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).

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One example of such a situation that Sapir discusses is the development of plurals of the type <code>mouse:mice, foot:feet</code> in both English and German (<code>Maus:Mäuse, Fuss:Füsse</code>), 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 the 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 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 their 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.

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 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.

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, 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. ŋà thà? tâ dô?.

 1sg OBJ NEG.IMP hit

 Don't hit me.

b. lì? chi ŋà thà? pî-?. book that 1sg OBJ give Give me that book.

- (2) Kokborok (Bangladesh; Karapurkar 1976:54-5)
 - a. buruny-čhikla-rog-no rohór-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.lsg house lsg-build-PAST I built a house.

3 These examples are also presented in Dryer 1986, where this phenomenon is discussed as primary object marking.

² LaPolla 1992a presents an earlier study of the same type based on a somewhat smaller database. See that paper for more extensive discussion.

⁴ 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 both to 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).

- b. no-e ka:h-lay poh-ke-o.3sg-ERG dog-OBJ beat-PAST-3sgHe beat the dog.
- c. no-e nga-lay cyu:-na-ke-o.3sg-ERG 1sg-OBJ watch-1sg-PAST-3sgHe 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 recepient. 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 systematic, 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: Achang, Longchuan (te55); Achang, Xiandao (te55); Adi, Milang (m/um); Adi, Padam (əm~m); Akha, Lampang (àŋ); Anong, Mugujia (kha³1); Apatani, Reru/Mudan Tage (mi); Bai, Jianchuan (no³³); Baima, Baima Commune (tsa⁵³); Balti, Baltistan (la); Bengni, Na (ñi:/m); Bokar, Smin-gling

⁵ 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 it is already somewhat established in the literature (e.g. Comrie 1975, 1978, LaPolla 1992a), and clearer than Blansitt's (1984) term, 'dechticaetiative'. 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 where it exists is not of the nature of a grammatical function, and in some languages it is also not limited to marking 'objects'.

⁶ This list consists of the language name followed after a comma by the dialect name, if available, then in parentheses the postposition used to mark an anti-ergative argument.

(m~fiam/me); Bola, Kongjia village (3e31); Bunan, Bhaga Rwer (rog/dog/tog/ kog/zhog); Burmese, Rangoon (kou); Central Monpa, Dirang Ke (go); Chamling (lai); Chang, Tuensang (to/cha); Chaudangsi-Byangsi (ja); Chepang, Eastern (kay); Daofu, Chengguan (gi); Darang, Xiachayu (we⁵⁵~we³¹); Dhimal. Darjeeling Terai (ēng); Dulong, Dulonghe (le31); Ersu, Zeluo Commune (va55); Gallong, Kombong (ém~m); Geman, Xiachayu (ji35~wi35); Gurung, Ghacok (lai): Hill Miri, Tamen/Raga (m/em/ém); Idu, Chayu (go31); Jingpo, Enkun (hpe?55); Jinuo, Manka/Mandou (a³³); Jirel, Jiri-yarsa (la); Johari (cəbən~cubən); Kaman (Miju), Parsuran Kund (wi); Kham, Taka (lay); Khoirao, Thanga (yō); Kinnauri, Lower Kinnaur (pəñ~u~nu); Kokborok, Debbarma (no); Ladakhi, Lower (la); Lahu, Black (thà?); Langsu, Yunqian (3 ϵ^{31}); Lhomi, Chepuwa (lag); Lisu, Bijiang (te55); Lyusu, Muli (wæ53); Menba, Cuona (le31); Menba, Motuo (ga~na~ca); Miji (=Dhimmai), Nafra (ru); Mikir, Hills-Karbi (phan); Miri, Shaiyang (em); Muya, Shade district (le33); Namuzi, Muli (dæ55); Naxi, Western (to55); Newari, Dolakha (ta); Newari, Kathmandu ((ya)tə); Nishi (=Dafla), Leli (ŋam~am); Nishi (=Dafla), Yano (em~ne); Nocte, Hawa-jap (nang); Nusu, Middle Bijiang (na35); Pattani, Shansha (bi/ting); Pumi, Jinghua (tci55/bie55); Pumi, Taoba (pe35); Qiang, Taoping (zie33/z o33); Queyu, Xiazhan (kw/ka); Rawang (hka); Sangkong, Xiaojie (la³³); Sharchhokpa-lo (Tsangla), Kanglung (ga); Sherpa, Chunakpu (laa); Shixing, Lanman (\$155_33 /ko53); Singpho, Bordumsa (phe/ang); Tagin, Taliha (a~am/nga~ngam); Tamang, Bagmati Anchal (ta); Tamang, Murmi (da/ta); Tangsa, Jogli (ma); Tangsa, Kimsing (ma); Tangsa, Longcang (mo/ma); Tangsa, Moklum (ma); Tangut (līn); Tankhur Naga, Ukhrul (ri); Thulung, Mukli (lāi); Tibetan, Classical (la); Tibetan, Lhasa (la~vowel lowering, tone change); Zaiwa, Xishan Zaiwa (1855/3855). 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 (in 27 of the 84 languages) 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 tha? '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 80% 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 thà?, 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 antiergative 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-TB 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 Tibeto-Burman 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

⁷ 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 (=Meithei); Nasu, Hetaojing; Newari, Classical; Rangkhol, North Cachar; Rong (Lepcha); Sunwari, Sabra; Tujia, Northern dialect; Yakha, Darjeeling District; Yi, Xide; and Zhaba, Zatuo.

⁸ 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.

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

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a. no^{55}ja^{33} \eta a^{55}ja^{33} jo^{55}
                                                    me^{31}.
(4)
                              1pl
                                           OBJ teach
          b. \eta a^{55} j a^{33} j c^{55} \eta c^{55} j a^{33} \eta c^{31}.
          1pl OBJ 2pl teach
c. no<sup>55</sup>ja<sup>33</sup> ne<sup>33</sup> ŋa<sup>55</sup>ja<sup>33</sup> jo<sup>55</sup> me<sup>31</sup>.
                                                  OBJ teach
                              ERG 1pl
          d. na^{55}ia^{33}io^{55} no^{55}ia^{33} ne^{33} me^{31}.
                            OBJ 2pl
                                                     ERG teach
          e. no^{55}ia^{33} ne^{33} na^{55}ia^{33} me^{31}.
                              ERG 1pl
          f. \eta a^{55} j a^{33} no^{55} j a^{33} ne^{33} me^{31}.
                             2pl
                                           ERG teach
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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; this is in fact 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

 $^{10\,}$ In Hani ${\it j}$ ${\it j}$ ${\it j}$ ${\it j}$ s used to mark an animate patient argument. Goal and locative arguments are marked with ${\it a}^{\it 33}$.

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 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.

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 thus constitutes evidence for a particular type of common starting point or motivation in Proto-Tibeto-Burman (PTB). 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 PTB, what exactly is it that we are to reconstruct? I have suggested (LaPolla 1992a, 1993a) that, at least in these TB 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 antiergative 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, antidative). 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 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 '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 TB, and so would appear to be reconstructible to PTB, no attested system can actually be traced back to the PTB 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

¹² For an interpretation of ergative morphology as being semantically based on the contrast of agent vs. non-agent, see Givón 1984 and Klimov 1984.

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 them. After the split into Proto-Naga and Proto-Kuki, these verbs developed in Proto-Naga 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. MaGam gat de? sa wa s-ai market to go hence-PART
 - MaGam went off to market.

 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 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 TB languages have developed this type of direction marking.

¹³ These particles follow the main verb, but are prefixed to person marking or auxiliary particles,

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 reflection 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 TB languages. The second type of causative marking is what these languages resorted to after the original prefixing strategy was no longer productive. ¹⁴ This is to take a verb meaning 'send on an errand, entrust with a commission', 'make', 'give,' etc., and use it in collocation 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-cɨ-ve.
 OBJ go-CAUSE-PART
 (Somebody) makes Johnny run.
 - b. Johnny kou¹¹ θwa⁵⁵-se¹¹-tε¹¹.
 OBJ go-CAUS-PART (Somebody) makes Johnny run.

Though the causative auxiliaries 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 (san³¹); Apatani (kenen); Bai, Jianchuan (sɛ̃³³); Baima, Baima Commune (nbe¹³); Balti, Purki (cuk); Bokar, Smingling (mo:); Bola, Kongjia village (n355); 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 (sw³¹dzwl⁵³); Ergong, Dasang (pw); Ersu, Zeluo Commune (su⁵⁵); Garo, Garo Hills-Chisak/Awe (at); Geman, Xiachavu district (ka⁵⁵);

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 still 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.

Guiqiong, Maiben Commune (ku33); Gurung, Ghacok (laba); Hani, Haya (bi33); Hayu, Murajor (pin); Idu, Chayu (tia55); Jingpo, Enkun (sha31 ngun55); Jirel, Jiriyarsa ('cyutq); Kachari (Bara), Darrang (hunu); 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 (l_2 ?⁵⁵); Leqi, Zhongxin (l_2 ?⁵⁵); Lhomi, Chepuwa (**chuŋ**); Lisu, Bijiang (ts_1 ⁴⁴); Lisu, Thailand (ty_2); Lotha, Wokha District ($t\bar{o}k$); 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 (tc'253); Namuzi, Muli (ngæ³³/ngæ³³ς)³¹/ςγ³¹); Nasu, Hetaojing (tsi³³); Newari, Classical (kal): Newari, Kathmandu (kal/k): Nocte, Hawajap (thuk): Nusu, Middle Bijiang (tçi³⁵); Pumi, Jinghua (skiɛ⁵⁵); Qiang, Taoping (zj³¹); Rangkhol, North Cachar (pek); Rawang (la~lwa); Rong (Lepcha) (kón/mót/tho); Sangkong, Xiaoiie (pi³¹); Sgaw Karen, Delugong (ma³³); Sherpa, Chunakpu (ji(t)/'ci(t)); Shixing, Lanman (xi⁵³); Sunwari, Sabra ('paysh); Tagin, Taliha (mu); Tamang, Bagmati Anchal (la); Taraon (Digaru) ($g\bar{o}/kw\bar{o}/masei$); Thado, Yongba Langkhong ($p\bar{a}/pi/s\bar{a}$); Yi, Xide ($s\bar{u}^{44}$); Zaiwa, Xishan ($l\bar{o}^{755}$); Zhaba, Tuanjie township ($dz\bar{v}^{35}$); Zhaba, Zatuo (ts'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 reconstructible 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 $\mathbf{xu^{55}}$, Xiandao Achang $\mathbf{gan^{31}}$, Bola $\mathbf{n2^{55}}$, and Leqi/Langsu $\mathbf{l2^{755}}$. 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). The etymological transparency of most of the Tibeto-Burman verb agreement systems shows that these agreement systems are relatively recent

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/3rd person statement, they are not as common as the pronominalized systems.

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 with written records dating back to the eleventh century. In Tangut the verbal suffixes have the same phonetic form, including the tone, as the free pronouns (adapted from Kepping 1979; third person is not marked): ¹⁶

Table 1: Tangut person markers and free pronouns

	FREE PRONOUNS	VERB SUFFIXES
1sg	ŋa²	-ŋa²
2sg	na²	-na²

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 facts that the system is prefixal, 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 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 Kuki-Chin system clearly developed independently of the Tangut system.

An intermediate 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 (< *nan) (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 suffixal. 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 clear case of 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

¹⁶ There is also a 1st and 2nd person plural marker ni².

(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
lsg	ā	ā-	â-
2sg	nō	ĥ-	n̂-
3sg	puô	puô-	puô-

Following are examples of the use of the Angami verb prefixes:

(8)	ā ā-ní 1sg 1sg-happy I am happy.	bá PART	puô puô-ní 3sg 3sg-happy He is happy.	bá PART
	nhîcûnyô puô-d boy 3sg-c (The) boy is cle	elever	nō n̂-dōvi 2sg 2sg-clever You are clever.	

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

A fifth case is illustrated by 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

	FREE PRONOUNS	VERB PREFIXES
lsg	ne	ne-
lpl excl.	netum	ne-
lpl incl.	itum~etum	i-~e-
2sg	naŋ	naŋ-
3sg	alaŋ	a-

That this system is a recent development seems clear not only because 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.

¹⁷ A full paradigm including person marking for dual and plural actants is not given by Giridhar, though since other examples from the grammar include prefixes for the first person dual exclusive and the third plural (given in [i] below), a full paradigm probably exists. If so, then there is even more reason to believe that this system was an independent development.

⁽i) hiēkô hiēkô-ñiē bá ūkô ū-númêyiē bá ldu.excl. ldu.ex-tired PART 3pl 3pl-angry PART They(pl.) are angry. We(dual exclusive) are tired.

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

	FREE PRONOUNS	VERB PREFIXE
lsg	ja ³³	jǎ ³³ -
1pl	$pu^{33} w\epsilon^{55} \theta e^{31}$	pǔ ³³ kǎ ³¹ -
2sg	na ³³	nǎ ³³ -
2pl	$\theta u^{55} w \epsilon^{55} \theta e^{31}$	θ ŭ ⁵⁵ k ă 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 the 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)

	FREE PRONOUNS	NOUN PREFIXES
lsg	'âi	'i-
2sg	nâŋ	na-
3sg	ma	ma-

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

	FREE PRONOUNS	NOUN PREFIXES
lsg	ŋo ⁵⁵	. ŋu ⁵⁵ -
2sg	n.au ³¹	$n_{\nu}u^{31}$ -
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, since 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 TB 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 bo^{33} for people and their organs, do^{31} for liquids, de^{31} for general animates, ky31 for existence within a group, and one existential verb, \$355, which is used only in the poetic language (Li & Wang 1986:54). In Queyu there are seven existential verbs (Wang 1991:61): t [i55, for animals; tcy13, for location in a vessel or certain area; $\kappa 0^{31}$, for non-movable objects; κi^{13} , for movable objects; 10¹³, for an object mixed up in another object; ru¹³, for abstract objects; and t[e¹³, 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: nii⁵¹, which seems to mark the existence or long term location of animate beings, with the causative form nji⁵¹; lun⁵⁵, for short term location of animate beings and has the causative form lun55; vo55, for possession by a person; t = 0.000, for inanimates; po^{51} , for containment within a vessel; and ton^{51} , 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 tcy¹³, Zaiwa po⁵¹), 'possession by a person' (Hani t[e¹³, 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 TB 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) have grammaticalized a similar (though preverbal) type of causative to the one discussed here; 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 prenominal 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

Generally speaking, 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 world view of the speakers of the proto-language. While it appears from the available evidence that the proto-language itself did not have any relational

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 (來) (< Old Chinese *rə, cognate to TB *ra) and qù (去) after the verb to show deictic direction. (Chinese does have a verb wang (往) '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 ba (艳) and bèi (被) constructions (the former marking a non-topical anti-ergative argument, the latter a topical anti-ergative argument). In terms of agentive marking we have you (由), which, just as in many TB languages, is also a marker of 'cause' or 'source'. And in terms of causative marking we have the grammaticalization of shi (使) '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 Giangic languages in Thurgood 1984.

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.

Thus, what we need to reconstruct 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

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1990, 1993b (Chinese). See also the discussions of Lisu in Hope 1974 and Mallison & Blake 1981.

²¹ While I have not found any evidence of PTB relational morphology, there is evidence that certain types of derivational morphology, such as the *s- causative prefix and possibly a *-t/-n suffix, are reconstructible not only to Proto-Tibeto-Burman, but to Proto-Tibetan. It seems likely the *pa/*ma gender/nominalizing suffixes are also reconstructible to PTB, as are seems likely the "par"ma gender/nominaizing sunixes are also reconstruction to FTD, 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

REFERENCES

- Allen, Nicholas J. 1975. Sketch of Thulung Grammar, with Three Texts and a Glossary. Cornell University East Asia Papers, 6. Ithaca, NY.
- Andersen, Paul Kent. 1987. "Zero-anaphora and related phenomena in Classical Tibetan." Studies in Language 11.2:279-312.
- Bhat, D. N. S. 1988. Grammatical Relations in Indian Languages (An Introduction to Indian Grammars 1). Mysore, India: Central Institute of Indian Languages.
- Blansitt, E. L., Jr. 1984. "Dechticaetiative and dative." In Plank (ed.) 1984, 127-150.
- Comrie, Bernard. 1975. "Anti-ergative." Papers from the 11th Regional Meeting of the Chicago Linguistic Society, ed. by R. E. Grossman, L. J. San, & T. J. Vance, 112-121.
- Comrie, Bernard. 1978. "Ergativity." Syntactic Typology: Studies in the Phenomenology of Language, ed. by W. P. Lehmann, 329-94. Austin: University of Texas Press.
- Dai Qingxia, Huang Bufan, Fu Ailan, Renzengwangmu & Liu Juhuang (戴慶夏、黃布凡、傅愛蘭、仁增旺姆、劉菊黃). 1991. 藏緬語十五種。北京:燕山出版社 [Fifteen Tibeto-Burman Languages]. Beijing: Yanshan Publishing Co.
- DeLancey, Scott. 1981. "An interpretation of split ergativity and related patterns." *Language* 57:629-57.
- . 1985. "The analysis-synthesis-lexis cycle in Tibeto-Burman: a case study in motivated change." *Iconicity in Syntax* (Typological Studies in Language 6), ed. by John Haiman, 367-389. Amsterdam and Philadelphia: John Benjamins.
- Dixon, R. M. W. 1980. The Languages of Australia. Cambridge, London, and New York: Cambridge University Press.
- Dryer, Matthew S. 1986. "Primary objects, secondary objects, and antidative." Language 62.808-845.
- Giridhar, P. P. 1980. Angami Grammar. (CIIL Grammar Series-6) Mysore: Central Institute of Indian Languages.
- Givón, Talmy. 1984. "Direct object and dative shifting: semantic and pragmatic case." In Plank (ed.) 1984, 151-182.
- Hope, Edward R. 1974. "The deep syntax of Lisu sentences: a transformational case grammar" (*Pacific Linguistics* B-34). Canberra: Australian National University.
- Jeyapaul, V. Y. 1987. Karbi Grammar. Mysore: Central Institute of Indian Languages.
- Karapurkar, Pushpa. 1976. Kokborok Grammar. (CIIL grammar series, 3.) Mysore: Central Institute of Indian Languages.
- Kepping, Ksenia B. 1979. "Elements of ergativity and nominativity in Tangut." In Plank (ed.) 1979, 263-277.

- Klimov, G. A. 1984. "On the expression of object relations in the ergative system." In Plank (ed.) 1984, 211-219.
- LaPolla, Randy J. 1990. Grammatical Relations in Chinese: Synchronic and Diachronic Considerations. PhD dissertation, University of California, Berkeley.
- _____. 1992a. "Anti-ergative marking in Tibeto-Burman." Linguistics of the Tibeto-Burman Area 15.1:1-9.
 - ______.1992b. "On the dating and nature of verb agreement in Tibeto-Burman." Bulletin of the School of Oriental and African Studies 55.2:298-315.
- . 1993a. "Ergative marking in Tibeto-Burman." Paper presented to the 26th International Conference on Sino-Tibetan Languages and Linguistics, National Museum of Ethnology, Osaka, Sept. 13-17. To appear in *New Horizons in Tibeto-Burman Morphosyntax*, ed. by Y. Nishi, J. A. Matisoff, and Y. Nagano. National Museum of Ethnology (Senri Ethnological Studies).
- .1993b. "Arguments against 'subject' and 'direct object' as viable concepts in Chinese." Bulletin of the Institute of History and Philology 63.4:759-813.
- _____. 1994. "Variable finals in Proto-Sino-Tibetan." Bulletin of the Institute of History and Philology 65.1:131-173.
- _____ .to appear. "On the utility of the concepts of markedness and prototypes in understanding the development of morphological systems." Bulletin of the Institute of History and Philology 66.4.
- Li Yongsui & Wang Ersong (李永煌,王爾松). 1986。哈尼語簡誌。北京:民族出版社。[Outline Grammar of Hani]. Beijing: People's Publishing Co.
- Malkiel, Yakov. 1981. "Drift, slope, and slant: Background of, and variations upon, a Sapirian theme." *Language* 57:535-57.
- Mallison, Graham & Barry J. Blake. 1981. Language Typology: Cross-linguistic Studies in Syntax (North-Holland linguistic series 46). Amsterdam, New York, Oxford: North-Holland Pub. Co.
- Matisoff, James A. 1973. *The Grammar of Lahu*. (University of California Publications in Linguistics, 75.) Berkeley & Los Angeles: University of California Press. Reprinted 1982.
- ______. 1976. "Lahu causative constructions: Case hierarchies and the morphology/syntax cycle in a Tibeto-Burman perspective." *The Syntax of Causative Constructions*, ed. by M. Shibatani, 413-42. New York: Academic Press.
- Meillet, Antoine. 1918. "Convergences des développements linguistiques." Revue Philosophique de la France et de l'Étranger 85:97-110.
- Mithun, Marianne. 1991. "The development of bound pronominal paradigms." Language Typology 1988, ed. by W. P. Lehmann & Helen-Jo Jakusz Hewitt. Amsterdam & Philadelphia: John Benjamins.
- Plank, Frans, ed. 1979. Ergativity: Towards a Theory of Grammatical Relations. London: Academic Press.

- _____. 1984. Objects: Towards a Theory of Grammatical Relations. London: Academic Press.
- Sapir, Edward. 1921. Language: An Introduction to the Study of Speech. New York: Harcourt, Brace and Company.
- Sapir, Edward. 1933. "Language." Encyclopedia of the Social Sciences 9:155-69. Reprinted in David G. Mandelbaum, ed., Selected Writings of Edward Sapir in Language, Culture, and Personality. Berkeley & Los Angeles: University of California Press, 1949.
- Sun Hongkai (孫宏開). 1981. 羌語動詞的趨向範疇。民族語文 ["The category of directionality in the Qiang verb"]. Minzu Yuwen1981.1:34-42.
- _____. 1982. 獨龍語簡誌。北京:民族出版社。[Outline Grammar of the Dulong Language]. Beijing: People's Publishing Co.
- _____. 1983. 義都珞巴話概要。民族語文 ["Outline of the Lhoba dialect of Idu"].
 Minzu Yuwen 1983.6:63-79.
- _____. 1985. 怒族柔若語概況。民族語文 ["Sketch of the Rauruo language of the Nu people"]. Minzu Yuwen 1985.4:63-78.
- Thurgood, Graham. 1984. "The 'Rung' languages: notes on their morphosyntax and subgrouping." Paper presented to the 17th International Conference on Sino-Tibetan Languages and Linguistics, Sept. 7-9, 1984, University of Oregon.
- Thurgood, Graham. 1985. "Pronouns, verb agreement systems, and the subgrouping of Tibeto-Burman." Linguistics of the Sino-Tibetan Area: The State of the Art, ed. by Graham Thurgood, James A. Matisoff & David Bradley, 376-400. Canberra: Pacific Ling. (C-87).
- Wang Tianxi (王天智). 1991. 卻域語。[The Queyu Language]. In Dai et al. 1991, 46-63.
- Watters, David E. 1973. "Clause patterns in Kham." In Clause, Sentence, and Discourse Patterns in Selected Languages of Nepal, I: General Approach, ed. by Austin Hale, 39-202. Norman, OK: Summer Institute of Linguistics.
- Wheatley, Julian K. 1982. *Burmese: a Grammatical Sketch*. PhD dissertation, UC Berkeley.
- Wolfenden, Stuart N. 1929. Outlines of Tibeto-Burman Linguistic Morphology. London: Royal Asiatic Society.
- Xu Xijian and Xu Guizhen. 1984. 景頗族語言簡志(載瓦語)[Outline Grammar of the Zaiwa Language of the Jingpo People]. Beijing: People's Publishing Company.
- Yabu Shiro. 1992. "The linguistic position of the Meitei language." Paper presented at the 25th International Conference on Sino-Tibetan Languages and Linguistics, UC Berkeley, Oct. 1992.