a fishing area)
myi? tə 'sin	'river one distant arc' (e.g., a path to the sea)
myi? tə θwə	'river one connection (e.g., tying two villages)
myi? tə 'pa	'river one sacred object' (e.g., in mythology)
myi? tə khu'	'river one conceptual unit' (e.g., in a discussion of rivers in general)
myi? tə myi?	'river one river' (the unmarked case)

The choice of classifier, then, is dependant on the speech act one is performing.⁸ The classifier is, in part, an indication of the context in which one is speaking about something. The goal of the rest of this discussion will be to describe one of the paradigms in which these choices are made.

3. Elementary semantic dimensions of the Burmese classifier system

As stated briefly above, Burmese linguistic classifiers are most commonly found in numerative phrases, such as:

lu 'le yau?
person four (classifier)

Classifiers can also be used in compounds (e.g., *yau?* 'ca 'male') and in a few other syntactic patterns which will not be discussed here.⁹

Classifiers are usually distinguished from quantifiers, which measure a more or less precise quantity of the thing being referred to, as in

lu 'le 'tan
person four rows (e.g., rows of soldiers)
lu 'le souŋ
person four sets (e.g., four couples)

Probably the assumed distinction between classifiers proper and quantifiers is really best considered a continuum, for, while there are forms which are clearly classifiers and clearly quantifiers, there are some forms which are intermediary and not clearly one or the other, such as

ke' – an amount removed surreptitiously from a pile or a collection
phouŋ – a round heap

Professor Hla Pe lists *ke'* as a quantifier, *phouŋ* as a classifier, though the basis for this distinction is not clearly stated in his article. The fact probably is that *quantity* and *quality* are not discrete semantic classes but rather polarities in a semantic continuum. However, there is structural evidence – to be presented below – that classifiers are semantically different in some respects at least, from quantifiers.¹⁰

In analyzing a phrase like that cited above,

lu 'le yau?
person four (clf)

it should be stressed that here, even more than is usually the case, translation is a distortion. We can discuss the classifier *yau?* in English, but we cannot translate it, for there are no syntactic or semantic equivalents in English. *Lu* 'person, man' has rough equivalents in English, *'le* 'four' a quite precise equivalent. The classifier *yau?*, however, can only be explained as part of a conceptual structure which is non-English.

First of all, *yau?* is not the name of a class to which men belong. It is not a genus, all members of which have some attribute, but rather a locus on a conceptual map. Animate beings are ordered according to distance from Buddhahood – which is not necessarily the same as social status. If we conceive of a Buddha (and his words, relics, and images) as the center, then all animate beings can be located in the network radiating out from the center. Furthest away are animals, ghosts, and base, depraved people. Closer are ordinary humans. Then come people with some spiritual status, and closest of all saints, monks, precious things, and members of the royalty. Spiritual progression is movement from animality to Buddhahood. People have no *fixed* position in this network. If one considered a king to be depraved, he might classify him in private as an animal, though it might be wise and safe to classify him in public as a saint.¹¹

It is interesting to consider the words used for these loci on the conceptual map. The meanings of these words gives us the key to the semantics of the classifier system, the basic dimensions of classification. Those closest to the center (Buddhahood) are classified as *'pa* – a word which also means, even in modern Burmese, 'close'. The meaning of this term suggests that one basic semantic dimension of classification deictic. As we shall see, *all* classifiers (as opposed to quantifiers) have deictic implications. All things range out in relation to a conceptual center, which is Buddhahood in the classification of animate beings, and which is the self in the classification of most inanimate things. People (and holy things) which are closest to that center are classed simply as *'pa* 'close'.

People not yet close but considered to have status are classified as *'u*, which also means 'head' and also 'beginning', 'origin', 'top'. This term *'u* is in contrast semantically with the term used for animals, ghosts, and depraved people – those furthest from the center, who are classified as *kaŋ* which also means 'body'. This opposition between head and body in the second basic semantic dimension of the classification system (and much of Burmese spiritualism, as well). In addition, all classifiers for inanimate things (as opposed to quantifiers) are related to this head-body opposition.

Between people of status ('head') and creatures of no status ('body') are ordinary people, those classified as *yau?*, as in

lu 'le *yau?*
person four (clf).

The term *yau?* apparently refers only to people in this position: unlike some of the other classifiers, it does not refer to anything else.

The classifier for the center, used for a Buddha, his relics, images, and his words – the Buddhist Law, is *shu*, a term of unclear origin. It may be related to the Kachin term *tsu*, meaning ghost or spirit (hence suggesting a pre-Buddhist origin) or it may be a loanword. It is important to note that this term *shu* can apply to the whole system itself (the field of human existence or the Law, the Dharma) and by metaphoric extension to items conceptually similar to the system with its center and measured distances, e.g., concentric networks like mosquito-nets and fishnets (both of which in traditional Burma were conical in shape), gardens (which were laid-out as a wheel), and staircases.

The conceptual world of animate beings implied by the classifier system (and mirrored in other Burmese symbolic systems) can be diagrammed as follows:

System of animate beings

Center	1st orbit	2nd orbit	3rd orbit	4th orbit
<i>shu</i>	'pa (close)	'u (head)	<i>yau?</i>	<i>kaun?</i>
Buddhas	deities	people of status	ordinary humans	animals
relics	saints	teachers		ghosts
images	monks	scholars		dead bodies
The Law	royalty			depraved people
(secondarily, nets	(gems)			children
staircases gardens)				

The classifier *yau?* in the phrase,

lu 'le *yau?*
person four (clf)

is thus a local in a conceptual map, to be understood not as a genus, but as part of a paradigmatic system.

Now let us explore this system of classification in the inanimate world. The roots of the system have already been exposed in the system of animate classification. The process for extending the system is metaphoric, and the two basic dimensions on which the metaphor can be described are deixis or proximity (both physical and psychological) and person (the head and the body).

System of inanimate objects

Center	1st orbit	2nd orbit	3rd orbit	4th orbit
Self	Part of self (inalienable)	On self (alienable)	Nearby self	Far from self
Head	<i>ywe?</i> hair on head leaf	<i>paig</i> head dress	' <i>louŋ</i> round, upper things: posts furniture cup script	' <i>siŋ</i> upper things which have circular orbit: sun rivers, sea arrows needles
Body	' <i>chaun?</i> hair on body digits teeth <i>piŋ</i> sticks & twigs twigs pens	<i>kwig</i> body dress body ornaments <i>the</i> folded clothes	<i>cha?</i> flat, lower things: boards mats saucer palmleaf for writing <i>le?</i> instruments used in the hand swords musical instruments puppets	' <i>si</i> lower things which move in straight lines: vehicles hunted animals horses dupes <i>θwe</i> rivers roads

4. A linguistic map of the world

Linguistic classifiers relate people to the world – not in a vague sense but quite literally, if we examine the way the Burmese language classifies inanimate objects. The structure underlying classification starts with the self at the center, divides the self into head and body, and then ranges objects at four distances from the self, associating them either with the head (metaphorically top, round) or with the body (metaphorically bottom, straight).

I would like to make several observations on the system of inanimate objects outlined in the chart above. First of all, it is not particularly neat and logical, and conceptual change over history has left some items obscure. For instance, unless one knows that the traditional Burmese pictorial map of the cosmos has man located on an island, from the center of which flows a river in a spiral course to the sea, one may question why rivers and oceans are classified here along with arrows and needles, which move in circular orbits.¹²

Secondly, the system depicted above is not an inductively derived taxonomy but an applied metaphor. Thus items located customarily at the same point in the system (e.g., fruit, cups, letters of the alphabet, wooden posts, furniture, machines, houses, stars, and electric lights, which are all *louŋ*) do not necessarily have any shared attribute – no common shape, size, or function – but are all relationally upper and not on the self but within view. In the relational logic of the metaphor:

Head is to Body

as: cup „ „ saucer
 letter „ „ page
 chair „ „ mat
 post „ „ floor

Thirdly, it is interesting that several of the classifiers are words for parts of a tree, so that one might say that the tree is the metaphor for the person, not vice-versa. As Adams and Conklin have pointed out,¹³ recurring shapes (and their names) in a great many classifier systems in Southeast Asia are round (often using the word for fruit), rod (stick), and flat (leaf). Here, however, the tree seems more an included metaphor which structures part of the classifier system (1st Orbit, inalienable objects) than a metaphor which underlies the entire system.

Fourthly, the reader will note that several of the categories are subdivided. There seem to be two basic principles used in subclassification. One of these focuses on function, distinguishing the active use of a thing from the static thing not in use. Thus, in the 2nd Orbit a sarong folded and not worn is classified as *the* ‘substance’, while a sarong wrapped around the body, enclosing something, is a *kwiŋ*, ‘encircling’. In the 3rd Orbit, an object held or manipulated in the hand is classed as a *le?* ‘hand’. In the 4th Orbit, vehicles and moving things (*si*) are distinguished from static things (*θwe*). Besides this active-static subclassification, though perhaps related to it, is the subclassification based upon pliable versus stiff, which appears in the 1st Orbit. Parts of the body can be conceived of as *pa* (plants) or *chaŋ* (sticks):

<i>piŋ</i>	<i>chaŋ</i>
feathers	legs
animal fur	digits
(thread, rope)	tusks
	tails
	(pins, pens)

Once again, however, these terms ‘pliable’ and ‘stiff’ are not to be seen as attributes of objects themselves, but as universes of discourse in which the objects may be discussed. To list words under a classifier – as I have done above – is only to note where they are classified most of the time: in the more creative uses of language, objects and people can be conceived of – and hence classified – in

original ways. Hla Pe writes of one instance of this original use of classifiers in which a poet uses a classifier to fit his imagery, referring to the five causes of a woman’s insolent behavior toward her husband as “five rings of insolence” (*ng - kwiŋ*, 2nd Orbit). This was apparently an original use of *kwiŋ*. A grammar can describe constraints on the system, but not produce rules or predict actual language behavior.

5. Classification of concepts

A third system of classifiers structures the realm of concepts, although, as observed above, concepts may be concretized as animate or inanimate (e.g., *rings* of insolence). Once again the system is basically spatial and deictic. It shares with the system of animate classifiers the term *pa* “close” for sacred concepts associated with the Buddha. Secular concepts which are considered beyond the ordinary (concepts in arts and sciences) are classified as *ya?*, a term which means literally “place”, further evidence that the system underlying classifiers is basically spatial or deictic.

The unmarked class is *khu'*, meaning a unit. This is the class into which one puts concepts and things which one does not know where else to put – a kind of conceptual limbo. In translating Buddhist works from Pali, which has no classifiers, Burmese traditionally used *khu'* for ideas and objects which had no clear Burmese counterpart. This use of *khu'* continues to the present. Wanting to test the analysis presented here in a way that might convince behaviorists, I made a list of objects which are not part of Burmese culture and asked Burmese what classifiers they would use. Without exception, stereo-headphones, contraceptives, aerosol throatsprays and the like were classified as *khu'*. They knew what these things were, but they did not know where to put them in the Burmese system (a further indication that things are not classified according to superficial attributes). Linguistic classification thus is a potential indication of the depth of the enculturation of borrowed objects and concepts. Change in the system of classification must represent deep conceptual change in the epistemology of a people. The first step has been to reveal the system, however, we must next study variation and change.

6. Conclusion

What I have attempted is to reveal a spatial metaphor, or rather some interrelated spatial metaphors. Revealing metaphors is an act of interpretation, of supplying information necessary for seeing the coherence and purpose of a phenomenon, in this case a particular set of Burmese words. The Burmese classifier system is coherent because it is based upon a single, elementary semantic dimension: deixis. On that dimension, four distances are distinguished, distances which metaphorically substitute for other conceptual relations between people and other living beings, people and things, and people and concepts.¹⁴ These distances are further

subdivided by another spatial dimension: higher and lower, expressed concretely as head and body. Further subdivisions are in part obscure (i.e., remain incoherent to me) but can be explained in part as difference along another spatial dimension, static versus active (e.g., the sarong not being worn or the stick not being used, versus the sarong or stick in use).

The Burmese classifier system has purpose because it maps nature and expresses just where one is placing himself and what he is talking about. It establishes in the surface structure of the language the universe of discourse (i.e., the sense in which someone is speaking of something) of a speech act, within a culturally shared image of nature. As Emerson has succinctly put it, "The whole of nature is a metaphor of the human mind."

Notes

- * I wish to acknowledge the aid and encouragement of the following: U San Htwe, U Thein Swe, Michael Aung Thwin, Robbins Burling, Karen Adams, Nancy Conklin, James Matisoff, Norma Ware, Benjamin K. T'sou and Judith Becker.
- 1 There are several versions of this work. Most accessible of published versions is Obhāsabhivamsa, *Thu-te-thana Thayoukpya Abhiddan* (A Dictionary of Established Sets of Forms) (Rangoon, 1955).
 - 2 The Burmese classifier system is discussed in Robbins Burling, "How to Choose a Burmese Numeral Classifier" in Melford Spiro, ed., *Context and Meaning in Cultural Anthropology* (New York, The Free Press, 1965) and also in Hla Pe, "A Re-examination of Burmese Classifiers", *Lingua* 15 (1965) (also published, with additional examples in *Journal of the Burma Research Society*, 50 [1967]). Both these works include lists of Burmese Numeral Classifiers. Burling's very insightful study closes with a challenge to which this article is a partial response. Burling writes, "Seeing the problems which arise in the attempt to bring order into the set of classifiers, one may feel that the best 'analysis' so far is simply the list of classifiers with their definitions. If there is such a thing as 'semantic structure' in a language, then this list ought to be reducible to some more orderly arrangement . . ."
 - 3 For a discussion of recurring semantic polarities in another linguistic system, see A. L. Becker, "Person in Kawi: Exploration of an Elementary Semantic Dimension," to appear in *Proceedings of The First International Conference on Comparative Austronesian Linguistics* (January 2-7, 1974) in Honolulu, Hawaii.
 - 4 The kinds of semantic distinctions made in numerative classifier systems are discussed in Karen L. Adams and Nancy F. Conklin, "Toward a Theory of Natural Classification" in *Papers from the Ninth Regional Meeting of the Chicago Linguistic Society* (1973). See also Burling, op cit., pp. 259-63.
 - 5 This point is made clearly and well in Burling, op cit. Burling writes, ". . . problems present themselves if we insist that the choice of classifier depends strictly upon the noun class of the noun with which it is used. Perhaps the most evident problem is that a single noun can, on different occasions, be accompanied by different classifiers . . ."
 - 6 This example was given me by Nancy Conklin. The best discussion of covert gender in English remains that in Benjamin Lee Whorf, "Grammatical Categories", in *Language, Thought, and Reality* (Cambridge, M.I.T. Press, 1956).
 - 7 For examples of the poetic use of classifiers, see Hla Pe, op. cit., p. 185.

- 8 The speech act intended by the speaker is overtly marked by sentence final particles, as well as by classifiers. A few of these sentence final particles, and the speech acts they identify are:

te	statement
'la	yes/no question
'le	content question
'saj	plea
tə'	permission
lai?	demand

- 9 The syntax of classifiers is being explored in detail for a large number of languages by Adams and Conklin, op. cit., footnote 5.
- 10 Insight into the overlap between classifiers and quantifiers stems from an unpublished study by Norma Ware, "Numeral Classifiers in Minangkabau" and a paper by Benjamin K. T'sou, "The Structure of Nominal Classifier Systems" to be published along with the other papers presented at the First International Conference on Austronesian Linguistic, Honolulu, Hawaii, January, 1973. T'sou describes classifiers and quantifiers on the basis of two features EXACT and ENTITY, a very different approach from that to be developed here, i.e., a good deal more abstract.
- 11 There is a well-known Burmese tale which establishes this epistemology: it is called The Five Brothers. A version is included in William S. Cornyn, *Burmese Chrestomathy* (Washington, 1957) pp. 27-29. The five brothers are the fingers and thumb, who quarrel about who is best. Each gives his argument based on his own uniqueness: special position, usefulness, height, beauty - excluding the little finger, who tries to make peace, but, failing that, establishes his own place in a hierarchy of distances from the Buddha. When the hands come together in prayer, it is the little finger who is closest to Buddha.
- 12 Depictions of Burmese cosmology are available in English in Sir R. C. Temple, *The Thirty-Seven Mats*, a phase of spirit-worship prevailing in Burma, (London, W. Griggs, 1906).
- 13 See Adams and Conklin, op. cit., p. 5.
- 14 The structural parallels between this analysis of Burmese classifiers and Leach's analysis of animal categories in English and Kachin are not coincidental. It was after reading Leach's work that I knew the right questions to ask about classification, and also some of the answers. See Edmund Leach, "Anthropological Aspects of Language: Animal Categories and Verbal Abuse" in *New Directions in the Study of Language*, ed. by Eric H. Lenneberg (Cambridge, M.I.T. Press, 1964).

TONOGENESIS IN SOUTHEAST ASIA

James A. Matisoff

Source: Larry M. Hyman (ed.), *Consonant Types and Tone* (Southern California Occasional Papers in Linguistics, No. 1) (Los Angeles, CA: UCLA, 1973), pp. 72-95.

In the Beginning was the Sino-Tibetan monosyllable, arrayed in its full consonantal and vocalic splendor. And the syllable was without tone and devoid of pitch. And monotony was on the face of the mora. And the Spirit of Change hovered over the segments flanking the syllabic nucleus.

And Change said, "Let the consonants guarding the vowel to the left and the right contribute some of their phonetic features to the vowel in the name of selfless intersegmental love, even if the consonants thereby be themselves diminished and lose some of their own substance. For their decay or loss will be the sacrifice through which Tone will be brought into the world, that linguists in some future time may rejoice."

And it was so. And the Language saw that it was good, and gradually began to exploit tonal differences for distinguishing utterances - yea, even bending them to morphological ends. And the tones were fruitful and multiplied, and diffused from tongue to tongue in the Babel of Southeast Asia.

1.0. Introduction

The languages of Southeast Asia, some of which are fully tonal, others of which are only marginally or incipiently tonal, and some of which are not tonal at all, constitute an ideal terrain for the investigation of the mechanism of "tonogenesis".¹

This paper is organized as follows. First come some introductory remarks on the role of laryngeal final consonants and syllable-initial voicing vs. voicelessness in the generation of tonal phenomena (1.1); then a discussion of the interrelationship among monosyllabicity, intersegmental feature-sharing, and compensatory tone (1.2). In the next section we give a brief overview of the present state of our knowledge about the tonal situation at the Proto-Sino-Tibetan (PST) and Proto-Tibeto-Burman (PTB) levels (2.1),

followed by some thoughts on the areal diffusion of tones in SE Asia and the utility of tone-systems for the establishment of genetic relationship among languages (2.2).

1.1. Laryngeal states and tonal effects

Twenty years ago the French botanist and Orientalist André Haudricourt wrote a classic article² which addressed itself to the problem of how standard Hanoi Vietnamese acquired its six tones. This question had a vital bearing on the genetic affiliation of Vietnamese - previous scholars had held that Vietnamese belonged in the Tai family rather than in the Mon-Khmer (M-K) group,³ largely because the Tai languages are tonal while the Mon-Khmer languages are not.⁴ Haudricourt succeeded in demonstrating that the tones of Vietnamese were secondary developments arising from a breakdown of the system of consonantal oppositions at the beginning and the end of the Mon-Khmer syllable. The proto-language had syllables with final segments of three significant types: those ending in an open vowel or nasal (i.e. with no laryngeal final segment); those ending in voiceless spirants, *s or *ʃ, which had reduced to -h by pre-Vietnamese times; and those ending in some sort of stop⁵ which had reduced to glottal stop by the pre-Vietnamese period. In addition the language had a voiced/voiceless distinction for its syllable-initial consonants. See Figure 1.

By the sixth century, final -h and -ʔ had disappeared, leaving in their wake a compensatory falling and rising effect (respectively) on the pitch of the preceding vowel. See Figure 2. At this point the language had a three-tone system, which

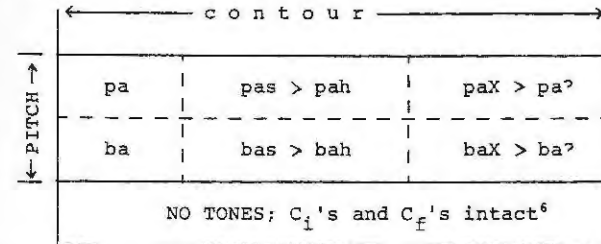


Figure 1 Vietnamese A (beginning of Christian era)

MID	FALLING	RISING
pa	pà	pá
ba	bà	bá
THREE TONES: exeunt laryngeal C _f 's/enter "contours"		

Figure 2 Vietnamese B (sixth century)

HIGHER	pa "ngang" ⁷	pả "hỏi"	pá "sắc"
LOWER	pà "huyền"	pã "ngã"	pạ "nặng"
SIX TONES: exeunt voiced C _i 's/enter "registers"			

Figure 3 Vietnamese C (twelfth century)

apparently remained stable as long as the voiced/voiceless opposition for initial consonants remained in force. But by the 12th century, the old voiced series had merged with the voiceless series. The language responded to this threat to its contrastive power by doubling the number of tones from three to six; the three tones descending from syllables with *voiced initials were then distinctively *lower* in pitch than the three which derived from syllables with *voiceless C_i's. See Figure 3.

This explanation – which has gone unchallenged by subsequent scholars – presupposes the existence of certain universal phonetic mechanisms which interrelate articulatory gestures of the larynx with the production of audible tonal effects. (a) Laryngeal C_i's affect the *contour*⁸ of the preceding vowel's pitch, with -h acting as a pitch depressor (i.e. leading to falling tones) and final -ʔ having the opposite effect (leading to rising tones). The exact physiological causes of these effects are being worked out in detail by experimental phoneticians (see elsewhere in this volume), but Haudricourt's impressionistic explanation still seems generally valid: the pitch-drop before -h is due to a "relâchement brusque du larynx", while the pitch-rise before -ʔ is caused by an "augmentation de la tension des cordes vocales". (b) Syllable-initial consonants merely affect the *register*⁹ of the following vowel, with voiced C_i's provoking *lower* pitch and voiceless C_i's provoking *higher* pitch. Again the physiological explanation for this fact involves a complex interplay of aerodynamic and articulatory factors¹⁰, but one thing seems clear: this is a universal phenomenon which obtains even in languages like English¹¹ which would never dream of exploiting such redundant pitch-differences for contrastive purposes.

In a 1968 talk¹² I roughly characterized the two basic contrasting "laryngeal attitudes" as shown in Figure 4.

More recently La Raw Maran (1971) has persuasively proposed a small set of binary distinctive features which are intended to capture simultaneously not only the role of the larynx in the production of voiced obstruents, *h*, and glottal stop, but also the concomitant tonal effects on adjacent vowels. Similarly motivated features (spread vs. constricted glottis and slack vs. stiff cords) have been adopted by Halle and Stevens (1971), and are now being widely discussed by generative phonologists.

TENSE-LARYNX SYNDROME	LAX-LARYNX SYNDROME
higher pitch/rising contour	lower pitch/falling contour
association with -ʔ	association with -h
voicelessness	voicedness, breathiness
retracted tongue-root ¹³	advanced tongue root ¹³
"creaky" laryngeal turbulence	"rasping" laryngeal turbulence
larynx tense and/or raised= reduced supraglottal cavity	larynx lax and/or lowered= distended supraglottal cavity

Figure 4 Laryngeal attitudes

Despite the complexity of the simultaneous bundles of articulatory activities which go to make up the "tense" vs. "lax" syndromes, it seems clear that the syndromes as a whole do stand in a binary opposition to each other. Otherwise how are we to understand the oft-noted diachronic phenomenon of tonal "flip-flops"¹⁴ whereby a high tone and a low tone abruptly switch places, so that the *high becomes low, and the *low becomes high? Some sort of "alpha-reversal" of laryngeal gesture must be assumed.

Maran (1971) has noted that in Jinghpaw, a Tibeto-Burman language which he speaks natively, syllable-final stops (-p, -t, -k, -ʔ) are voiceless under the high tone, but voiced (-b, -d, -g, -ʔ) under the low tone, inferring from this that it is the voicing contrast which is distinctive here, with the tonal difference being redundant. For several reasons¹⁵ I prefer to interpret the situation in the opposite sense. It seems to me that voicing/voicelessness has a causal effect on the tone of the adjacent vowel only in syllable-*initial* position. In syllable-*final* position the voicing or voicelessness of a consonant (at least in Tibeto-Burman) is rather the automatic, redundant *consequence* of a pre-existent tonal opposition, not its cause. For both -h and -ʔ are voiceless (though in rather different ways) – yet they have opposite tonal effects in syllable-final position.

1.2. Monosyllabicity, intersegmental feature-sharing, and compensatory tone

If the laryngeal mechanisms we have been considering are really universal, why haven't all human languages been tonal at some point in their history, like Chinese, Burmese, or Jinghpaw? Some language families seem more hospitable to the development of tones than others, and the same goes for geographic areas of the world. It is as if the seeds of tone potential required a particularly fertile soil of a certain structural type in order to take root and flourish. In particular, it appears that to become truly tonal a language must have a basically *monosyllabic* structure (i.e. the morphemes must be only one syllable long). Polysyllabic languages like

Japanese, Swedish, or Serbo-Croatian may develop "pitch-accent" systems, but these differ from true tone-systems in many important respects.^{16,17}

There is something about the tightly structured nature of the syllable in mono-syllabic languages which favors the shift in contrastive function from one phonological feature of the syllable to another. The Tibeto-Burman (TB) languages have always been monosyllabic. The proto-monosyllable was quite complex in structure: the initial consonant could be preceded by a variety of prefixes (or even by a sequence of two prefixes) and followed by one of four glides (-w-, -y-, -r-, -l-). The vowel could be followed by any of a number of final nasals, stops, liquids, or -s, or even by a nasal or stop plus -s. Written Tibetan (WT) may be taken to preserve the proto-syllable canon faithfully, with maximally complex forms like *brgyad* 'eight', *brnyabs* 'diligence', *bsnyigs* 'sediment'. Written Burmese (WB) syllables may have initial consonant clusters of up to three members, but no more than a single consonant in final position: *mrwe* 'snake', *krwat* 'leech', *krwak* 'rat'. We may symbolize the proto-syllable canon as follows:

(P₁) (P₂) C_i (G) V (') (C_f) (S),

where P = prefix, C_i = initial consonant, G = glide, V = vowel, ' = vowel length, C_f = final consonant, and S = suffixial -s.

When we look at the phonological changes which these richly complex syllables have undergone through time (e.g. from WT to modern colloquial Lhasa Tibetan, or from WB to modern Rangoon Burmese, or from Proto Lolo-Burmese to Lahu), we find that the different parts of the syllable have constantly been influencing each other: the prefixes affect the root-initial consonant, as do the glides; the glides also affect the vowel, as do the final consonants; the vowel itself affects the preceding and following consonants, etc. It thus makes little sense to ask questions like "What happens to the Proto-Tibeto-Burman (PTB) vowel *a in language X?" Rather we must specify the syllabic environment more precisely: "What is the PTB reflex of *-am, or *-ak, or *-wa, or *-ya, or *-yaŋ in language X?" Thus, Proto-Lolo-Burmese (PLB) *-a develops into Lahu -a in syllables without a G or a C_f; but *-ya becomes -ε, and *-wa becomes -ɔ. A nasal or stop following the PLB nuclear vowel *a- determined different Lahu reflexes for each point of articulation. Thus PLB *-am > Lh. -o, but *-an > -e, and *aŋ > -ɔ; *-ak > a[?], but *-at > -e[?] and *-ap > -o[?]. It is for this reason that Sino-Tibetanists traditionally lump the vocalic nucleus together with any post-vocalic consonants the syllable may have, and refer to this complex, well-integrated entity as the "rhyme" of the syllable.

So tightly interdependent are these neighboring vowels and consonants, that certain phonetic features seem to have bounced back and forth from vowel to consonant and back again through the history of the TB languages. The fate of the PTB rhyme *-ik in Burmese is a good case in point. By the time Burmese was committed to writing in the 12th century, older *-ik had become -ac (e.g. PTB *tsik 'joint', WT *tshigs*, WB *chac*); that is, the palatality of the vowel had

been transferred to the C_f, so that the latter changed from a velar stop to a palatal affricate, thereby depalatalizing the vowel from *i to a. What is remarkable is that this development was then completely reversed between the Old Burmese period and the modern standard Rangoon dialect, so that words written with -ac are now pronounced with the rhyme -l' (Mod.Bs. *hsI'* 'joint'). That is, the palatality has been shifted back again from the C_f to its "original" vocalic home!

This leads us to the key question: did this complex proto-monosyllable already carry a lexically distinctive tone? The answer is far from clear at the moment.¹⁸ What does seem certain is that, given the intimate relationship between consonantal and vocalic features of the TB syllable, there must have been phonetic perturbations of the pitch of vowels due to the influence of neighboring consonants throughout the history of the family. However, as long as the consonants maintained themselves in a good state of preservation, such pitch-differences as existed were likely to have remained subphonemic – predictable, automatic, redundant. It was only when the old consonantal system had decayed through cluster simplification, losses, mergers that the daughter languages were forced to exploit those pitch-differences for contrastive purposes.

Initial consonants "decay" rather differently from final ones.¹⁹ At the beginning of the syllable, the prefixes generally found themselves in a weak position, sometimes fusing with the root-initial and often dropping entirely (see Matisoff 1972c). Before their departure, however, they were likely to have affected the voicing or voicelessness of the root-initial consonant. Thus the glottal prefix *ʔ- or *ʔə- typically devoiced a following sonant, while the nasal prefix *N- often voiced a following surd. Yet it is noteworthy that the basic TB *voiced/*voiceless opposition in root-initial position was everywhere preserved systematically, even though the phonetic nature of the contrast changed in many languages (like Burmese and Lahu) from voiced/voiceless to voiceless unaspirated/voiceless aspirated.

In syllable-final position there is a whole continuum of consonantal decay²⁰ for final nasals and stops. The three-way contrast among *-m, *-n, and *-ŋ was sometimes reduced to a two-way one, but without the remaining nasals losing their point of occlusion. (This is what happened in Mandarin Chinese, where *-m and *-n merged to -n.) At more advanced stages of decay, one or more of the nasals could lose their point of articulation, so that the feature of nasality shifted back onto the vowel, yielding a new type of oral/nasal contrast for vowels. At the ultimate stage, the nasal feature disappears altogether from the syllable; but in this case the vowel quality itself has usually already been altered differentially by the particular nasal which had followed it, so that the language does not necessarily suffer a loss of contrast.²¹

Final stops may undergo even more finely graded degrees of attrition than the nasals. The three-way proto-contrast among *-p, *-t, and *-k could be reduced to a two-way contrast without the remaining stops losing their buccal occlusion. More radically, one or more of the stops could be reduced to -ʔ – a glottal stop might be termed the "minimal stop" from this point of view. At more advanced stages the final consonant may disappear entirely, after transferring its occlusion

back onto the vowel, so that the vowel has "laryngeal constriction" or "creakiness". At a still further stage even this constriction may disappear, and the only trace of the former C_r may be a tenseness in the vowel, or some other alteration in the vowel quality.²² The smile of the Cheshire cat, fading away imperceptibly.

Looking at the TB family as a whole, we find that the details of consonantal decay differ considerably from subgroup to subgroup and from language to language, but one important generalization holds: the better-preserved the consonantal system, the fewer the vowels and the fewer the tones; the more vestigial the consonant system, the more proliferation of vowels and tones.

2.1. Redundant and contrastive tone in PST and PTB

Paul K. Benedict (1972a, 1972b, 1973a) has argued persuasively that even back at the remote Proto-Sino-Tibetan period the proto-language had a "phonemic" two-way tone-contrast in *non-stopped* syllables (though syllables whose C_r was a stop had no distinctive tone). Benedict bases his argument mainly on evidence from Chinese on the one hand, and from certain subgroups of TB on the other: Lolo-Burmese, Karen, and Nungish. Karen is extremely aberrant from the other TB languages from the grammatical point of view (for one thing, the Karen object comes after the verb instead of before it); so much so that one is tempted to set up a higher-level taxonomic group "Tibeto-Karen" comprising Karen on the one hand and "Tibeto-Burman proper" on the other. Yet as Benedict has shown, the four tones of Karen correspond systematically to the two main non-stopped tones of Lolo-Burmese, in a simple, straightforward way. Two explanations are therefore possible: either the two-way tone-contrast must be placed at least as far back as the remote Tibeto-Karen period (and thus a fortiori at the PTB period), or else the tone-system of Lolo-Burmese somehow "diffused" into the Karen languages (see next section). Benedict rejects the diffusion hypothesis (see note 40), and goes on to show that the Lolo-Burmese/Karen/Nungish²³ two-tone system can be systematically related to the two principal non-stopped tones of Chinese, the level tone (*p'ing sheng*) and the rising tone (*shang sheng*).²⁴ He therefore projects the two-way tone-system back to the PST period itself.

A serious objection to Benedict's theory is the fact that the oldest attested TB language, Written Tibetan, shows no evidence of tonal distinctions at all. In fact some modern dialects of Tibetan, like Balti²⁵, don't have tone either, or at any rate do not have fully developed tone-systems like Lolo-Burmese. (Significantly it is those dialects, like Balti and Purik, which preserve the WT syllable-initial consonants the best that have non-existent 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.²⁶) 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 developments²⁷ 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,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 (Kachinic 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.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,³⁰ so that the *word* is no longer monosyllabic. At the same time, "analytical" ways of signaling 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 laziness 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 the picture. The *nouveau riche* consonantism of the syllable is making it less and less necessary to use the tones for contrastive purposes. Vowel-contrasts are weakening in certain areas. The language is becoming monosyllabic again.

And so it goes. *Plus ça change, plus c'est la même chose*.

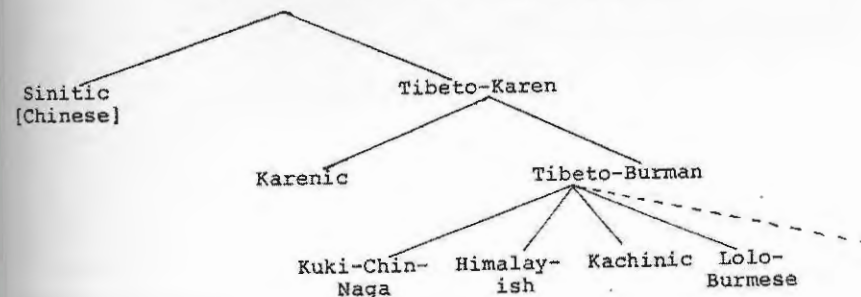
2.2. The areal diffusability of tones and the "Southeast Asian Tonbund"

Generations of scholars have puzzled over the genetic interrelationships of the hundreds of languages spoken in mainland and insular Southeast Asia. This is not the place to attempt to recapitulate the various arguments that have been advanced to justify one or another classificatory scheme. Let us rather accept as a basis for discussion the classification worked out by Benedict during the thirty years he has been studying the languages of the area (see especially Benedict 1972a and 1973c). According to his scheme there are only three great linguistic superstocks in the area³¹: Sino-Tibetan (ST), Austro-Thai (AT), and Austro-Asiatic (AA). See Figure 5.

The indigenous inhabitants of mainland SEA are thought to have been the AA peoples. At a very early date the Austronesian branch of the AT peoples pushed southward, eventually leaving the mainland and settling on the island chains of the South Pacific.³² Later came the Tai peoples, whose southward invasion split the Mon-Khmer speech community in two. Some Tai communities remained behind in China, as have the Miao-Yao peoples until very recent times. The last intruders were the Tibeto-Karen peoples, who fanned out southward into Assam and Burma, and in very recent times as far as Thailand and Laos.

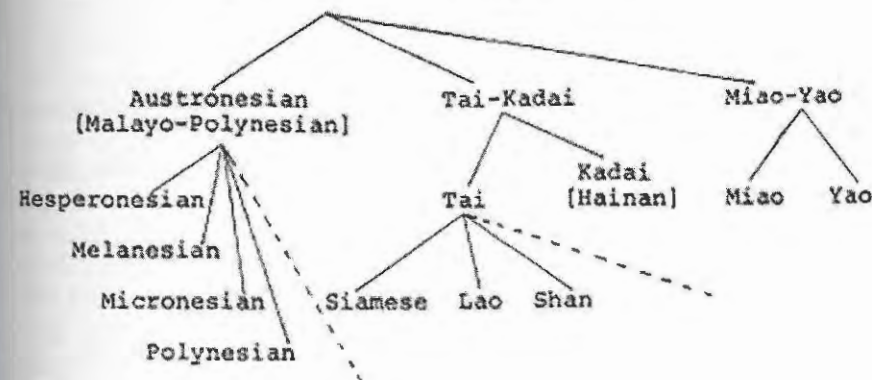
Of these three linguistic stocks, only Sino-Tibetan is thought to have been "intrinsically tonal" (with the qualifications expressed above in section 2.1). Proto-AT, as reconstructed by Benedict (1973c) was devoid of tone, and had polysyllabic (often trisyllabic) root-morphemes. This polysyllabic structure is still characteristic of the Austronesian (AN) branch,³³ and AN has remained without true tones to the present day. The Tai and Miao-Yao (M-Y) branches, however, have become monosyllabic,³⁴ 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 *psaa* 'market', *tkiam* 'jaw', *ckae* 'dog', *khaok* 'peacock'.

(a) SINO-TIBETAN [monosyllabic; tonal]



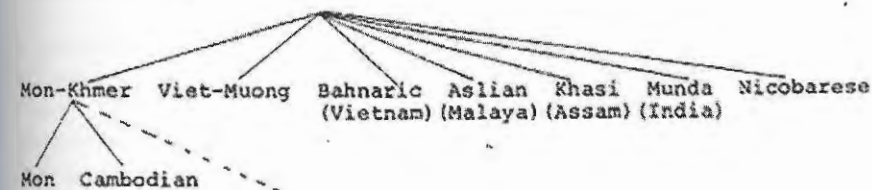
Homeland: eastern Tibet/western Szechwan, Yunnan; headwaters of the Yangtze, Brahmaputra, Irrawaddy, and Mekong Rivers

(b) AUSTRO-THAI [polysyllabic; atonal]



Homeland: very close geographically to the Sino-Tibetan Urheimat

(c) AUSTRO-ASIATIC [sesquisyllabic; registral]



Homeland: mainland southeast Asia

Figure 5 The three superstocks

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 languages³⁵ 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.³⁶ 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.³⁷

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 *huyền*,³⁸ and Tai has tone "A" (unmarked in the writing system); where Chinese has

CHINESE	平 p'ing [level]	去 ch'ü [falling]	上 shang [rising]
VIETNAMESE	ngang/huyền	hỏi/ngã	sắc/nặng
TAI	A (unmarked)	B ⁽¹⁾ 𑜀𑜂𑜆𑜇 𑜀𑜂𑜆𑜈	C ⁽²⁾ 𑜀𑜂𑜆𑜇 𑜀𑜂𑜆𑜈

Figure 6 Sino-Xenic tone correspondences

departing (=falling) tone (*ch'ü sheng*), Vietnamese has tones *hỏi* 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 *sắc* or *nặng*, 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".³⁹ We must assume that phonological interinfluencing on the "segmental" level (i.e. involving consonants and vowels) must have preceded the tonal influence. First of all, these non-ST languages had to become 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 motivate 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 SEA 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. Standard Thai is a typical example, with the old *voiced series becoming voiceless aspirated (merging with the old *voiceless aspirated series) and the old *voiceless sonorants becoming voiced (merging with the old *voiced sonorants).

It seems likely that the development of true tones in Vietnamese 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 languages 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 regular tonal correspondences – are not to be taken uncritically as evidence for genetic relationship among languages.⁴⁰ 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 are dialects of one and the same language, more closely related to each other than to any other language. Not only may tones be readily *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]).⁴¹

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

Notes

- 1 This paper may 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.
- 2 The term “tonogenesis” was first used, to my knowledge, in my 1970 article “Glotta dissimilation and the Lahu high-rising tone: a tonogenetic case-study”.
- 3 “De l’origine des tons en vietnamien”, *Journal Asiatique* 242. 69-82 (1954).
- 4 See 2.2 below.
- 5 Most M-K languages have “register” systems rather than “true” tonal distinctions. See below, loc. cit.
- 6 Haudricourt does not commit himself as to the exact nature of these stops, symbolizing them by *-X.
- 7 Throughout the rest of this paper we use the symbols “C_i” and “C_f” for “syllable-initial consonants” and “syllable-final consonants”, respectively.
- 8 The diacritics over the vowels are those used to indicate the six tones in modern Vietnamese orthography. The words *ngang*, *huyền*, etc. are the native names for the tones.
- 9 Haudricourt’s term is “inflection”.
- 10 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.
- 11 Which my colleague John Ohala has tried to make me understand on several occasions.
- 12 William Ewan has carried out experiments which confirm this for English (personal communication); see also Lea (1973).
- 13 Implications of Tibeto-Burman phonological developments for distinctive feature theory”, Yale University Linguistics Club, Dec. 1968.
- 14 For a fascinating treatment of the relationship of the tongue-root to laryngeal activity in the production of tonal effects see Gregerson (1973).
- 15 See Matisoff (1972b).
- 16 See my review of Maran (1971) (Matisoff 1973c).
- 17 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.
- 18 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).
- 19 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.
- 20 I cannot resist observing that dental decay is no more prevalent than velar or labial decay in our family.
- 21 What Maran (1971) calls “depletion of final consonants”.
- 22 This is what happened in Lahu, as we indicated above (*am > o, *an > e, *aŋ > ɔ).
- 23 All of these stages are attested in one or another Loloish language. See Matisoff (1972b).
- 24 Nungish is a minor TB group that shows special affinities both for LB and for Kachinic.
- 25 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).
- 26 See Sprigg (1966).
- 27 See Sedláček (1960).
- 28 See the discussion of the Burmese reflexes of the PTB *-ik rhyme, 1.2 above, and the remarks on the “tonal cycle” later in this section.
- 29 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.
- 30 See Matisoff (1973d).
- 31 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” /stɪkpin/ and “ink-pen” /ɪŋkpin/, 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 for *foot* and *fish* (standard Yiddish *fus* and *fiš*) are both pronounced /fis/. Speakers of this dialect responded by creating jocular compounds whose second members were the Russian words for ‘foot’ and ‘fish’: *fis-noge* (< Russ. *nogá* ‘foot’) vs. *fis-ribe* (< Russ. *ryba*)!
- 32 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.
- 33 An interesting Austronesian people are the Chams, who remigrated back to the mainland (Vietnam) after having lived for centuries in the islands near Malaya.
- 34 Though AN morphemes now typically have only two syllables, not three.
- 35 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.
- 36 According to Huffman (1970), standard Cambodian has no fewer than 31 vocalic nuclei.
- 37 Not unlike those physically weak animal species, like gerbils, whose chosen evolutionary defense against extinction is the ability to proliferate their kind rapidly.
- 38 Benedict has discussed the AA/AT contact relationship, which he calls the “Austro-linkage”, in Benedict (1973b). In the AA/ST area, Shorto (1973) has assembled an impressive number of Mon-Khmer etymologies for widespread ST roots. In Matisoff (1973a) I discussed the probable M-K source for the velar “animal prefix” in Lolo-Burmese. The AT/ST interaction has been intensively studied by Benedict (1967, part 3; 1972a; 1973). Many ST words for items of material culture and technology (including objects related to writing and the calendrical signs of the zodiac) can now be shown to have an AT source. Recent archaeological findings (Chang 1963, Gorman 1971) confirm a high level of material culture in the non-Chinese neolithic denizens of northern Southeast Asia.

- 38 See 1.1 above.
- 39 It is noteworthy that Japanese, despite centuries of massive lexical borrowing from Chinese, has never shown any signs of preserving lexical tone contrasts in these borrowed items. The intrinsic polysyllabicity of Japanese has resisted any such development. (Also the geographic isolation of the Japanese islands from the mainland must have been an inhibitory factor.)
- 40 Benedict's rejection of the diffusional explanation for the close correspondence between the tones of the distantly related Karenic and Lolo-Burmese languages (2.1 above) is therefore open to debate.
- 41 We might refer to this process as "tonoexodus" (Lea 1973).

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