

PRONOUNS, VERB AGREEMENT SYSTEMS,¹
&
THE SUBGROUPING OF TIBETO-BURMAN

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0. Introduction. The need for a more definitive subgrouping of Tibeto-Burman is self-evident. Only two major attempts at subgrouping Tibeto-Burman exist: Benedict (1972) and Shafer (1966-7, 1974); other attempts such as Egerod (1974) involve minor modifications of one or both of these. Further, Benedict (1972), displaying his characteristic caution, only offers a series of lower-level 'nuclei' thus completely avoiding the question of higher-level branching. Shafer (1966-7, 1974) goes further than Benedict in offering four major supergroups [Bodic, Burmic, Baric, and Karenic] but fails to provide compelling evidence for his conclusions. In short, Tibeto-Burman subgrouping is still at a stage where numerous questions exist about the composition of lower-level units and most questions about higher-level units are largely wide open.

The older verbal agreement system. Bauman (1975) established pronominalization systems as a native rather than a borrowed Tibeto-Burman feature and argued that it was reconstructable back to common Tibeto-Burman. While the precise antiquity of the 'oldest' verb agreement system may be open to some argument, Bauman's contention that it dates all the way back to proto-Tibeto-Burman [=PTB] is supported by sufficient evidence to make it clear that the original system at least transcended a number of the established major subgroups; thus, even if Bauman's precise dating of the system should require a minor revision, his more general contention that the original system was extremely archaic has proven quite accurate. As a consequence, the most archaic pronominalization system is not at our present state of knowledge useful for subgrouping purposes.

¹ I shall be astonished if all my errors should prove minor, and I will be grateful to readers for their corrections. The foundations for this work lie in Bauman (1975). This paper also owes a large debt to Hale 1982, which has become a standard reference. In addition, I also wish to thank Keith Record for his help. This material is based upon work supported by the National Science Foundation under Grant No. ENS-8203882.

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Abbreviations: LSI (Linguistic Survey of India, see Grierson). Symbols: /E/ and /O/ are open vowels; <*> marks a reconstructed form; and /ts/ and /dz/ mark apical-dental affricates, while /c/ and /j/ mark palatals.

However, a careful examination of the characteristics and distribution of the modern systems shows they represent more than just the reflexes of a single original agreement system; instead, in addition to reflexes of the older system, the evidence shows a number of historically-distinct paths of development both in the pronoun systems and in the agreement systems and where these patterns represent changes which postdate the breakup of the original proto-system, they constitute excellent subgrouping evidence.²

This paper first distinguishes the more archaic pronoun patterns and verbal agreement systems from the more recently innovated pronoun patterns and verbal agreement systems, and then examines the evidence provided by the innovation patterns for Tibeto-Burman subgrouping. The oldest proto-Tibeto-Burman (=PTB) pronouns are the first person singular *nga 'I' and the second person singular *nang 'thou'; these are reconstructed at the PTB level and thus are of no use for subgrouping. The oldest verbal agreement patterns are also extremely archaic; in fact, these same first and second person pronouns through the reinterpretation of the syntax and semantics of interaction with various topicalization processes were reanalyzed and form the oldest clear sources of verbal agreement markers. The decision to examine pronouns and verb agreement systems together is a natural consequence of the historical interaction between the two—an interaction so intimate that modern agreement markers are often still transparently the remains of these original pronouns.³

In some systems, new independent pronouns have been innovated and then these innovated pronouns have been subsequently incorporated into the agreement systems. For example, in proto-Kuki-Chin *kai 'I' first replaced the older proto-Tibeto-Burman *nga 'I'; then, the new first person pronoun was incorporated into the subject-verb agreement system as *ka- '1st'. From a methodological viewpoint, the existence in a number of different languages of systems where it is not reflexes of the oldest layer of proto-Tibeto-Burman pronouns but rather reflexes of a more recent layer of pronouns which has been incorporated into the verbal morphology is particularly strong evidence for a prior period of shared common development.

2 The use of verb pronominalization for subgrouping is certainly not new and dates back at least to Konow's Linguistic Survey of India (1903-28; Grierson (ed.)), where Western pronominalized and Eastern pronominalized languages are distinguished. However, this and subsequent attempts have frequently been undermined by inadequate data and by the tendency to use for subgrouping the mere presence of any pronominalization system rather than the presence of a specific pronominalization system. This practice, however, is typological rather than genetic, and thus is in principle not a valid basis for genetic subgrouping; for genetic subgrouping, only the presence of reflexes of what was historically the same system are valid evidence.

Voegelin and Voegelin's (1977) more recent use of pronominalization for subgrouping runs into other problems. Their division of these languages into non-pronominalized, eastern pronominalized, and western pronominalized is undermined by the inclusion of the clearly pronominalized Gyarung in their non-pronominalized and the inclusion of Kusunda, a language Shafer (1953:356) termed 'non-Tibeto-Burman' in their eastern pronominalized. This and other errors make Voegelin and Voegelin of limited value.

3 Within the Tibeto-Burman literature, verbal agreement systems are often termed 'verbal pronominalization' or simply 'pronominalization' systems. This usage, found as early as Hodgson (1856), is solidly entrenched in over one hundred years of literature.

1.0 Methodology. While subgrouping often constitutes a far more difficult task than the simple discovery of genetic relationship,⁴ the principle involved is quite simple: subgrouping is done exclusively on the basis of shared innovations. The corollary to the above principle is equally simple: since shared retentions can occur independent of a period of common development, the presence of shared retentions does not constitute subgrouping evidence. Although this corollary seems self-evident, even a cursory glance at the literature on subgrouping in Tibeto-Burman makes it necessary to state it.

2.0. Innovated second person pronouns. The presence of an innovated velar-initial second person pronoun overlaps with a considerable portion of what is traditionally thought of as Bodish languages: (§2.1) the Tibetan languages and dialects and (§2.2) the Tamang-Gurung-Thakali-Manang complex. Included in this group on the basis of other evidence is Takpa (§2.3), which has a definitely innovated and rather unique second person pronoun but not a velar-initialled one; instead, the Takpa innovation appears unique to Takpa and thus reveals little about the history of 'shared periods of common development'.

2.1 Tibetan languages⁵. With the exception of his single member East Bodish Unit [i.e. Takpa], all the remaining languages within within Shafer's Tibetan Section [= West Bodish, a Central Bodish, and South Bodish] all share the innovation of a second person singular *khyot 'thou' [Chart 2.1] and, although the reconstruction of third person forms still leaves much to be desired, they also apparently share the innovation of a third person singular *kho. Thus, the pronominal systems of languages in of the Tibetan Section seem to have evolved from a Proto-Tibetan *nga 'I', *khyot 'thou', and *kho '3rd person'.

Chart 2.1: Tibetan Languages

	first person	second person	third person
Balti LSI 3.1	nga nga-ang	khiang yang (resp.)	kho
Purik LSI 3.1	nga nga-rang ⁶	khyod khye-rang	kho kho-rang

⁴ Subgrouping is complicated by the fact that many similarities between closely-related languages are the product not of common inheritance but of what Sapir 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. The picture is further complicated by the areal convergence produced by the wide-spread multilingualism. Finally, the detection of borrowing is more difficult between related languages.

⁵ Miller (1969) and Nishida (1970) include Taofu (Migot 1957: esp. 556-60) within this section, but Migot himself suggested its non-Tibetan roots, a position supported by Shafer and by the colloquial language, which has, in addition to the probably borrowed formal forms t'i 'thou' and khör, the colloquial forms nu [noe] 'thou' and thu [thoe] 'third person'. Shafer has placed Taofu in a group with Horpa.

⁶ The various forms of *rang 'self' found throughout the pronominal systems of

		ye-rang	
Ladakhi LSI 3.1	nga nga-rang	khyot khyo-rang ⁷ nye-rang ⁷	kho kho-rang khong
Lhasa Tibetan Sedlacek 1959	nga 13	tyø: 41	k'o:n 53 (hon.)
Central Tibetan LSI 3.1	nga	khyö khye	kho khong (hon.)
K'ang Ting 1 Migot 1957	nga	chE chö	
K'ang Ting 2 Migot 1957	nga	chEt chOt	
Kantze Migot 1957	nga	chEt chöt	
De-ge [=Derge ⁸] Migot 1957	nga	che chö	
Spiti LSI 3.1	nga	khyut	kho
Sherpa LSI 3.1	nga	khyod khyed khyo	kho
Sherpa c. 1600 Nishida 1970	nga nge2	khjo2	khong
Ando Sherpa	ña [L]	chö	kho ri [HH]

these languages are a secondary reflection of the fact that the pronouns often need not appear at all except when necessary for foregrounding purposes. Thus, pronouns often appear accompanied by either an emphatic reflexive such as *rang 'self' or with a topic marking particle such as the *ka found in various subgroups often with a secondarily-developed pronominal function. In fact, it is this that accounts for the large number of disyllabic pronominal roots in Tibeto-Burman.

⁷ Unless this form is actually a plural form used in the singular in an honorific capacity, the nasal initial would indicate that, while *khyot 'thou' was an innovative second person pronoun, it did not entirely replace the original *ngang of Tibeto-Burman.

⁸ Egerod (1974) classifies this language as outside the Tibetan Section; Roerich (1931), Uray (1955 [1949]), Miller (1969), and Nishida (1970) all classify it as Tibetan. The pronominal configuration would suggest it belongs within Tibetan.

Nagano 1980			
Amdo Sherpa c. 1600 Nishida 1970	nga nge2	khjo2	khong khung
Amdo Sherpa Roerich 1958	nga	k'ye c' 'o2	k'e ge
Hsi-K'ang Sherpa c. 1700 Nishida 1963	nga	khyod	
Ton Jon Hsien Go 1954	ngo	tshhø	
Jirel (abs.) Strahm (erg.) 1975	'nga nye	'khoq khuig	'the 'theiki
Lhomi Vesalainen 1980	nga	khøtq	kotta
Kagate LSI 3.1	nga	khyo	kho
Dänjong-ka	nga	chhø	kho khu
Lhoke LSI 3.1	nga	khyøt, khyø chhot, chho	kho khu
Glo skad Kitamura 1977b	nga	khyod	kho

Thus, the Tibetan Section can be distinguished from much of Tibeto-Burman by its innovative *khyot 'thou' and from closely-related Tamang-Gurung by its *kho 'third person singular'. It should be noted that the investigation of the above languages has not revealed even vestigial evidence of an original Tibeto-Burman pronominalization system.

2.2 Tamang-Gurung Section. Like Tibetan, the Tamang-Gurung Section has innovated a second person pronoun but apparently does not seem to show even vestigial evidence of an original PTB agreement system⁹. [Chart 2.2]

Chart 2.2: Tamang-Gurung Section¹⁰

first person second person third person

⁹ Ghale, which Nishi (1981) includes in Tamang-Gurung, is best placed in some other subgroup. Not only are the pronouns inappropriate for this subgrouping but also the tonal system shared by Tamang-Gurung-Thakali-Manang (Mazaudon 1978) is not shared by Ghale (Reyes 1983).

¹⁰ Data from Hale (ed.) (1973.4:46, 309).

Tamang Hale (1973)	nga	'e:	the
Gurung Hale (1973)	nga	kih ¹¹	caq
Thakali Hale (1973)	nga	'kyahng	the

2.3 Takpa Section. Benedict (1972) and Shafer (1974) both recognize this as a separate section¹². As Chart 2.3 below makes evident, the pronoun configuration found in Takpa is distinct from that found in the languages of the Tibetan Section. Specifically, Takpa has innovated a second person singular pronoun but one which is not velar initialled; in addition, the third person singular pronoun¹³ is distinct from the *kho of other Tibetan dialects.

Chart 2.3: Takpa [=Dwags] Section

	first person	second person	third person
Takpa Hodgson 1853	gne ¹⁴ , nye	i	pe, be
Tsuona ¹⁵ Sun et al. 1980:4-64	nge 13	2i 53	pe 13

Like both the Tibetan and the Tamang subgroups, Takpa has no apparent traces of an original PTB agreement system.

3.0 First person innovations.

3.1 Tsangla. Although Tsangla is normally grouped with the Tamang-Gurung complex and with the Tibetan complex, it differs from the Tibetan-Tamang-Gurung complex in two features: unlike those languages, Central Monpa and Muotuo Monpa have retained reflexes of the original PTB *nang 'thou' while innovating a first person singular form.¹⁶

¹¹ Bauman (1975:148) lists a form ke:n 'thou' here as well as a form ai 'thou' for Tamang above.

¹² Shafer (1974) treats it as a Tibetan language by making it the only member of the East Bodish Unit of his Bodish Branch; similarly, Voegelin and Voegelin (1977) simply put it in their Central Tibetan, while Nishida (1970) treats it as one of his Southeastern dialects of Tibetan. Benedict, however, makes it a separate branch of Bodish.

¹³ Hrusso [=Aka], like Takpa, has also innovated a non-velar-stop initialled second person singular pronoun (ba) as well as a distinctive third person singular pronoun (i/e).

¹⁴ Hodgson's gn is simply a velar nasal.

¹⁵ The name Tsona Monpa used by Sun et al. (1980:4-64) suggests a relationship to Central (Muotuo) Monpa, but if one exists it must be a more ethnographic than linguistic since a comparison of this with their Muotuo Monpa or with Das Gupta's Central Monpa (1968) shows it to be structurally quite distinct not just in terms of pronouns but also in terms of such things as the tense/aspect system.

Chart 3.1: Tsangla

	first person	second person	third person
Central Monpa Das Gupta 1968	jang	nang	dan
Muotuo Monpa Sun et al. 1980:65-114	dʒang	nan	dan ro2

The structure of the innovated first person pronoun suggests descent from an earlier #ga-nga source. Like the Tibetan, Tamang-Gurung-Thakali, and Takpa sections, Tsangla appears to have retained no evidence of the earlier PTB agreement system.

3.2 Kuki-Chin Section. The Kuki-Chin languages readily reconstruct a pronoun system that consists of *kai 'I', *nang 'thou', and *a-mi 'third person' and a prefixal subject-verb agreement system that consists of *ka- 'first', *na- 'second', and *a- 'third' (see Chart 3.2).

Chart 3.2: Kuki-Chin pronouns and pronominalization patterns¹⁷

	first person		second person		third person	
	pronoun form	agreement affix	pronoun form	agreement affix	pronoun form	agreement affix
<u>Northern Chin</u>						
Tiddim Chin Henderson 1965	kei	ka-	nang oblique	na-	a-ma	a-
Thado LSI 3.3.	kei	ka-	nang	na-	a-ma	a-
Siyin LSI 3.3	kei	ka- ki-	nang	na- ni-	a-ma	a-
Ralte LSI 3.3.	kei ka ¹⁸	ka-	na	na-	a-ma	a-
Paite LSI 3.3.	kei ka	ka-	na	na-	a-ma	a-

¹⁶ Central Monpa and Muotuo Monpa are at the very least dialects of the same language.

¹⁷ The pronouns found in the chart below are not an exhaustive list.

¹⁸ In addition, Ralte has an nai form apparently from the older *nga provenience as well as an object form ai which in itself is intriguing.

Proto-	*kei *ka	*ka-	*nang	*na-	*a-ma	*a-
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Central Chin A

Lushei Bauman 1975:290	kei	ka-	nang	i-	a-ma	a-
Zahao LSI 3.3.	kei ka	ka-	nang	i- na-	a-ma a	a-
Mhar LSI 3.3.	kei ka	ka-	i-ni	i-	a-ma	a-
Proto A	*kei *ka (? possessive?)	*ka-	*nang	*i-	*a-ma	*a-

Central Chin B

Lai (Haka) LSI 3.3.	kei ke	ka- kx-	nang nx-	na-	amma	a-
Banjogi LSI 3.3.	kei	ka-	nang	na-	a-ma	a-
Pankhu LSI 3.3.	kei	ka- ke-	nang	na-	a-ma	a-
Proto B	*kei	*ka-	*nang	*na-	*a-ma	*a-

Old Kuki¹⁹

Kolren [=Koireng] LSI 3.3.	kai	ka- ki-	nang	na- ni-	a-ma	a-
Kom LSI 3.3	kai	ka-	nang	na- nx-	a-ma	a-
Purum LSI 3.3.	kai	ka- (occasional)	nang	?	a-mo (occasional)	a-
Rangkhoh LSI 3.3.	ga ge	ga-	nang	ne- ni-	a-ma mi	a-
Bete LSI 3.3.		ka-		na-		a-

¹⁹ Anal and Hiroi-Lamgang are also traditionally subgrouped with the Old Kuki languages. As with Purum, the data is limited and unclear; however, it is at least clear that both have first person pronouns with an initial nasal rather than a velar stop and both probably have a subject-agreement system with a first person *ka- derived form. Recall the Ralte form nai 'I' found in Northern Chin above.

Hallam LSI 3.3.	kei	ka-	nang	na-	a-ma	a-
Langrong LSI 3.3.	kai	kai- kei-	nang-ma	na- nai-	a-ni	a-
Aimol LSI 3.3.	kai	ka-	nang	na-	a-ma	a-
Chiru	kai	ka-	nang	na-	a-ma	a-
Proto	*kai	*ka-	*nang	*na-	*a-ma	*a-

Southern Chin²⁰

Shõ	kye	*ka- (H)	naung	na-	a-ya	a-
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Proto-Kuki- Chin	*kai	*ka-	*nang	*na-	*a-(ma)	*a-
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3.3 Karen.²¹ Three forms of pronouns are reported in Jones (1961): topic forms (T), object forms (O), and subject-possessive forms. Etymologically, the object forms are historically prior. The subject-possessive forms, which partake in the subject-verb agreement system, are for the first and second person phonological reductions of the object forms. The topic forms are the product of the fusion of the object forms with the topic marking particle wE e.g. ja + wE > jE.

Chart 3.3: Karen pronouns and pronominalization²²

	first person		second person		third person	
	pronoun	agreement	pronoun	agreement	pronoun	agreement
	<u>form</u>	<u>affix</u>	<u>form</u>	<u>affix</u>	<u>form</u>	<u>affix</u>
Moulmein	ja (O)	jx2	na (O)	nx2		
Sgaw	jE (T)		nE (T)			

3.4 Naga languages. First person innovations are also found in the Naga languages. How these languages are subgrouped is far from determined e.g. distinct subgroupings found in Benedict (1972), Shafer (1966-7, 1974), Marrison (1967), French (1983), and Weidert (1979, 1981). French and Weidert are quite similar with the major difference being in the placement of the Tangkhul languages. The chart below, which contrasts first person innovations with nasal initial reflexes, should be viewed with caution. Not only is the chart not intended as a serious claim about subgrouping but also the reliability of the data base is sometimes open to question. Further, Mikir and Meithei, which are

²⁰ The Southern Chin data is limited.

²¹ Although Karen is normally considered outside of Tibeto-Burman proper, its pronouns do pattern as do the other pronoun systems here.

²² More than just Jones' Moulmein Sgaw dialect needs to be examined.

generally treated as peripheral to the main body of Naga languages, occur in the appropriate pronoun groupings.

Chart 3.4: Naga languages

	first person	second person	third person
Naga I: First person innovation			
<u>Southwestern Naga</u>			
Maram McCulloch 1859	e-	nang-	a-do
Maring LSI	kai ²³	nang	a
Khoirao LSI	ii ai hai-ni	nang nang-ni	pai pai-ni
Kabui [=Kapwi]	ai (S) a (O)	nang	kamai
Empo LSI	anui ²⁴ i (St.)	nang	ji
Kwoireng LSI	i	nang	si
Nzong LSI	a-	ne	a-
Nzong Mills 1937	a (low note)	ne no	a (high note)
Tangkhul LSI	i	na	a
Phadang [=Tangkhul] LSI	i	nge	ai
Khangoi [=Tangkhul] LSI	i ei	nang	pro

Angami

²³ This kai root for Maring is intriguing but unexplainable. Perhaps this is the same root reflected in the Khoirao hai-ni.

²⁴ This form is not necessarily as transparent as it initially appears. It may simply be a straightforward reflex of *nga 'I', but it also may be the result of a parentage such as *a-ni (cf. the Khoirao forms above).

Sopvoma [=Memi] LSI	yi	ni	po hana
Kezhama LSI	ye iye	no	pu
Angami (Tengima) LSI	a	no	po
<u>Lhota</u>			
Lhota LSI	a ai	na no	mbo
Anyo Mills 1937	hi	no	ma
Ntenyi Mills 1937	he	na	ma
Yachumi LSI	iya	nunu	
<u>Other</u>			
Meithei LSI	ai i-hak ei	nang na-hak	ma ma-hak
Thukomi [=Ao?] LSI	iyeshu	nana	napunu

Naga II:

Nasal initialled first person forms

Ao

Mongsen Mills 1937	ni	nang	pa
Chungli LSI	ni	na	pa
Tengsa LSI	ngai	nang	po

Innovated and nasal initialled first person forms

Sema²⁵

²⁵ The first person possessive suffix for these languages is either i- or ni-.

Lazemi LSI	ngi	na	pa
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Zömoni Hutton 1921 [1968]	ni ni-ye	no	pa
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Mikir

Mikir Grüssner 1978	ne e	nang	
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Despite the temptation to speculate, full interpretation of this data will have to await a better overall understanding of the interrelationships among the Naga languages.

3.5 Bodo-Garo. All of the Bodo-Garo languages are characterized by a first person reflecting an earlier *a-nga (> *ang) provenience. In Abeng and Dacca, the reflex is still a-nga, while the reflexes elsewhere are transparently from an *a-nga source. The second person forms reflect an earlier *nang source.

4.0 Innovated first and second person pronouns

4.1 Kiranti. The Kiranti pronouns display innovative first and second person singular pronouns. However, it is not these innovated pronouns that have been incorporated into the system of pronominal agreement in the verb morphology (see Chart 4.1 below); instead, it is the older PTB pronouns *nga 'I' and *nang 'thou'. The disyllabic first person forms appear to reflect an earlier *ka + *nga, while the second person forms appear to reflect an earlier *ka + *nang. The *ka element in each of these forms is probably a 'TOPIC/ERGATIVE' marker, while the second element is a former pronoun. This unique configuration of characteristics effectively sets off the Kiranti languages.

Chart 4.1: Kiranti pronouns and pronominalization patterns²⁶

first person		second person		third person	
pronoun	agreement	pronoun	agreement	pronoun	agreement
<u>form</u>	<u>affix</u>	<u>form</u>	<u>affix</u>	<u>form</u>	<u>affix</u>

Hayu²⁷

²⁶ The absence of a form, unless specifically designated with the symbol -∅, is as likely to reflect a gap in the data base as anything else.

²⁷ The Hayu pronouns cited are those in the absolutive case; the agreement affixes cited are those obviously derived from *nga 'I' and *nang 'thou'.

The ergative and the oblique pronouns are also of interest since they suggest one parameter which might account for some of the striking diversity and variation among Kiranti pronouns. Similarly, the presence of more than one agreement system might account for the often unexplained variants found in the verbal morphology. In this regard, Michailovsky's own often brilliant work has already brought a great deal of order out of what was formerly chaos.

Michailovsky 1974, 1976c, 1981	gu / gu'u	-ngo 1st > 2nd	gon	-na- 1st > 2nd	mi ²⁸	-∅
Bahing LSI 3.1.327-37 Michailovsky 1976	go	-nga	ga	-na- 1st > 2nd	harem ²⁹	
Sunwar ³⁰ LSI 3.1.198-205 Bieri, Schulze, and Hale 1973	go	-nga- -ng	ga / ge	?	hare	
Thulung ³¹ Allen 1975	go	-ngu	gana	-na	gu	-∅
Proto	#go	#-nga	*gana	*-na	-	-
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Khaling ³² S. Toba 1979 I. Toba 1973	ung	-ngaa	in	-∅	am	-∅
Chourasya LSI 3.1. 369-70	unggu		ngo-me unu		ti-me yo-me ya-me	
Dumi LSI 3.1. 372-3	ung ang-ngu		in anu		mo-mi nam yakam	
Rai LSI 3.1. 373-9	ung		in		tam mam yakam	
Proto	*ung	#-ngaa	*in	#-∅	#am	#-∅
<hr/>						
Kulunge ³³	kong	-o	an	-x ³⁴	ngkx	-x

Hayu, without question, belongs in Kiranti.

- 28 The only etymologically pronominal third-person form in Hayu is the third person oblique form a. Etymologically, this is a demonstrative being used as a third person pronoun.
- 29 The pronouns are cited from the LSI account, while the agreement description is from Michailovsky 1976. It is unlikely that harem and hare below are really third person pronouns even synchronically let alone historically.
- 30 The Sunwar data comes both from the LSI material and from Bieri, Schulze, and Hale (1973), but as the latter is not a grammar not only are the precise conditions for the use of nga/ng not stated but also information on the use or non-use of a second person singular agreement particle is not given.
- 31 The forms cited here are the absolutive pronouns and the agreeing intransitive affixes.
- 32 The pronouns cited for Khaling are those of the absolutive case; the affixes cited are those which agree with subjects in the absolutive case.

Holzhausen
1973:15-26

Khambu LSI 3.1. 316-26	kong konga	ana	na/ kho / khalu / khungko
Sangpang LSI 3.1. 351-3	kanga	ana	mo-ko me-ko
Natchereng LSI 3.1. 365-66	ka kanga	ana	manka ya-ko
Proto ³⁵	#kang(-a) #-a?	#an(-a) #-a?	#-a?
Rodong LSI 3.1. 363-5	kanga ing-ka	khana	khu
Waling LSI 3.1. 357-8	ang-ka ing-ka	hana khana	aya haya-ko mo-ko
Rungchhenbung LSI 3.1. 360-1	ung-ka ang-ka	khana	o-ko / mo-ko euhya-ko euyau-ko
Dungmali LSI 3.1. 362-3	ang?-ka ing?-ka	hana	mu-go
Proto	#i/ang-ka	#khana [?> hana]	#-ko [<?#kho]
Lambichhang LSI 3.1. 355-7	ka kanga	khana	a-ko / yo-na mo-na to-na
Chhingtang LSI 3.1. 358-9	aka	hana	mo-gwa yo-ko
Lohorong LSI 3.1. 353-5	ka kanga	hana ana	mo-nu mo mi

³³ Again, the pronouns are cited in the absolutive case along with the agreement particles which correspond.

³⁴ The symbol x is used here to designate a schwa.

³⁵ The first and second forms are most likely absolutive without the #-a and ergative with it. Given the data base, the reconstructed agreement markers are also similarly quite speculative.

Balali LSI 3.1. 350-1	ka kanga		ana		mo kho
Proto	*ka *kang-a		#khana		*mo 'ʔ'

Limbu ³⁶ Bauman 1975: 286-89	anga:	-a: ³⁷ -ang	khene: k'-		³⁸ khu:ne: -∅
Yakha LSI 3.1. 305-15	ka	-nga- -ng-	ing-khi -ka- -ga-		u-khi ³⁹ i-khi
Proto	*ka	#-ng-		#kv-	

4.2 Kanauri-Almora.⁴⁰ Innovated first and second person pronouns are found in Kanauri-Almora. The first person agreement forms are forms of *-ga, the second person agreement forms are the familiar-looking *-na < *nang 'thou' and forms of *-ga, and the third person forms also although less frequently contain forms of *-ga. This unique configuration quite effectively sets off these languages as a distinct subgroup.

Chart 4.2: Kanauri-Almora pronouns and pronominalization⁴¹

first person	second person	third person
pronoun agreement <u>form</u> <u>affix</u>	pronoun agreement <u>form</u> <u>affix</u>	pronoun agreement <u>form</u> <u>affix</u>

Kanauri Branch

³⁶ The forms cited are absolutive case pronouns with corresponding intransitive verb affixes.

A number of the Limbu agreement markers display the classical split ergative case marking pattern e.g., in the past tense, the first person forms -ang/-hang occur marking intransitive subjects and transitive objects. No corresponding pattern occurs with third person forms.

³⁷ The -a: occurs in the nonpast; the -ang occurs in the past.

³⁸ Bauman notes (p. 286) that the three forms of the third person singular form a system in which the first is appropriate when the object is absent, the second is appropriate when in sight but distant, and the third is appropriate when near. Presumably, these come directly from demonstratives, still reflecting the three-way distinction found in many Tibeto-Burman demonstrative systems.

³⁹ The first element of each of these two forms is a demonstrative pronoun i.e., i- 'this' and u- 'that'.

⁴⁰ Cf. Shafer's West Himalayish Section.

⁴¹ A number of the languages listed below are not extensively described. One consequence of this is that the agreement systems for several of them list second person agreement morphemes but not first; however, it would be most surprising if a fuller description did not also show first person forms.

Kanauri ⁴² Bauman 1975 280	gø	-g	ka'	-n	do	---
			ki'(hon.)		nu	
Kanashi LSI 3.1.	gu	-k	ko	-n	du	---
					nu	
Manchati Bauman 1975: 291	gye	-ga	ka	-na	du	---
	ghyanga	-g	(hon.) kyena	-n		-t
			kakyena			-g
Chamba Lahuli LSI 3.1.	ge	-ga	ka	-na	du	---
		-g	ku	-n		-d
Bunan Bauman 1975: 271-2	gyi	-g	han	-na	tal	-re
		-g ⁴³		-g-ni		-g-re / -g
Rangloi, Gondla, Tinan	gye		ka		du	
					do	

Almora Branch

Rangkas LSI 3.1.	ji / je	-?	ga	-?	hve	
	jin ⁴⁴				u	
Darmiya LSI 3.1.	ji	-?	gai	-n	vo	
					u	
Chaudangsi LSI 3.1.	ji	-?	gan	-n	vo	
					u	
Byangsi LSI 3.1.	ji	-?	gan	-n	vaii	
					u	
Proto	*gai	*-ga	*gan	*-na	*du	
					*u	

While the interpretation of these patterns is not completely obvious, one explanation for the *-ga / *-na variation in the second person agreement forms is origin in a disyllabic second person pronoun. This pronoun, now reconstructed as *gan, must have evolved from an earlier form such as #ka-na < #ka-nang. The first person *gai pronoun is also ultimately disyllabic but its more immediate origin is not as apparent.⁴⁵

⁴² Kanauri also has an intriguing genitive first person form ang.

⁴³ The suffixes in this row occur on the dual/plural forms.

⁴⁴ This form, if actually first person singular, would point to a disyllabic root such as #ka-nga.

⁴⁵ The splitting of the Kanauri-Almora Section into a Kanauri Branch and an Almora Branch can tentatively be done on the basis of the *gai > *ji isogloss

4.3 Lepcha and Newari. Lepcha and Newari also have innovative first as well as second person pronouns.

Chart 4.3: Lepcha and Newari⁴⁶

	first person		second person		third person	
	pronoun agreement		pronoun agreement		pronoun agreement	
	<u>form</u>	<u>affix</u>	<u>form</u>	<u>affix</u>	<u>form</u>	<u>affix</u>
Lepcha	go		ho		hu	
Newari	ji		chha chhi		o	
Pahri (Newari dialect)	ji		chha chhi		ho chho chha	

These languages, unlike the others with innovative first and second person pronouns, have no apparent pronominalization systems.

4.4 The Qiang languages. Despite the outstanding recent research on the Qiang languages by Sun Hong-kai work on the Qiang languages our interpretation of that work has not yet caught up; thus, not much can be said with total confidence about the history of Qiang. However, like Sun's descriptive work, both his subgrouping and subgrouping evidence (1981b:177-94) can be used with confidence. Sun divides the Qiang languages into five southern Qiang dialects [= Da-chi-shun, Tau-ping, Du-xi, Mien-xi, and Hei-hu] and five northern Qiang dialects [=Lu-hwa, Ma-chi, Tsi-mo-ling, Wei-gu, and Ya-du].⁴⁷ From an examination of the pronouns certain patterns appear:

4.4: Qiang

as well as on the basis of the *du versus *u distribution. Both would set Rangkas, Darmiya, Chaudangsi, and Byangsi off from the remaining languages.

⁴⁶ While the ultimate subgrouping of Lepcha and Newari is far from settled, Thurgood (1984) places Lepcha (contra Shafer's classification of Lepcha with the Naga languages) with the Rung languages. The classification of Newari remains totally unclear.

⁴⁷ The bases for the various subgroupings differ (Chang 1967:423). Wen Yu (1941) divided the languages into eight groups primarily on geographical grounds. The Institute of Nationalities (ibid.) divided the languages into two groups on an essentially typological basis—phonological complexity. In contrast to both of these, Sun's criteria are such that the resultant subgrouping should be genetic rather than geographical or typological. Nonetheless, Sun's subgrouping only differs significantly from that of the Institute of Nationalities in its omission of Lung-hsi from the list of southern dialects. This difference, however, is important for our discussion.

Equally important for our discussion are the six southern dialects discussed in depth in Chang (1967): (1) Waszu (four dialects from Wen Yu 1941: Antzut'ou, Lip'ing, Kaotungshan, and Hop'ing), (2) Lopu Chai, (3) T'aop'ing Hsiang, (4) Tsengt'ou Hsiachai, (5) Chitutzu Ying, and (6) Jota Chai.

	first person		second person	
	Nominative	Oblique ⁴⁸	Nominative	Oblique
<u>Southern Qiang</u>				
Lip'ing ⁴⁹	nga	ka	no	?u/u
Goadongshan	nga	ka	no	?u/u
Anzitou	nga	ka	no	?u/u
Lopu Chai	— ⁵⁰	ka	nx	—
T'aop'ing Hsiang	nga	qa	no	—
Tsengt'ou Hsiang	nga	qa	no	—
Chiutzu Ying	—	qa	no	—
Jota Chai	nga	qa	no	—
Tauping ⁵¹	nga 55	qa 55/ qo 55	no 55	kux 55/ ko 55
Jiashanzhai ⁵²	nga	ka	no	kux
Niushanzhai	nga	ka	no	kux
Dapuxi	ngae	ka	no	kux
Seruzhai	nga	ka	no	kux
Banpo	nga	ka	no	ko
	<*nga		<*no < *nang	
<u>Northern Qiang</u>				
Machi ⁵³	qa	qa	kux	kux
Xiabaishui ⁵⁴	ka	ka	nx	n/ nyi
Qingtuping	ka	ka	nx	n/ ni
Tongshanzhai	ka	ka	no	nx
Suoqiao	ka	ka	nx	ni
Longxi	ka	ka	no	kux
Xige	ka	ka	wu	wu
Erwazhai	ka	ka	no	kux

⁴⁸ Oblique refers here to both the objective and possessive cases.

⁴⁹ The first three languages are Waszu cf. above footnote.

⁵⁰ The data for these five languages is from Chang (1967). Where a form has not been found in that source the symbol <—> has been used.

⁵¹ From Sun (1981b:78). Whether or not this is the same as Taop'ing Hsiang listed above is not clear but in any case it is definitely a southern Qiang dialect.

⁵² The membership of these five languages from Wen Yu (1941) in southern rather than northern Qiang is only tentatively assumed on the basis of their pronoun configuration.

⁵³ Northern Qiang from Sun (1981b:218).

⁵⁴ The ten languages in this group have only very tentatively been grouped with northern Qiang Machi on the basis of their parallel pronoun systems.

Jiuzizhai	ka	ka	no	kux
Ershui	ka	ka	kux	kux
Hnik s1	ka	ka	kuxn	kuxn

(1) The southern dialects have a peculiar pattern whereby in the subject case the first and second person pronouns reflect the earlier *nga 'I' and *nang 'thou', respectively, while in the objective case innovation has taken place. This is unusual since it is typically the subject case which innovates while the object case remains the same. (2) The patterns for the objective and the possessive cases are so similar that the chart simply lists them jointly as the 'oblique' case.⁵⁵ The real oddity in this is that it is typically the nominative case not the oblique cases which shows innovation.

The Qiang languages also clearly have an agreement system, but it has been obscured both by simple loss and by assimilation. However, both the northern Qiang dialect Machi and the southern Qiang dialect Tauping show clear vestigial evidence of some sort of suffixal first person marker as well as an extant -n or -nx second person marker.

5.0 Pronominalization without innovative pronouns.

5.1 Rung. Subject-verb agreement systems, of course, also occur in other language groups which did not innovate pronouns. Unlike cases where either innovation in the pronoun system or innovation in the pronominalization system occurred, the mere existence of a non-innovative pronominalization system provides no evidence for subgrouping since it is merely a retention from the proto-system. Within Rung such a retention of the original pronominalization system is found well preserved in Gyarong, Kham, Chepang, Jinghpaw, and Tangut as well as in the Nungish subset of Rung languages.⁵⁶

Chart 5.1: Rung

	pronoun	agreement	pronoun	agreement	pronoun	agreement
	<u>form</u>	<u>affix</u>	<u>form</u>	<u>affix</u>	<u>form</u>	<u>affix</u>
Gyarung Bauman 1975: 276-7	nga	-ng ⁵⁷	no	tx- <u>v</u> -n	nx	---
Kham Watters 1973 <Bauman 1975:282-5	nga:	nga- ⁵⁸	nxn:	nx-	no-	---
Chepang Bauman 1975: 273-5	nga:	-ng ⁵⁹ -nga	na:ngte	-te	u:	---

⁵⁵ When the two cases are marked differently, the object case is given first, the possessive second.

⁵⁶ The Qiang languages (§4.3b above) are also subgrouped with the Rung languages (see Thurgood 1984).

⁵⁷ These are the intransitive verb affixes.

⁵⁸ These prefixes occur with transitive verbs.

⁵⁹ These agreement particles are the intransitive verb affixes.

Tangut hnga: -nga na: -na² tha:
 Kepping 1975 (R 14) (R 17) (R 17)

5.2 Nungish. Within the Nungish subset of the Rung languages, the pronominalization on the verb morphology is distinguished by the suffixal nature of the first person agreement particle in contrast to the prefixal nature of the second person marker.

Chart 5.2: Nungish

	first person		second person		third person	
	<u>pronoun form</u>	<u>agreement affix</u>	<u>pronoun form</u>	<u>agreement affix</u>	<u>pronoun form</u>	<u>agreement affix</u>
Trung Lo 1945	nga ⁴	-ng ⁴	na ⁴	nx-	ang ⁴	-θ
Trung Sun 1982, 1983 ⁶¹	nga 53	*-ng	na 53	*nw ⁻⁶⁰	ang 53	—
Rawang Morse 1965 ⁶²	nga/	-ng	na/	e-	ang/	—

Nungish is also distinguished by its third person singular pronoun.

5.3 Nocte. The agreement pattern in the Nocte data below is for the intransitive verbs (Das Gupta 1971:16). Aside from the obvious fact that the Nocte shows agreement, it is important because Nocte is the only Northern Naga language (French 1983) which shows pronominalization.

Chart 5.3: Nocte

	first person		second person		third person	
	<u>pronoun form</u>	<u>agreement affix</u>	<u>pronoun form</u>	<u>agreement affix</u>	<u>pronoun form</u>	<u>agreement affix</u>
Nocte	nga	ang	nang	o	ate	a

5.4 Other. The languages below are distinguished by their innovated first person pronoun and, in several cases, by their innovated first person agreement marking pattern. Of these, Kaman and Taraung are most likely closely-related to Nungish, while the affiliations of Dhimal, Thami, and Toto remain indeterminate.

⁶⁰ Second person plural agreement is designated by *nw-v-n.

⁶¹ The agreement forms here are internally-reconstructed on the basis of the forms found in Sun (1982, 1983).

⁶² The agreement forms are actually from Bauman (1975:294).

Chart 5.4: Other

	first person		second person		third person	
	<u>pronoun form</u>	<u>agreement affix</u>	<u>pronoun form</u>	<u>agreement affix</u>	<u>pronoun form</u>	<u>agreement affix</u>
Miju [=Kaman] Das Gupta 1977	ki	-ng/-ki	no nu	-n	wi	-n
Kaman ⁶³ Sun et al. 1980:232-98	ki 53	-ng/-ki	nyo 53	-n	wi53	-n
Digaro ⁶⁴ LSI 3.1	ha ⁿ ha		nya		he/e m'ta	
Taraung [=Digaro] Sun et al. 1980:174-231	xang 35		nyon 35		tcye 55	
Dhimal LSI 3.1. 277-9	ka kang- ⁶⁵ cf. Kuki-Chin	-ka	na nang-	-na	wa wang-	---
Thami LSI 3.1. 280-2 ⁶⁶	gai ai-mi	-nga-	nang na	-na-	dha	---
Toto LSI 3.1. 250-3 ⁶⁷	ka-te		na-ga		dea ko	

6.0 Configurational evidence: the Adi languages.⁶⁸ In the case of Adi, it is the parallelism of a cluster of morphological features cooccurring along with the pronouns rather than just the pronouns themselves that provides the subgrouping evidence.

⁶³ Although the agreement system is far more complex than represented here, it is sufficient to note that a first person *-ng can be factored out of several of the standard verb endings. Cf. also Sun (1983:21).

⁶⁴ Digaro is often classed with Mishmi. This more and more appears to be an ethnographic designation. Chulikata [=Midu] is most closely-related to the Adi languages, while both Digaro [=Taraung] and Miju [=Kaman] appear most closely-related to the Nungish languages.

⁶⁵ These are the pronominal part of forms found glossed 'by me', 'by thou', and 'by him', respectively. These may be agentive forms.

⁶⁶ Konow (LSI 3.1:275) writes: "...as far as we can judge, Thami is a dialect of the same description as Dhimal".

⁶⁷ The material on Toto so limited that a full analysis is impossible. Thus, an accurate subgrouping may also remain beyond our grasp.

⁶⁸ Adi is here meant to designate the Abor-Miri-Dafla or Mirish languages.

⁶⁹ Even from the enormously limited LSI (3.1.613-5) sample data, it is clear that

Chart 6.0: Adi pronominal morphology⁶⁹

	case	first person	second person	third person	plural marker
Eastern Nishi Simon 1978	'subject'	ngo	no	mi	-lu
	'object'	nga-m	na-m	mi-em	
	'possessive'	nga-k	na-k	mi-ge	
Apatani Simon 1978	'subject'	ngo	no	mo	-nu
	'object'	ngi-mi	ni-mi	mo-mi	
	'possessive'	ngi-ki	ni-ka	mi-ge	
Galo Simon 1978	'subject'	ngo	no	mi	-nu
	'object'	ngo-m	no-m	mi-em	
	'possessive'	ngo-kke	no-kke	mi-ge	
Galo Das Gupta 1963	'subject'	ngo	no	mi/bi	-lu
	'object'	ngo-m	no-m	mi-m/bi-m	-nu
	'possessive'	ngo-k	no-kke	mi-ge	
		ngo-kke			
Padam Simon 1978	'subject'	ngo	no	bi	-lu
	'object'	ngo-m	no-m	bi-m	
	'possessive'	ngo-k	no-kke	bi-ke	
Hill Miri Simon 1978	'subject'	ngo	no	e/be	-lu
	'object'	ngo-m	no-m	e-m/be-m	
	'possessive'	ngo-k	no-kke	e-ke/be-ke	
Luoba Sun et al. 1980	'subject'	ngo:	no:	ko:	-lu
	'object'	ngo-m	no-m	ko-m	
	'possessive'				
Tagin Simon 1978	'subject'	ngo	no	e	-lu
	'object'	nga-m	na-m	ong -nu	
	'possessive'	ngo-ke	no-kke	e-ke-ge (?)	
Miri LSI 3.1. 594	'subject'	nga ⁷⁰	na	bui	-lu
	'object'	ngo-m	no-m	bui-m	
	'possessive'	nga-ka	na-ka	bui-ka	
Dafla LSI 3.1.	'subject'	nga	na	ma	-lu
	'object'	nga-m	na-m	ma-m	

the Chulikata Mishmi [=Midu]—despite being one of the four main divisions of the Mishmi and despite the close phonological resemblance between the names Midu and Miju—must be subgrouped linguistically with the Mirish rather than with the Mishmi languages. The pronouns, even such as they are in the sample, nonetheless make it clear that the first person singular is connected to *nga rather than an innovated velar stop initialised form as in the Mishmi group. Other parallels such as the apparent use of -lu 'plural' with pronouns as well as an apparent -m object marking suffix also exist, but these cannot be fully evaluated without a better sample.

⁷⁰ It is not clear to me to what degree these stem alternations are real and to what degree they are a byproduct of the notational system used.

'possessive' nga na mui-ga
 nga-ka na-ka mŭ-ga

In fact, it is not yet clear to precisely what degree the individual features themselves represent innovations. The system, however, is an innovation; it is clear from the almost suspicious lack of divergency and from the striking closeness between the systems of the various languages these languages descend from a single common system in the not too distant past.

7.0 Conclusion. The patterns of innovative pronouns and agreement systems effectively characterize certain lower-level subgroupings; then as a consequence of the recognition of the criterial nature of such patterns, these patterns can then be used as one piece of evidence to help decide cases of disputed membership in these groups. The groups thus far characterizable in this way include:

Chart 7.0: Lower-level groupings

	pronoun form	agreement affix	pronoun form	agreement affix	pronoun form	agreement affix
Tibetan (§2.1)	*nga	---	*khyot	---	*kho	---
Kiranti (§4.1)	*ka *kang-a	*-nga	#khana ⁷¹	*-na	---	---
Kanauri- Almora (§4.2)	*gai	*-ga	*gan	*-na	---	---
Kuki-Chin (§3.2)	*kai	*ka-	*nang	*na-	*a-(ma)	*a-
Naga I ⁷² (§3.4)	*(k)ai	---	*nang	---	---	---
Qiang (§4.4)	*nga/ka	*-a	*no	*-n	---	---
Bodo-Garo (§3.5)	*ang <	*a-nga	*nang	---	---	---

7.1 Individual languages. The explicit knowledge of these patterns has immediately allowed us to choose on a principled basis between a number of alternative subgrouping proposals for individual languages; as is undoubtedly obvious to those familiar with the state of Tibeto-Burman subgrouping, these decisions have already been incorporated in the text above. In terms of future work, the patterns above such choices generate some testable and

⁷¹ <#> indicates a rather tentative reconstruction.

⁷² Naga I: Southwestern, Angami, Lhota, and Meithei; Naga II: Ao, Sema, and Mikir. The terms Naga I and Naga II only characterize the split discussed in this chart and should not be taken as indicating any major claims about Naga.

potentially fruitful hypotheses about the subgroup membership of a number of heretofore unclassified languages e.g. Dhimal (§5.2), Thami (§5.2), Newari (§4.3), Tsangla (§3.1), Takpa (§2.3), and even Karen (§3.3).

7.2 Lower-level subgroupings. Just as Adi (§6.0) has been characterized by its unique patterns of pronominal configuration, the subgroups in Chart 7.0 have also been uniquely characterized through their patterns of innovative pronouns and/or agreement morphology. This, however, is not to say that considerable work does not remain to be done—precisely the converse is closer to the truth. Nonetheless, these characterizations alone or in combination with other defining characteristics allow membership in these groups to be designated with some confidence. In addition, within some these subgroups sub-patterns have sometimes clarified the nature of divisions within subgroups e.g. within Kiranti (§4.1), within Kanauri-Almora (§4.2), within Naga (§3.4), and within Qiang (§4.4).

7.3 Higher-level subgroupings. However, what the above patterns have to say about higher-level relationships is far more problematic. First, it is difficult to evaluate the absence of any agreement markers in a given language or even a given subgroup. After all, even a casual analysis of the various systems surveyed in this paper makes it readily apparent that the following agreement system was common to most if not all of Tibeto-Burman at one time:

pronoun <u>form</u>	agreement <u>affix</u>	pronoun <u>form</u>	agreement <u>affix</u>	pronoun <u>form</u>	agreement <u>affix</u>
*nga	*-nga-	*nang	*-na-	---	---

As a consequence, neither the presence nor the absence of the above agreement markers is strong evidence for higher-level subgrouping. For example, if the system was already present in common Tibeto-Burman, its presence in various subgroups merely represents common retentions; however, if the system was innovated after the breakup of common Tibeto-Burman, then its presence in certain subgroups could represent a shared common innovation—with the caveat that at least some parallel but independent development is conceivable.

The stop-initialled forms above provide a more immediately useful source of hypotheses. The second person innovation *khyot found in the Tibetan languages invites comparison with a similar *k-initialled second person form found in the Tamang-Gurung languages (§2.2) and Takpa (§2.3); conversely, the lack of such an innovation in Tsangla (§3.1) coupled with a first person innovation not found in Tibetan, Tamang-Gurung, or Takpa suggests the hypotheses that these three are closer to each other than any of them is to Tsangla. Numerous hypotheses are suggested by the various cross-group similarities found among the groups sharing stop-initialled first person innovations e.g. Kiranti & Kanauri-Almora? (first and second person innovations), Kanauri-Almora & Kuki-Chin & Naga I (*kai 'I'). The eventual confirmation or disconfirmation of any of these hypotheses will ultimately rest on the the discovery and accurate interpretation of other data than that discussed here. [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]

7.4 Comments. Subgrouping is an art but an art capable of achieving precise and historically accurate results if the cross-section of innovation patterns used is sufficiently broad. The patterns used above although reasonably complex merely generate 'interesting hypotheses' until confirmed by their intersection with the evidence provided by other innovative patterns. Further work needs to be done with the complex patterns of agreement found in languages such as Hayu, Thulung, Chepang, Gyarung, Trung, etc. in which the

marking system correlates with a person hierarchy, with the transitivity of the verb, and with the tense/aspect system. Parts of these various complex systems are historically related while others are not; undoubtedly, these complexities contain much valuable subgrouping evidence that has not yet be utilized. Nonetheless, these patterns have produced some 'interesting hypotheses.'