SINO-TIBETAN-AUSTRONESIAN: AN UPDATED AND IMPROVED ARGUMENT

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Thesis: Chinese and Austronesian are genetically related

→ Sino-Austronesian macrophylum

Linguistic evidence:

- shared vocabulary
- sound correspondences
- shared morphology

Archeological evidence

Shared vocabulary:

Comparison of 61 basic vocabulary items in Chinese and Austronesian.

(Old Chinese is reconstructed according to Baxter, modified by Sagart)

Of Yakonthov's 35-word list of basic vocabulary, 6 (17%) match;

Of Swadesh's 100-word list, 10 match (10%)

→ Sagart does not consider these figures to be final.

Cultural vocabulary comparison:

cultural vocabulary			
1. husked rice	beRas	糲 ^{b}rat-s	Tib. 'bras 'rice'
2. grain of cereal	-may	米 ^{a}mij?	B-G may 'cooked rice; rice; paddy' Gyarong sməj khri 'millet'
3. chicken	kuka	雞 ^{a}ke	
4. cage, enclosure	kurung	籠 ^{a}kə-rong	kru:ŋ
5. broom	CapuH$_1$	帚 ^{b}t-pu?	
6. stopper, plug	seŋseŋ	塞 ^{a}sɨk	
7. to bury, tomb	-buN 'to bury'	墳 ^{a}bu[r] 'tomb, tumulus'	
8. loincloth, robe	sabuk	服 ^{b}buk	Tib. 'bog 'k. o. garment'
9. to plait, braid	-pid	編 ^{a}pin(?) F?	byar~pyar
10. to shoot	panaq	弩 ^{a}na? (crossbow)	

One notes the presence of terms for agriculture, animal husbandry, hunting, house utensils and the absence of terms for metal. This points to a neolithic, pre-metal, ancestral culture.

Sound correspondences:

Due to canonical reduction of the initial syllable(s) of ancestral polysyllables, sound correspondences relate the last syllable of PAN words with Chinese and Tibeto-Burman monosyllabic word stems. In addition, Old Chinese syllable type (A or B) correlates with the nature of the initial of Austronesian penultimate syllables, as detailed in Table 9.7. Tables 9.3 and 9.4 present the correspondences of syllable-initial and final consonants, and Table 9.6 presents the vowel correspondences.

initial consonants (PAN final syllable initial : Chinese root initial : TB)

p- : p(h)- : p-	palm of hand, chew, plait, close, broom
t- : t(h)- : t-	leech, earth, vomit, thick, short
k- : k(h)- : k-	elbow, bone, chicken, dog, high, curled, crooked, dig, grasp, wrap around, scrape I, scrape II, open
q- : ʔ- : 0-	cloud(y)
b- : b- : (p-)	carry, broad, loincloth, meet, tomb, ruin
d- : d- : d-	old, this
g- : g- : g-	hold in fist or mouth
m- : (h)m- : m-	body hair, drown
n- : n- : n-	brain, breast, pus, mother, think, shoot, sink
ŋ- : ŋ- : ŋ-	hot,
N- : (h)l- : l-	hunt, water, follow, sunlight, moon
l- : (h)l- : l-	head, snake, head, flow, lick, put together, fall, wind, cave, worm
R- : r- : r-	horn, salt, husked rice
w- : (h)w- : w- (Tib. g-)	year, far, say
s- : s- : ?	wash, stopper
z- : ts- : ?	sharp, sleep, wink

final consonants (PAN final consonant: Chinese root final consonant : TB)

-0 : -0 : -0	palm of hand, chicken, carry, this
-k : -k : -k	leech, crooked, loincloth
-t : -t : -t	bone, hot, dig, close
-p : -p : ?	hunt, grasp
-ng : -ng : -ng	put together, broad, cage, meet, sunlight, cave, old
-ng : -k : -ng	horn, stopper
-m : -m : -m/-p	water, think, hold in fist or mouth, dark, cloud
-$H_{1,2}$: -ʔ : -0	head, female breast, elbow, salt, broom
-q : -ʔ : -k	brain, pus, earth, lick, vomit, chew, shoot, wash, open
-l : [-r] : -r	curled, thick,
-R : [-r] : -y	dog, snake, egg, flame, flow, fall, follow
-S : -t : -0	say, year, scrape I, moon
-s : -t : -s (/a_) ~-t (else)	husked rice, drown, wrap around, ruin
-N : [-r] : -y~-l	body hair, far, tomb

STAN	PAN : Chinese	examples
u (before labials)	-u- : -ï-	water
u (elsewhere)	-u- : -u-	head, brain, elbow, bone, body hair, dog, flow, thick, dig, meet, tomb
o (before labials)	-u- : -a-	hunt
o (elsewhere)	-u- : -o-	breast, egg, horn, fall, put together, curl, crooked, cut off, cage, cave
a (before y)	-a- : -i-	grain
a (elsewhere)	-a- : -a-	palm, mother, snake, year, salt, earth, vomit, shoot, speak, broad
æ	-a- : -e-	chicken, lick, ruin, open
e (after grave cons.)	-e- : -e-	grasp, wrap around, drown, hot
e (elsewhere)	-e- : -i-	think, leech, worm, sleep
i (open syll.)	-i- : -ï-	this
i (closed syll.)	-i- : -i-	plait, close
ə	-e- : -ï-	dark, sink, hold in fist, stopper, sharp

Shared morphology:

Several morphological processes are shared by Austronesian and Sino-Tibetan, including three of the main verbal 'focus' constructions which form the backbone of Austronesian verbal morphology:

- *The Proto-Austronesian nominalizer and Goal Focus Marker and the Tibeto-Burman nominalizing suffix –n;* e.g.:

Atayal: niq 'to eat', niq-un 'eaten thing'; Paiwan alap 'to take', alap-en 'object being taken'

Tibetan: za-ba 'to eat', za-n 'food'; skyi-ba 'to borrow', skyi-n-pa 'borrowed thing, loan'

- *The Proto-Austronesian Actor Focus prefix and infix m-/-m and the Sino-Tibetan intransitive prefix –m*

The Austronesian 'Actor Focus' marker is a nasal affix m- (prefix) or -m- (infix) depending on language and root shape. In Starosta's ergative interpretation of Austronasian grammar, assumed here, all verbs in Actor Focus are intransitive, with m-/-m- deriving intransitive verbs from transitive ones. Proto-Sino-Tibetan had a prefix m- which turned transitive verbs into intransitives, e.g.:

Tibetan	m-nam-ba	'to smell (intr.), stink'
Kachin	ma-nam	'to smell' (intr.)
	ma-ni	'to laugh'

This prefix, illustrated before nasals in the preceding examples, reduced to prenasalization preceding voiceless stops. In Tibetan, Kiranti, Bahing, Vayu, Bodo-Garo, prenasalization has further been lost and only secondary voicing of the root initial marks the intransitive member. Middle Chinese (MC, mid-first millennium CE) likewise had contrasting pairs of transitive verbs with voiceless stop initials vs. intransitive verbs with voiced stop initials:

別 pjet (III) 'to separate, distinguish' : 別 bjet (III) 'to take leave'

箸 trjak 'to put something in a certain place' : 箸 drjak 'to occupy a fixed position'

斷 twanH 'to cut, sever' : 斷 dwanH 'broken off, cut off from; to cease'

折 tsyet 'to break, to bend' (trans.) : 折 dzyet 'to bend' (intrans.)

- The PAN Instrumental/Beneficiary Focus prefix Si- and the valency-increasing s- in Sino-Tibetan

A prefix PAN Si- : OC s- : TB s- allows a verb to take a NP with real-world roles such as causer, beneficiary, instrument, etc., and treat it formally as its patient (that is, as its grammatical object in Chinese, an accusative language, and as its subject in ergative AN). The Austronesian Si-V construction is known as 'Instrument focus' (also 'Beneficiary Focus') but its semantics are complex. Huang (1991: 45) characterizes the Si- construction in Atayal as 'circumstantial voice' and states that one characteristic of circumstantial voice is 'increased transitivity'. As an illustration, I cite here examples with a transitive/causative character, because the semantic difference between prefixed and non-prefixed forms can be apprehended directly through simple lexical glosses, even though this is an oversimplification of the functions of this prefix.

Old Chinese	順 *^{b}m-lun-s ‘to be pliant, obedient’ : 馴*^{b}s-lun ‘to tame'
Tibetan	Nbar 'to burn, catch fire, be ignited' : s-bar-pa 'to light, to kindle, to inflame'
	m-nam-pa 'to smell, stink' (intransitive) : s-nam-pa 'to smell' (transitive)
Gyarong	rong 'to see' : s-rong 'to show'
Boro	gi 'to be afraid of, fear' : si-gi 'to frighten'

-ar- distributed action; distributed object

This infix was inserted between the root initial and the first vowel of a stem. Attached to verbs of action it indicated that the action was distributed in time (occurring over several discrete occasions), or in space (involving several agents/patients/locations); attached to nouns it indicated a referent distributed in space, i.e. having double or multiple structure. The reflex of this infix in the Austronesian languages is -ar-, marking verbs of distributed action and nouns of distributed object, including names of paired or multiple body parts. Infixation is often, but not always, in the first of two reduplicated syllables:

Paiwan	k-ar-akim 'to search everywhere' (kim 'search')
	k-ar-apkap-an 'sole of foot'
Puyuma	D-ar-ukap 'palm of hand'
Bunun	d-al-apa 'sole of foot' (PAN *dapa 'palm of hand')
Amis	p-ar-okpok 'to gallop'
	t-ar-odo' 'fingers, toes'
Tagalog	d-al-akdak 'sowing of rice seeds or seedlings for transplanting' (dakdak 'driving in of sharp end of stakes into soil')
	k-al-aykay 'rake'
Malay	ketap 'to bite teeth' : k-er-etap 'to bite teeth repeatedly'

Both -r- and -R- correspond to Old Chinese -r-. Although no living Tibeto-Burman language has -r- infixation as a living process, paired nouns and verbs with what appears to be an infix -r- show up here and there, with similar semantics as in Chinese:

Burm.	pok ‘a drop (of liquid)’ : prok ‘speckled, spotted’
	pwak 'to boil up and break, as boiling liquid' : prwak ‘id.’
	$khwe_2$ 'curve, coil' : $khrwe_2$- ‘to surround, attend’
Kachin	hpun ‘of pimples, to appear on the body’ : hprun ‘pimples, on the body; to appear on the body, of pimples'

Sagart identified the Chinese -r- distributed action/object infix from minimal pairs in Old Chinese (Sagart 1993). Later on, he described some infixed pairs in modern dialects where the infixed showed up as the regular modern reflex -l-, preceded either with a schwa or with a full or partial copy of the syllable’s rime.

- *Reduction to monosyllables and maintenance of prefixation and infixation*

How did PSTAN prefixes and infixes survive the loss of non-final syllables, to which they were attached, in the evolution to Chinese ? The answer was provided by Starosta (1995). Starosta argued that PSTAN had both mono- and polysyllables: only polysyllabic words were affected by the loss of initial syllables and attached affixes: monosyllables could then act as a refuge for prefixes and infixes. PSTAN monosyllables survive in PAN as roots and reduplicative disyllables. Judging from the high number of verbs among PAN roots, and from the high number of PAN roots in the lexical comparisons for verbs presented above (Table 9.1), it appears likely that many PSTAN verbs were monosyllabic. PSTAN verbal morphology, then, could easily continue in ST languages after canonical reduction had started operating.

Archeological evidence:

- Evidence of a substantial cultural unity between the Austronesian peoples of Taiwan and the Sino-Tibetan peoples can be discerned
  - Agriculture: two millets (Setaria italica and Panicum miliaceum) and rice
  - The names of these cereals shared

Sagart's view:

Between 8,500 and 7,500 BP, farming communities with domesticated *Setaria*, *Panicum* and rice began to appear in the mid-Huang He Valley, whether as a northern extension of the Yangzi rice Neolithic, or as an independent transition to the Neolithic is still uncertain. I call Proto-Sino-Tibetan-Austronesian (PSTAN) the language spoken by these early farmers. Subsequent population growth resulted in geographical expansion, both up- and downriver, of PSTAN speakers. A Western and an Eastern dialect individualized. The Western dialect, in the mid- and upper Huang He Valley, later evolved into Proto-Sino-Tibetan, whose speakers eventually expanded southward and westward. The Eastern dialect was spoken in the lower Huang He and Huai He Valleys. There its speakers adapted to a wetter environment (marine, riverine, lacustrine). The site of Longqiuzhuang, dated to ca. 7,000-5,500 BP in the lower Huai Valley, has both rice and millet. A migration brought some of the speakers of this eastern dialect speakers to Taiwan, reached by 5,500 BP. There their language began to diversify into the modern Austronesian languages. Southern elements (cord-marked pottery, bark beaters, etc.) probably entered early Austronesian culture through contact with peoples of southern China. These southern elements do not, however, indicate a south mainland origin of the Austronesians. As to the Tai-Kadai languages, which show strong evidence of relatedness with the Austronesian languages, I have hypothesized that they are not a sister group of Austronesian having remained on the mainland when the pre-Austronesian migrated to Taiwan, but a daughter group of Austronesian, sharing some innovations with the Malayo-Polynesian languages.