

The origins of nominal affixes in Austroasiatic and Sino-Tibetan: convergence, contact and some African parallels



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1. Introduction

The languages of the world characteristically have morphological strategies to classify nouns and signify to both speakers and hearers aspects of the semantics of the noun. These strategies can be broadly divided into two widespread categories, noun-classes and numeral classifiers. A third system, characteristic of phyla such as Indo-European and Afroasiatic, is the sex-gender system, classifies nouns through notional male/female oppositions, but which is often not informative about semantics. Noun classes are often referred to as 'genders' but this is a confusing terminology as it conflates a genuine semantic categorisation with sex-gender systems, which broadly do what they say on the tin. Global overviews such as Aikhenvald (2000) sometimes conflate these two systems. These categories are not watertight; languages can display aspects of all these, and erosion of one morphosyntactic category can lead to the partial or complete evolution of another. For example, the Kana language in the Niger Delta of Niger is historically a Niger-Congo language descended from languages with rich noun-class systems. However, along with the other members of the Ogoni group, it has almost entirely lost this aspect of its morphology and developed instead a system of numeral classifiers (Ikoro 1996). Similarly, Krongo, one of the Kadu languages, a branch of Nilo-Saharan, appears to have nominal affixes, although these are partly fossilised and unproductive. They have no semantic assignments, but Krongo has instead adopted or developed a sex-gender system (Reh 1985, 1994; Blench 2006).

Languages are, broadly speaking, conservative and phyla can be characterised by particular strategies. So the great majority of Niger-Congo languages have noun-classes or nothing; numeral classifiers or sex-gender systems rarely develop. Afroasiatic languages have sex-gender throughout the phylum and indeed a highly conservative morphology. Austroasiatic, Austronesian, Hmong-Mien and Sino-Tibetan languages all have numeral classifier systems and it is usually considered that noun classes are absent in SE Asia. Concordial noun classes are widespread, though far from universal, in the Papuan and Australian language areas (Harvey & Reid 1997), and appear occasionally in New World phyla, in keeping with their great diversity.

This paper asks whether it is actually true that noun classes are absent in SEA Asia. Typical noun class languages consist of a root and an affix; which can be prefixed or suffixed, and appear as an infix or circumfix. In rare cases, languages exhibit double-affixing, two separate affixes which alternate according to distinct rules. Examples of such languages are Bassari on the Togo-Ghana borderland and the Tivoid languages of SE Nigeria (Greenberg 1977). As part of the erosion of such systems, various types of fusion can occur, but the original morphemes are usually reconstructible. The affix in principle has a semantic assignation, and in some languages this is clear, whereas elsewhere the semantics can be opaque. Affixes frequently alternate; thus singulars can have one or two marked plurals. In Nilo-Saharan it is often considered that the 'middle' is the unmarked term and a singulative and a plurative can be formed from the root (Dimmendaal 2000). But this is not a necessary requirement of a noun class language; in Niger-Congo the m- class for mass nouns is always an unpaired class (Greenberg 1963; Blench 1995). Another important aspect of classic noun-class languages is concord, agreement between the nominal affix and affixes on other parts of speech in the same clause or sentence. Most typically concord is with adjectives, but verbs, pronouns and other particles can all enter the picture. Agreement can be alliterative, i.e. the same or segmentally related material is repeated, or non-alliterative, i.e. the relationship is regular without segmental copying.

In SE Asian language phyla, word structure is often described as 'sesquisyllabic' (Matisoff 1973). The intended meaning is that words have major and minor syllables, i.e. an iambic structure. The major syllables are in the stem and the minor syllable a prefix, generally C or CV. Since the -V is often represented orthographically with a mid-central vowel, it may be that it is not realised segmentally. Minor syllable prefixes are either lost or optional in many languages, and they seem to be able to change in ways that do not suggest phonological shift but affix substitution. Austroasiatic and Sino-Tibetan are of this type. In Austronesian languages, the tendency is for the prefix to have a (C)V format and to be conserved. In other words, once a prefix has been fused to a stem, it is retained, from Taiwan to New Zealand, as it were. There is an exception to this, the Daic languages, which are typically CV(C) and except in rare cases no longer retain the minor syllable. The origin of the Daic system is considered below.

Minor syllables thus have the appearance of optional prefixes in many languages. However, they have no obvious semantic assignments, and in no SE Asian language do they show concord. Yet in other ways they do have the appearance of an unproductive noun-class system, and in this they resemble Nilo-Saharan. Nilo-Saharan languages seem to show a wide range of affixes that suggest there was formerly a fully functioning nominal marking system, but synchronically, no language shows a system as productive as those in Niger-Congo. Alliterative concord is unknown and affixes certainly change to mark number they do not alternate in a regular pattern. This system is stable, and Nilo-Saharan shows no sign of eliminating this unproductive morphological baggage and heading towards a SE Asian type system.

Austroasiatic and many branches of Sino-Tibetan¹ have a common word structure where the root is preceded by a C- prefix, the ‘sesquisyllabic’ form. C- prefixes may have semantic correlates although this is not consistent. In different languages the prefix may disappear or be substituted, while the root remains static. The C- prefix can sometimes be incorporated into the stem, and a new prefix added, leading to complex initial sequences. Additional evidence for this is drawn from the typical pattern of pronouncing initial consonant sequences as individual segments; thus ‘spr’ in Austroasiatic and Sino-Tibetan is pronounced s.p.r, rather than /spr/ as in a true cluster in Indo-European. Unlike true noun-class languages elsewhere in the world, no number-marking is implied, nor is there any trace of concord with adjectives or pronouns. The similarities between the two phyla are rather perplexing, as few historical linguists consider them to be related. Globally, such systems are extremely rare, and for them to exist in direct geographical proximity is unlikely if they arose independently. However, clear examples of common lexemes of any time-depth are few², and these are often shared with other regional phyla such as Daic and Hmong-Mien. Constructing a historical scenario to account for this structural convergence is not obvious; the likely Urheimats of these two phyla are far apart.

This paper³ will describe the features of word structure in Austroasiatic and Sino-Tibetan that appear to be convergent and suggest how they might have arisen. It will argue that such features are transitional in terms of the evolution of true noun-classes and present a typological parallel from West Africa. The hypothesis is that this affix system originates from frozen nominal classifiers and that as the system is renewed, these prefixes co-exist together with productive classifiers. It will examine possible borrowing scenarios and suggest that these can be detected, but are inadequate to explain the diachronic morphology. The paper will suggest the origins of this pattern lie in a period when the region was far more phyletically diverse and where the original pattern of CV.CV(CV) characterised languages of the region.

2. Word structure in Austroasiatic

Word structure in Austroasiatic (at least for nouns) seems to consist of one or more optional C(V) prefixes, a CV(CV) stem and a C suffix, often weakened to a glottal stop or deleted. The optional C(V) prefixes are often referred to as a ‘pre-syllable’ in the literature. Many nouns may well have had a labial or palatal approximant in final position. This has strong tendency to be incorporated into the stem, and if it represents a different prosody from the vowel of the stem, then the synchronic output may be either a diphthong or a long vowel.

There is a sort of background murmur in the literature suggestion the existence of old affixes with semantic content which derive from frozen classifiers (e.g. Costello 1996, 1998). For example, Thomas (1969: 105) gives evidence for a *sa-* prefix in Chrau which denotes animals. She says ‘For the most part the first syllable is never dropped, except in direct address’ which of course does mark its optionality in the minds of speakers. Although she was unable to find comparative evidence, in fact this prefix appears to quite widespread, as Shorto (2006: 469) notes a number of cognates. Table 1 cites cognates for the Chrau term for

¹ I am aware this is a controversial term and that some prefer Tibeto-Burman. What the case, Sinitic languages are in consideration, as the evidence for the type of canonic form described here is well attested in Old Chinese.

² Benedict (1992:4) says, ‘there is little evidence of any borrowing of lexical items of ‘core’ type by TB/ST from AA/MK’. However, he does go by giving some striking examples from kin terms, as also the animal names ‘hawk’ and ‘tiger’ (cf. Table 6).

³ An early version of these ideas was presented at the 40th Colloquium on African Languages and Linguistics, Leiden, 29th-31st August, 2011.

‘bear’ [the animal] which shows that the s- prefix occurs in Bahnaric, Katuic and Vietic, with further possible cognates for the root itself in Aslian and Pearic.

Table 1. An Austroasiatic root for ‘bear’ with variable prefixes

Attestation	Language	Subgroup
kaw.ip	Jahai	Aslian
*c.kaw ~ *gaw	proto Bahnaric	Bahnaric
h.kaw	Laven [Jru’]	Bahnaric
rə.kəw	Sedang	Bahnaric
si.kaw	Chrau	Bahnaric
haŋ.kaw	Ngeq	Katuic
sa.kaw	Bru	Katuic
kəw.ɣaj su:ʔ	Chong [of Kanchanaburi])	Pearic
gáu	Vietnamese [Hanoi])	Vietic
cə.ku:	Chút [Rục])	Vietic

Smith (1975) points to the widespread presence of a velar prefix for animal names in Sedang, and widely in the Vietnamese languages he sampled. However, this prefix is found across Austroasiatic and also, strikingly, widely in Sino-Tibetan. Matisoff (1973) draws attention to its presence in Lolo-Burmese, but as Benedict (1990) notes it is present on the words for ‘tiger’ and ‘hawk’ throughout the phylum.

In some languages of the region, the use of the fricative to mark animal names is very marked. Table 2 gives an example from Western Miji, an only doubtfully Sino-Tibetan language spoken around Nafra in Arunachal Pradesh. The palatal fricative /ʃ/ is the most common prefix, but I am assuming s~ts are probably its allomorphs.

Table 2. Animal names in Nafra Miji

Gloss	ʃ	s/ts
animal		steḏ
horse	ʃgrə	
stallion	ʃgrə mbũ	
mare	ʃgrə mněʔ	
colt	ʃgrə i	
sheep	ʃgθəʔ	
goat	ʃprn	
dog	ʃazi	
barking deer		tʃshũ
deer		tʃsə
flying squirrel	ʃbiã	
leopard	ʃnmu	
monkey	ʃbḏ	
musk deer		tʃspãw
pangolin, anteater	ʃgdʒə	
wild cat	ʃgrě	
wild dog	ʃkfə	
sparrow		slĩʔ
ant	ʃni	
fish sp. I		sθũ
fish sp. II		sviaʔ
fish sp. III		sgioʔ

The neighbouring Hruso language also shows an S- prefix for animals, although it shares almost no lexical cognates with Miji, except probably ‘ant’ /n/.

Table 3. Hruso animal names with S- prefix

Gloss	Hruso
wild animal	sm ʃi
dog	ʃluo
bear	sĩo
otter	sʒe
rat	ʒmo
ant	ʃn
caterpillar	ʃblu
flea	sgzə
bloodsucking fly	sdʒm
cobra	ʒtɔ
python	ʒʃaba
snake sp. I	ʒmə
frog I	ʃdʒa
snail	svankɔ

This suggests strongly that what is transferred is the idea of the semantics of a prefix rather than lexical borrowing. The Koro language, which is structurally very similar to Hruso and Miji, seems to show no trace of S- prefixes.

Miji and the related Bangru also have a very marked m- prefix related to body parts, both for humans and animals. Table 4 shows a comparative list of Western and Eastern Miji as well as Bangru. The Bangru citations are orthographic, and on comparative grounds, assume the vowel following the m- prefix is epenthetic.

Photo 1. Hruso shaman, Thrizino



Table 4. Miji and Bangru body parts with an m- prefix

Gloss	Miji	East	Bangru	Comment
arm	(m)gĩ	(m)gĩ		
beard	momyuʔ	mmuʔ	m(a)maŋ	
bone	mriaŋ	mriaŋ	mnii	
brain	mɲoʔ	mɲoʔ		
breast	mɲu	mnuʔ		m- 'body part prefix' plus widespread Tibeto-Burman etymon *nu(w)
chest	mθm kʷu	m oŋ kəʔ		
chin	mugudza	mguteă		
ear	mʒoʔ	mzəʔ	m(i)bwa	cf. Memba <i>namdzo</i> ,
eye	mmreʔ	mreʔ		
face	mgmiaʔ	mkmiaʔ	m(e)kwii/mekuyi	
finger	mgi tso		m(e)gey ʃowa	
flesh	mzaʔ	mʒaʔ		
hand	(m)gi		m(e)gey	
heart	θom vʷu		mloŋ	
kidney	mkbɔ		mpega	
lip				
liver	mtn		m(a)tayiŋ	
lungs			mloŋ wasayi	

Table 4. Miji and Bangru body parts with an m- prefix

Gloss	Miji	East	Bangru	Comment
mouth	mugǔ		m(i)niŋ	
navel	mʃmay			
neck	dmuzǔ		m(i)niŋri	
nipple				
nose	ɲubyuŋ		m(i)niiko	
rib			mpelowa	
shoulder	mfa		mpoŋ	
stomach	mrǔ		mulgu	
thigh	mləʔ		mur ^h	
throat	mryɔnza			
tooth	mt̄		m(e)t ^h u	
vein	mdtʔ			
wrist	gi mvθɛ			
Animals				
horn	mʃzǔ		m(e)ws	
tail	mdmray		m(u)lwe	
hump	mkb ^v u			
tusk	m̄t̄			
udder	m̄ɲʔ			
fur, feather	mɔmyũʔ			
wing	mktɛi			

There is some comparative evidence for a Tibeto-Burman m- prefix, see for example Matisoff (2008:183) on **m-ley~*m-li* for ‘penis’.

Forrest (1962), in an article not often cited, points out that Lepcha (Rong) has the same *kV-* prefix for animals noted for Palaungic and Khmer. Rong also shares other animal prefixes with Austroasiatic, for example, *luk/lun-* for animals and plants corresponds to Khasian *lyŋ-* and the *sV-* prefix mentioned above, which is also attested in Khasian and Palaungic. Another prefix shared between Rong and Austroasiatic is the nominaliser which forms abstracts in Rong, *nun/num-*, also widely attested in Austroasiatic.

As an example of how this affix appears synchronically, Table 5 shows a widespread root for ‘buffalo’ attested in most branches of Austroasiatic⁴. The term is borrowed into Austronesian and gives us the common English name carabao. The attestations in different languages provide an example of the complex build-up of prefixes that characterise this type of morphology. Shorto (2006) reconstructs **krpiʔ* for PMK⁵, but the evidence seems to better support either a back or central vowel and a final palatal, thus the suggestion **k.r.pu.y*. I have analysed each synchronic form as a combination of a root, plus segmental affixes, each separated by a full stop. The proposal for the leftwards movement of the final palatal to the interior of the root is shown with a raised *ɣ*, thus *p^ɣu*. The front vowels arise from the final *-y* being incorporated into the stem. Sometimes it is merely lost and the back vowel is retained or lengthened. Whether the earliest form had a three consonant cluster in initial position is debatable; the original could have been **r.pu* as in Khmuic, which subsequently gained a *k-* prefix, as part of the widespread animal class in Austroasiatic identified by Smith (1975). Proto-Khmuic must have had something like **g.r.pu* to explain the synchronic forms. In Vietic, the *b/p* of the root was lost and *r→l*, generating *k.l.Vw* structures. The final nasal in Mon is mysterious unless it arose under the influence of the *k-* prefix.

⁴ Munda has *bɔŋtel* throughout, which may be the same root with the *-tel* an old compound. Mangic languages have *vɔ*, which again could well be cognate but a lack of morphology makes this speculative.

⁵ I use proto-Mon-Khmer when citing previous literature, but in general this terminology should be discouraged, as perpetuating an outmoded classification (Sidwell & Blench 2011).

Table 5. ‘Buffalo’ #k.r.pu.y in Austroasiatic

Phylum	Branch	Language	Attestation	Formula	Comment
Austroasiatic		PMK (Shorto)	*krpiʔ	k.r.pi.ʔ	
Austroasiatic		PAAS (RMB)		k.r.pu.y	
Austroasiatic	Monic	Mon	preaŋ 𑜀𑜢𑜤𑜰𑜫	r.p ^y u.ŋ	
Austroasiatic	Monic	Nyah Kur	chəlow	k.r.(p)u	? < Vietic
Austroasiatic	Vietic	proto Vietic	*c-lu	k.r.(p)u	
Austroasiatic	Vietic	Thavung	khuay ¹	k.r.(p)u.y	
Austroasiatic	Vietic	Pong	klow	k.r.(p)u	
Austroasiatic	Khmeric	Khmer	krəbxy	k.r.pu.y	? < Stieng
Austroasiatic	Pearic	Pear	krəpa:w	k.r.pu.y	
Austroasiatic	Pearic	Chong	kapa:w ^A	k.p ^y u	
Austroasiatic	Bahnaric	PNB	*kapə:	k.pu	
Austroasiatic	Bahnaric	Sedang	koṛəu	k.puu	
Austroasiatic	Bahnaric	Tampuon	kəpəu	k.p ^y u	
Austroasiatic	Bahnaric	Bahnar	kəpə:	k.p ^y u	
Austroasiatic	Bahnaric	PSB	*g~rəpu:	k.r.pu	
Austroasiatic	Bahnaric	Mnong	rpu	r.pu	
Austroasiatic	Katuic	Proto-Katuic	*krpiiw	k.r.p ^y u	
Austroasiatic	Katuic	Pacoh	kərbɔ:	k.r.pu.w	alligator; dragon [!]
Austroasiatic	Katuic	Chatong	karpiiw	k.r.p ^y u	
Austroasiatic	Khmuic	Sre	rəpu	r.pu	
Austroasiatic	Khmuic	Chrau	gəpu:	k.pu	
Austroasiatic	Khmuic	Biat	rpu:	r.pu	
Austroasiatic	Aslian	Kensiw	kə'paw	k.p ^y u	
Austroasiatic	Aslian	Temiar	kəlbau	k.r.p ^y u	< Malay

‘Buffalo’ indicates clearly the morphological path these nouns characteristically take; multiple affixing of prefixes, originally nominal classifiers with a semantic coherence and then differential dropping of consonants leading to highly diverse outcomes. An Austronesian language such as Rhade, which today has *kbao*, probably originally had a longer, more characteristic Austronesian form, and has restructured it under the influence of Austroasiatic neighbours. A Daic language such as Nung has a synchronic form *tú vai*, i.e. classifier plus stem, which may have been borrowed from a Vietnamese Austroasiatic language. This could also explain deviant Katuic forms such as Katu *tariiḡ*, which would originally have resembled Chatong *karpiiw*. The k-prefix became a suffix, the stem consonant p- was deleted and a now unproductive t- prefix was added, perhaps on the model of the Daic nominal classifiers.

Table 6 is a second illustration of the k- prefix for animals in SE Asian languages, showing a common root for ‘tiger’, which is attested across phyllic boundaries.

Table 6. The #kVla root for ‘tiger’ in SE Asian languages

Phylum	Branch	Language	Attestation
Sino-Tibetan	Sinitic	OCM	*hlâʔ
Sino-Tibetan	Burmese	Old Burmese	klya
Sino-Tibetan	Bodish	Monpa	khai-la
Austroasiatic	Palaungic	Shinman	kaʔ ⁴ vai ³
Austroasiatic	Khmeric	Angkorian Khmer	khlaa
Austroasiatic	Pearic	Samre	kanəh ^A
Austroasiatic	Bahnaric	PB	*kəlaa
Austroasiatic	Bahnaric	Sedang	klá
Austroasiatic	Katuic	Pacoh	kulaa
Austroasiatic	Katuic	Ir	kalaʔ
Austroasiatic	Katuic	So	kula
Austroasiatic	Monic	Proto-Monic	*klaaʔ

Phylum	Branch	Language	Attestation
Austroasiatic	Aslian	Sakai	kla
Austroasiatic	Khasian	War Jaintia	k ^h la
Austroasiatic	Muṅḍā	Muṅḍā	kula
Daic	Tai	Thai	kla

The root for ‘tiger’ is probably an illustration of how semantically assigned affixes are borrowed. The tiger is an animal of great symbolic importance across the region and has probably been borrowed extensively, fossil morphology and all. Once a semantic association of a k-prefix for ‘animal’ is set up (cf. Table 5 above) it is easily generalised to other animals within a particular speech.

3. Word structure in Sino-Tibetan

The Sino-Tibetan language phylum has a disputed membership, internal structure and thus debatable reconstructed forms. Van Driem (2008), Handel (2008) and Blench (2008) give an overview of some of the key issues. These swirl around the position of Sinitic, formerly considered a primary branching, but now often treated as simply another branch within Sino-Tibetan. It is certainly the case that Sinitic shares far more lexically with common Tibeto-Burman lexicon than some of the isolated groups of Arunachal Pradesh (Blench & Post in press). Proposals to rename the phylum in a more neutral fashion (e.g. Tibeto-Burman or Trans-Himalayan) certainly have merit. As with Austroasiatic, Sino-Tibetan words tend to have a core segmental structure, very often CV, and then one or more affixes, both prefixed and suffixed. Affixes can shift right or left into root medial position, inducing consonant and vowel changes, and prosodies affecting C₁. Change in the segmental character of C₁, such as n→ŋ or ŋ, is deemed to be driven by a shift of palatalisation or velarisation into the core. The perceived incorporation of a consonant within the stem leads to affix renewal, and thus stacking of unproductive morphemes. This is very common in phyla such as Nilo-Saharan, where languages like Krongo (Kadu group) have up to three unproductive affixes preceding nouns (Reh 1985).

Table 7 is intended to demonstrate how this works in Tibeto-Burman with the root for ‘two’, not strictly a noun, but subject to analogous processes. The starred forms are drawn from standard sources, and are not necessarily endorsed, merely cited for a convenient comparison. It is assumed there was a core *ni*, with a velar prefix and two suffixes, a fricative and a high front vowel or an approximant. The velar prefix was regularly suffixed and weakened to ʔ. The fricative suffix was either affricated or weakened to –h and switched to a prefix. Forms like Cho *hngih* may represent copying, leaving the copy of an affix at both ends of the word. Other more sporadic affixes are added, such as p-, t-, r- and possibly a-

Table 7. The root C.ni.C(C) for ‘two’ in Tibeto-Burman

Language	Group	Form	Formula
*Sino-Tibetan	Sino-Tibetan	gnyis	g.n ^ʷ i.s
*Tibeto-Burman	Tibeto-Burman	g-ni-s	g.ni.s
*Karen	Karenic	hni	h.ni
*Lolo-Burmese	Lolo-Burmese	ʔnit	ʔ.ni.t
*Loloish	Loloish	s-ni(k) ²	s.ni.k
*Northern Naga	Northern Naga	ʔ-ni	ʔ.ni
Bugun	Bugun	peŋ	n ^ʷ i.ŋ
Taraon	Mishmic	kaiŋ	k.ni
Idu	Mishmic	kapi	k.n ^ʷ i
Puroik	Puroik	pi	n ^ʷ i
Kamengic	Mey of Shergaon	pit	n ^ʷ i.t
Miji	Miji	gni	g.ni
Miju	Mijuish	kn ^h n	k.ni.n
Koro	Siangic	ki-ne	k.ni
Milang	Siangic	nə	ni
Karbi	Mikir	hiní	h.ni
Meithei	Meithei	ə-ni	ə.ni
Newar (Dolakhali)	Newar	nis	ni.s

Language	Group	Form	Formula
Atong	Bodo-Garo	ni	ni
Garó	Bodo-Garo	gəni	g.ni
Kokborok	Bodo-Garo	nəy	ni.y
Ao (Mongsen)	Naga	anət	a.ni.t
Rongmei	Naga	kənəi	k.ni.y
Tangkhuł	Naga	³ khə ³ ni	k.ni
Phom	Northern Naga	ñi ³¹	n ^y i
Cho (Mindat)	Chin	hngih	h.n(g)i.h
Daai	Chin	ŋ ^y i?	ŋ.ni.?
Khumi	Chin	nue(ng)	ni.ŋ
Lai (Hakha)	Chin	pa-hni?	p.h.ni.?
Lakher [Mara]	Chin	³ sa ² nə	s.ni
Lakher [Mara]	Chin	pā-nō	p.n ^w i
Lushai [Mizo]	Chin	hnih	h.ni.h
Matu	Chin	pəni?	p.ni
Nyh moye	Chin	ŋ ^y i?	ŋ.ni
Bhramu	Himalayish, Western	nis	ni.s
Kanauri	Himalayish, Western	nis	ni.s
Motuo Menba	Monpa	ŋik tsin	n ^y i.k
Kaika	Bodic	ngnyi	g.h.n ^y i
Tshona (Mama)	Bodic	nai ¹³	a.ni
Tibetan (Alike)	Tibetic	ŋ ^y i	g.n ^y i
Tibetan (Amdo: Bla-brang)	Tibetic	h ^y i	h.n ^y i
Tibetan (Balti)	Tibetic	ŋis	n(g)i.s
Tibetan (Sherpa)	Tibetic	ngyi	g.n ^y i
Dirang	Tibetic	nitsin	ni.ts.ŋ
Tawang	Tibetic	ne ⁱ	ni
Memba	Tibetic	ji	n ^y i
Meyor	Tibetic	ni	ni
Burmese (Written)	Burmish	hnats	h.ni.ts
Marma	Burmish	hnai?	h.n ^w i.?
PNL	Loloish	?nit ^L	?ni.t
Ahi	Loloish, Central	ni ²¹	ni
Lalo	Loloish, Northern	ni ²¹	ni
Nasu	Loloish, Northern	ŋi ⁵⁵	n ^y i
Nusu (Southern)	Loloish, Northern	fi ³⁵	h.ni
Akha	Loloish, Southern	nyi	n ^y i
Mpi	Loloish, Southern	ji [?] 2	n ^y i.?
Naxi	Naxi	ŋi ²¹	n ^y i
Chinese (Old)	Sinitic	njijs	n ^y i.(y)s
Sak	Luish	niŋ-hvú	ni.ŋ
Anong	Nungic	əni	ə.ni
Dulong	Nungic	ɑ ³¹ ni ⁵⁵	a.ni
Nung	Nungic	ɑ ³¹ ŋ ⁵⁵	a.n ^y i
Ersu	Qiangic	ne ⁵⁵	ni
Guiqiong	Qiangic	ŋi ³³	n ^y i
Namuyi	Qiangic	ŋi ⁵³	n ^y i
Qiang (Mawo)	Qiangic	ɣnə	g.ni
Tangut [Xixia]	Qiangic	ŋj ⁱ	n ^y i
Caodeng	rGyalrongic	ɣnes	r.ni.s
Daofu	rGyalrongic	ɣnə	g.ni
rGyalrong	rGyalrongic	kənəs	k.ni.s
Gurung (Ghachok)	Tamangic	ŋihq	ŋ.n ^y i.h.q

Language	Group	Form	Formula
Tamang (Sahu)	Tamangic	'nyi:h	n ^{yi} .h
Thakali	Tamangic	'ngih	n(g)i.h
Kayan (Pekon)	Karenic	θaní	t.ni
Magar	Kham-Magar	nis	ni.s
Thulung	Kiranti	nək	ni.k
Limbu	Kiranti, Eastern	nəc ^h i	ni.s
Bahing	Kiranti, Western	nik-si	ni.k.s
Apatani	Tani	tá-ñe	t.n ^{yi}
Nah	Tani	a-ŋi	a.n ^{yi}
Tujia	Tujia	ŋie ⁵⁵	n ^{yi} .V

The rapid switching and replacement of affixes in Tibeto-Burman shows all too clearly the defects in the process of reconstruction. The ‘method’, such as it is, involves choosing a common segmental core and then proposing the most commonly attested affixes to accompany it. But common affixes may well be evidence for lower-level nodes, or indeed diffusion. The similarities between affixes attested in Austroasiatic and Sino-Tibetan show that these can spread both from language to language and across phylum boundaries.

Sinitic historical phonology allows us to see these processes as they occur. Early Zhou Chinese has many more affixes familiar from other Tibeto-Burman languages than its later descendants. Table 8 shows a set of lexemes attested in Zhou which are found either with fewer or without affixes in later forms.

Table 8. Affix movement and loss in the evolution of Chinese

Gloss	Early Zhou	Classical	Character
blood	s.wi:t	wi:t	血
fire	s.mə:yʔ	ṃǎ:y	火
head	s.luʔ	lǔ	首
black	s.mə:k	ṃǎ:k	黑
see	ke:n.s	ke:n.s	見
seed	toŋ.ʔ	tǒŋ	種

To illustrate the convergence of Sino-Tibetan and Austroasiatic affixes in semantics, Table 9 shows one of the principal roots for ‘bear’ in Sino-Tibetan. The original form may have been something like *twǒ.m*, currently attested in rGyalrong. This would account for many synchronic forms with roots such as *vom*, *wom*, *hom*, with or without affixes. However, strikingly, the common prefix for ‘bear’, as for some other animal names in Sino-Tibetan, is *s-*, just as in Austroasiatic (§2.).

Table 9. ‘Bear’ in Tibeto-Burman languages

Group	Language	Form	Formula
Central Loloish	Kucong	sa ³⁵ mu ³¹	s.-m
Chin	Lakher [Mara]	chā-vỳ	s.vo.m
Chin	Lushai [Mizo]	sà-váwm	s.vo.m
Kham-Magar-Chepeng-Sunwar	Chepeng	siŋʔ.tyamh.yom	s.t.vo.m
Meithei	Meithei	shaum	s.wom
Naga	Lotha Naga	sēvǎŋ	s.vo.m
Naga	Ao (Chungli)	shim	s.h ^{vo} m
Naga	Khoirao	chawom	ʃ.f.wom
Naga	Lotha Naga	seva	s.vo(m)
Naga	Maram	sahom	s.hom
Naga	Rongmei	cagüm	ʃ.f.g.wom
Naga	Tangkhum	'si 'ŋom	s.g.wom
Nungic	Rawang	ʃǎwi ⁵³	s.w ^{vo} (m)
Sinitic	Chinese (Old/Mid)	gǐum/jǐung	g.yom

Group	Language	Form	Formula
Loloish, Southern	Akha	xhà-hrń	g.hom
Loloish, Southern	Hani (Khatu)	sjhń	ʃ.h ^{yo} (m)
Tani	Galo	sotum	s.tom
Tani	Padam-Mising [Abor-Miri]	si-tum	s.tom
Tani	Apatani	si-tń	s.t ^o
Tani	Bengni	šu-tum	s.tom
Tani	Bokar	šu-tum	s.tom

This is not the place to develop a specific historical model to explain this situation. But what this can be taken to demonstrate is;

- a) Sino-Tibetan and Austroasiatic have underlyingly similar word structures, without being genetically related
- b) that the so-called ‘minor syllable’ is an optional affix, which often has semantic content, and which can be shifted to a suffix, or incorporated into the stem
- c) that unproductive affixes can be subject to renewal, for example reprefixing, without forming consonant clusters
- d) that semantic associations of affixes both can be borrowed across phyllic boundaries, along with the segmental material, and evidently were at an early stage of the evolution of these phyla

4. Contact, borrowing and metatypy

The Austroasiatic and Sino-Tibetan language phyla are intertwined across much of their geographical range today and we should expect considerable local borrowing. The Munda languages are cut off from the remainder of Austroasiatic by a zone of highly diverse Sino-Tibetan languages. There are evidently two distinct issues, local borrowing and broader structural similarities between the two phyla. Studies of this issue are sparse; Benedict (1990) discusses Austroasiatic loans in Sino-Tibetan and Shafer (1952) is a study of similarities between Khasi and Sino-Tibetan, evaluated in Diffloth (2008). Forrest (1962) and Bodman (1988) both discuss the puzzling issue of apparent Austroasiatic similarities in Lepcha (Rong), a language no longer in direct contact with Austroasiatic.

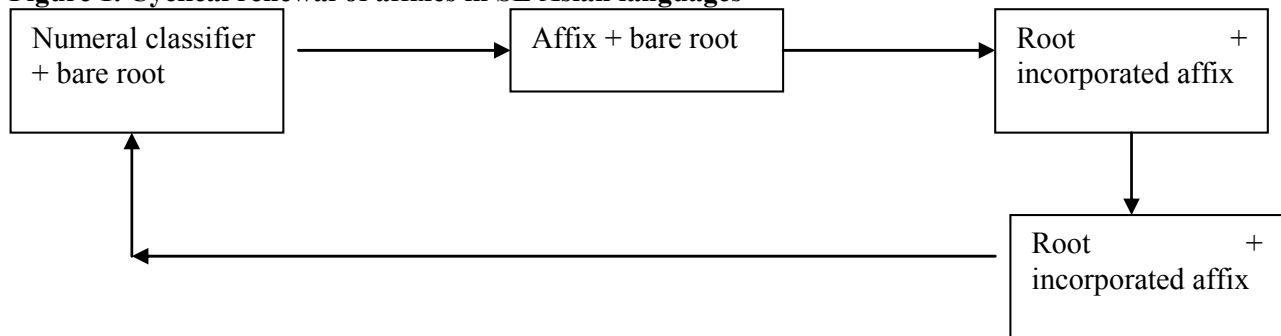
Although there *are* deep-level lexical borrowings between Austroasiatic and Sino-Tibetan, they appear to be few (Benedict 1990). Most striking, however, are the similarities of word-structure and affixes, often displaying the same segmental material with comparable semantics. What seems to have occurred is extensive metatypy, i.e. long-term bilingualism causing convergence of structures. The infrequency of lexical borrowing must be due to sociolinguistic factors, a desire for esoterogeny, marking the separateness of languages. This is probably at its most extreme in Arunachal Pradesh, where neighbouring languages with extremely similar cultural concepts, such as Miji, Hruso and Koro, share no more lexical cognates than could be expected by chance.

The key to these convergent structures is the incorporation and re-analysis of nominal classifiers. In many Eurasian and New World language phyla, nominal plurals are marked with short morphemes that indicate to hearers the semantic class of object under discussion. Sino-Tibetan and Austroasiatic, along with many other language phyla (Austronesian and many New World phyla) are sporadically marked by nominal classifier systems. Indo-European languages only have this system to a very limited extent; a ‘flock of sheep’, a ‘herd of cattle’, a ‘bunch of bananas’. Classifiers are essentially grammaticalised nouns that have become obligatory accompaniments (clitics?) when marking plurals or groups of nouns (Aikhenvald 2000). Nominal (or numeral) classifiers are a distinctive feature of SE Asian languages widespread in Austroasiatic (Adams 1989), Sino-Tibetan (e.g. Post 2007), Austronesian and Daic (Jones 1970). There has been much discussion about the difference between classifiers and quantifiers, but essentially, classifiers are non-concordial lexemes that are obligatory with certain classes of plural nouns. In some languages they can act as pronominals, for example in Chrau (Thomas 1969).

There is strong evidence for borrowing between phyla; for example, one of the ‘animal’ classifiers in Austroasiatic is probably a borrowing from Daic. Classifiers often have a transparent etymological origin, typically grammaticalised body parts (see e.g. Becker 1975 for Burmese), and this process of grammaticalisation has been similarly documented for noun-class affixes in African languages.

Both Austroasiatic and Sino-Tibetan may originally have had simple stems, with no affixes marking number, case, semantics or gender. Nominal classifiers, usually CV(C) syllables with semantic assignments, and were put together with nouns, usually preceding them, as is still very much the situation in Daic languages. It is possible that Sino-Tibetan and Austroasiatic nominal classifiers became bound to the root and reduced to C with an epenthetic vowel following, hence the transformation into affixes. Although this occurred to a greater or lesser extent in different languages, consciousness of their separateness was retained. As a consequence, they can be shifted to the end of the root, deleted in some languages and a new prefix added, elsewhere a new prefix was added in front of the existing prefix. Meanwhile, distinct nominal classifiers continued to co-exist and continued to be incorporated and renewed. Figure 1 shows a highly schematic visualisation of this process of renewal; the examples in the text indicate some of the complexities encountered on the way.

Figure 1. Cyclical renewal of affixes in SE Asian languages



The analytic problem with this hypothesis is that classifiers are usually very numerous and diverse. The lists given in Adams (1989) or Post (2007) are extremely long, and are moreover, strongly concerned with shape and appearance, something characteristic of Bantu, but not necessarily marked C affixes. I can offer one piece of evidence which is suggestive, the m- prefix in Mey [=Sherdukpen] of Rupa (Table 10) and the widespread *ma(ŋ)(k)* classifier for fruits, found in Tai languages.

Table 10. m- prefix for fruits in Mey of Rupa

Gloss	Rupa
fruit	mɿŋ
banana	msuŋ
lemon	mkē
sugar-cane	mʃi
walnut	mku

If we take the example of the mangosteen, *Garcinia mangostana*, the name of this fruit originates in Thai, with the classifier maŋ preceding it. The term is borrowed into Lao (where it remains meaningful within the classifier system) and Khmer and Burmese, where the Thai classifier makes no sense (Blench 2008).

Burmese	Khmer	Thai	Lao
min gut	məŋ kōt	maŋ khót	man khud
နာနတ်သီး		(มังคุด)	

By what process of copying and re-interpretation the *mVn* classifier eventually reached Mey will be difficult to recover. But I offer this as an example of the sort of process responsible for the semantics of affixes in Sino-Tibetan and Austroasiatic.

Most languages in the region also historically had suffixes; it seems likely these were also originally classifiers and indeed, the similarities of segmental material suggest that prefixes became suffixes. Although it has been suggested by typologists that such a process is rare, Harvey et al. (2006) reference some of the literature while illustrating this for Northern Australia (see also Green 1995). The evolution of the noun-class suffixes in Gur and Adamawa languages within Niger-Congo is similarly an example of prefix-suffix shift, carrying all the segmental material and concomitant alliterative concord. Within SE Asia, suffixes tend to weaken to glottal stops, nasals or approximants. As the final segments of a word erode, their features are incorporated into the stem, resulting in unstable vowels and vowel length. This is very similar to the sort of word shortening characteristic of languages of the Cameroun Grassfields, where final syllable erosion is responsible for complex tones (e.g. Mambiloid).

Photo 2. Mangosteen



5. Parallel processes in African languages

Apart from Afroasiatic, African languages are usually considered to be characterised by noun-classes, and not to have nominal classifiers at any historical time-depth. However, there are some interesting cases where these appear to be developing, for example Kana, a Cross River language in the Niger Delta of Nigeria (Ikoro 1996). The relatives of Kana are classic nominal affix alternation languages but Kana seems to have reduced this system but compensated by developing nominal classifiers through grammaticalisation (Williamson 1985). More surprising is the case of Mambay, an Adamawa language of northern Cameroun, which still has a quite prominent nominal suffix system, but which is developing prefixed nominal classifiers (Anonby 2011). Examples given by Anonby include the ‘collectives’ which precede nouns, do not show concord and have broad semantic correlations.

Nilo-Saharan is more puzzling, since its nominal morphology is marked by extensive affix alternation, and yet there is no system of alliterative concord and no systematic association with semantic categories. However, evidence seems to be increasingly emerging that we have been quite wrong in our understanding of Nilo-Saharan, that its underlying morphology is a system of nominal classifiers. Various studies have noted associations between affixes and semantic themes in different branches. For example, both Stevenson (1991) and Gilley (in press) note the semantic associations of affix pairings in Kadu languages, and Storch (2005) analyses these for Western Nilotic. Carlin (1993) observes some So number markers have broad semantic themes. But the most striking evidence comes from Gumuz, a Nilo-Saharan language of the Ethio-Sudan borderland, whose Mayu dialect has been studied by Ahland (2010). Gumuz has a system of nominal incorporation, where a series of body part nouns are incorporated into verbs and which ‘classify’ the object, or more rarely the subject or instrument.

Gumuz turns out to have a system of predicate classifiers, marking semantic fields, typically of shape or texture. These are infixes in ‘split verbs’ and are copied as demonstratives. The major classifiers are -Vk^w ‘head’, -Vts ‘body’, -Vc ‘eye/seed’, -k^wós ‘tooth’, and -ts^ê ‘ear’ Mithun (1986) describes a verbal classifier whereby “a noun is incorporated into a verb to categorize an extra predicate argument...usually in S or O function.” With this type of verbal classifier, there is frequently a generic-specific relationship between the incorporated NP and the external NP which accompanies it. The significance of this system is that classifiers which develop from grammaticalised body parts are governed by the semantics of nouns. For example; *‘entities that are head-like in shape and/or function or closely associated with such objects’* govern the following classes of object ‘fingers, toes water, sauce, beer, lotion, soap (in a container) ears of corn pots, pans, cans’. In constructions where the classifier refers to the object of the main verb, the classifier is suffixed to the verb and thus abuts the object noun directly. It is thus not difficult to see how it could become attached to the noun rather than the verb. Western Nilotic, as described by Storch (2005), has a system of nominal suffixes which appear to have semantic correlates. There are both singular and plural suffixes marking length, roundness, part of etc. And there is some evidence for a system of suffix alternation which has been overwritten by the diffusion of ‘imperial’ number markers kV- and N- from other branches of Nilotic. As with Gumuz, grammaticalisation of body parts seems to be a major source for affixes. The

T/K and N/K ‘substrata’ identified by Bryan in the 1950s and Greenberg’s (1981) ‘moveable –k as a Stage III article’ are all reflections of this broader phenomenon.

Exactly how Niger-Congo and Nilo-Saharan systems are related is still under discussion. Some branches of Niger-Congo, such as Mande, Dogon, Ijoid and Kaalak-Domurik, show no clear traces of any affix system. However, the remainder, Atlantic, Kwa, Benue-Congo and Gur-Adamawa have elaborate noun-classes and alliterative concord, or traces of such systems where they have been lost (e.g. in Volta-Niger and Kru). So this system develops within Niger-Congo (and is thus probably not to be reconstructed to proto-Niger-Congo, despite an extensive literature to the contrary). Other evidence, such as labial-velars, \pm ATR vowels etc. point to extensive contact between Nilo-Saharan and Niger-Congo, and it is not stretching credibility to propose that the noun-classes of Niger-Congo represent a regularised metatypy of Nilo-Saharan affix systems. In other words, something that was implicit in the Nilo-Saharan system of nominal classifiers was borrowed as a system into part of Niger-Congo and then analogised as a rich system of nominal classes⁶.

From this perspective, the similarities with SE Asian languages become clearer. Affix renewal is an extremely common process in Niger-Congo, where noun-class affixes become unproductive and a new affix is added (e.g. Childs 1983). Usually, however, the unproductive affix retains its vowel, or else the conjunction of two consonants results in a complex consonant. For example, Hyamic (Plateau) has developed a complex system of alternating initial clusters due to deletion of –V in the prefix. In SE Asia, the weakening of –V does not result in consonant merger but is rather retained as a syllable sequence. Such a word structure is not typical of Niger-Congo in general, but at least one group of languages does look like this synchronically. Nouns in the northwest Kainji languages (cLela, tHun, ut-Main, Gwamhi-Wuri), typically have the structure C.CVCV (the prefix is often transcribed with a schwa to make sense of the otherwise disquieting appearance) (e.g. Hoffmann 1968, Paterson in press). Table 11, shortened from Paterson (2012), shows the noun-class prefixes of Ut-Ma’in, some of which now only have consonant prefixes, but which retain strong semantic associations. $\bar{\epsilon}$ marks the epenthetic vowel for single-consonant prefixes.

Table 11. Ut-Ma’in noun class prefixes

Class	sg.	pl.	Object Pronoun	Examples
1u	ū-	ú/wá	ū-mákt	‘barren woman’
1ø	ø-	wá	ø-hámòt	‘visitor’
2	ø-	é	ø-ná	‘oxen, bovines’
3u	ū-	ó	ū-bù	‘house’
3ø	ø-	ó	ø-bò?	‘dream’
4	$\bar{\epsilon}$ s-	sé	$\bar{\epsilon}$ s-bò?	‘dreams’
5	$\bar{\epsilon}$ r-	dé	$\bar{\epsilon}$ r-kók	‘calabash’
6	$\bar{\epsilon}$ t-	tó	$\bar{\epsilon}$ t-kók	‘calabashes’
6m	$\bar{\epsilon}$ m-	mó	$\bar{\epsilon}$ m-nò:g	‘oil’
7u	ū-	já	ū-ná	‘ox, bovine’
7ø	ø-	já	ø-tjāmpá	‘man’
AUG	\bar{a} -	á	\bar{a} -kók	‘huge calabashes’
DIM	\bar{i} -	é	\bar{i} -kók	‘tiny calabash’

These prefixes can be said to bear tone, although as it appears to be always low, it is no longer functional (also the case in Himalayan Sino-Tibetan). Similarly, many Kordofanian⁷ languages have C.VCV structures, where the initial C is an alternating prefix. Schadeberg (1981a, 1981b) illustrates this for both the Heiban

⁶ The origins of alliterative concord can be debated, but a stimulating suggestion is the proposal of Hoffmann (1968) that demonstratives which copy affixes can explain the movement from prefix to suffix. Extending this idea, if affixes became re-analysed as separable, they can easily become demonstratives or articles, and once copied, establish the principle of alliteration.

⁷ ‘Kordofanian’ is a creation of Greenberg (1963) based on the assumption that the Niger-Congo languages of the Nuba Mountains must form a genetic group, although this now looks like an over-optimistic view. However, these languages do share common morphological features, which is perhaps due to contact.

and Talodi groups. For example, Table 12 shows the reconstructed noun-class prefixes of Proto-Heiban (Schaeberg 1981a: 133).

Table 12. Proto-Heiban noun-class prefixes

sg.	pl.
gu-	li-
g-	j-
d-	n-
li-	bu-
ŋ-	ɲ-
ɕ-	d-

The difference with northwest Kainji is that the typical Kordofanian stem is -CVC. This suggests (perhaps) loss of C₁ of the stem, subsequent loss of -V from the prefix or assimilation of the resultant VV sequence.

The overall parallels to be drawn with African languages are as follows;

- a) Nilo-Saharan languages have traces of a former numeral classifier system, still realised in Gumuz, which surface synchronically as moveable affixes and which have sporadic semantic associations
- b) A subset of Niger-Congo languages have noun-class affixes with semantic associations, although these are regularly lost and re-evolve
- c) These affixes can be shifted, disappear, fossilise or be incorporated into stems, leading to a process of renewal.
- d) These affixes typically conserve their co-associated vowel, because it has a strongly associated segmental tone, whereas SE Asian languages weaken the vowel because there is no underlying tone.
- e) However, Niger-Congo languages can occasionally lose the -V- of the affix so comprehensively that the result is a segmental affix consisting only of C, with resultant structural similarities to SE Asia

Photo 3. Heiban houses, Nuba Mountains



For these reasons, it seems that outcomes in SE Asia, while diverse, are still less exuberant than in West Africa. Excluding Bantoid and Bantu, the principal branches of Benue-Congo are Kainji, Plateau, Jukunoid, Cross River and ? Ikann. All of these have evidence (and usually synchronic examples) for a Bantu-like system of alternating nominal prefixes marking and alliterative concord applied to adjectives and other parts of speech. From this it is reasonable to conclude that nouns in the system of the proto-language had a basic (C)V.CVCV morphology, assumed by De Wolf (1971) in his now outdated study⁸. If so, the surface forms we see today are a development from this. However, those surface forms are astonishingly diverse. As an example of the complexity with a single family, Table 13 illustrates the possible outcomes from this type of restructuring.

⁸ De Wolf reached this view by working ‘backwards’ from Bantu rather than actually surveying Benue-Congo as the primary data source.

Table 13. Erosion and restructuring of CV nominal prefixes in Benue-Congo

Strategy	Languages
Complete loss of affixes	Shen
Complete loss of prefixes, vowel neutralisation in stem, loss of C ₂ , number marked by contrastive vowel length	Cara
Complete loss of prefixes, addition of generalised prefix, suffixed or clitic plural marker	Lower Cross, Central Jukunoid
Complete loss of prefixes, development of nominal classifiers	Kana
Complete loss of original affixes, new affixes added on the basis of reduplication of first syllable of stem	Hasha
Loss of V of affixes leading to C- prefixes	Northwest Kainji (cLela etc.)
Loss of V of affixes leading to long C- stem initials	Kambari, Upper Cross, Jju cluster
Loss of V of affixes leading to stem initial consonant clusters and consonant alternation	Hyamic
Existing affixes become frozen to the stem and are reprefixed	Cibər [Lopa]
Reduction of all CV- prefixes to V-	Ikann, some Plateau
Reduction of all CV- prefixes to u/i- and rightwards shift into stem, leading to contrastive palatalisation and labialisation	Many Plateau
Reduction of RV- and NV- prefixes to R-, N-, and rightwards shift into stem, leading to sporadic nasalisation and rhotacisation	Many Plateau
Prefixes become suffixes	Some Mambiloid
Prefixes become suffixes, which are deleted producing complex stem tones	Mambila
Prefixes become suffixes, lose final -V, C is frozen to the stem and number marking is lost	Dakoid
Prefixes partly become suffixes, resulting in systems of double-affixing	Tivoid

Once the descriptive language is changed, many of these processes are also attested in Austroasiatic and Sino-Tibetan.

6. A historical scenario

Describing structural similarities is one thing, accounting for them historically is quite another. A neat explanation would have Sino-Tibetan and Austroasiatic originating in neighbouring areas and these similarities be phenomena deriving from early contact. However, this is difficult to support using current hypotheses about homelands. Austroasiatic has a long history of quite varied speculations about its homeland (see review in Sidwell & Blench 2011). For scholars who still support the Mon-Khmer hypothesis, the Bay of Bengal is an option. Diffloth (2005) has generally argued for a southern tropical locus on the basis of faunal reconstructions. Sidwell & Blench (2011) propose a riverine dispersal from the Central Mekong, based on their parallel array model of Austroasiatic classification. Sino-Tibetan has a similarly varied menu of hypotheses, from the views of Matisoff ('the flanks of the Himalayas'), Van Driem (1998) Sichuan and Blench & Post (in press) arguing for Northeast India.

Unless these hypotheses are very misguided, proximate homelands are not the solution. Austroasiatic clearly spread far and fast, probably along the river systems of SE Asia, seeking river valleys to grow taro while using improved boat technology. Only such a hypothesis would account for the arrival and diversification of the Munda languages in India. If the proposals in Sidwell & Blench (2011) are correct, then this would have been around four thousand years ago, when there is a rapid and sudden expansion of the Neolithic in mainland SE Asia, marked by the spread of 'incised and impressed' pottery (Rispoli 2009). So there may have been intensive contact between Austroasiatic and Sino-Tibetan in the zone between northern Vietnam, Laos and northeast Myanmar, and consequent diffusion of key structural traits. Purely chronologically, these traits are likely to originate in Sino-Tibetan, as they are clearly attested in Sinitic and many of the highly diverse languages of NE India. Probably this question cannot be fully resolved until we have better mapping of the distribution of semantically significant prefixes across multiple language phyla.

7. Conclusions

It is unlikely that SE Asian specialists will find this analysis very palatable; the established terminology works hard against the notion of noun classes, a feature usually associated with Africa, Papuan and Australian, as well as some Amazonian languages. But research traditions and proposals for reconstruction also do not seem very credible, if proto-forms simply piled up unexplained affixes. The next step in the linguistic prehistory of the region is exploring its historical morphology in much greater detail and in particular accounting for the remarkable structural convergence at a particular historical juncture.

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