

SINO-TAI WORDS FOR 'TO EAT'

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ABSTRACT

This paper examines Sino-Tai lexical correspondences in the semantic field of 'to eat'. Several dozen correspondence sets are established, including concepts like 'eating', 'drinking', 'biting', 'chewing', among others. Related concepts involving food preparation, food processing and food vessels are also investigated. Wider connections are sought where appropriate. The findings have implications for the debate on the genetic affiliation of Tai within Sino-Tibetan.

1. INTRODUCTION

In the history of civilisation, food collecting and food production remains one of the fundamental activities of mankind. The way food is gathered and consumed is a distinctive trait of a cultural group, for food has a number of social and communicative functions when it is served on the table. On the other hand, food collecting and production is intrinsically linked to the habitats of the gatherer and producer. As such it reveals the homogeneity of a cultural group and their relationships with nature and the environments.¹ Linguistically, this is even more so because concepts associated with eating, food collecting and food preparation are often found to differ from culture to culture. Indeed, if we want to probe into the roots of a cultural group, we will first of all do well to gain a good understanding of the history of their food culture.

Just as the Chinese are well-known for their inventiveness in science and technology, so they are reputed for their preoccupation with food and food production. The subsistence of the Chinese population is a testimony to this success story. The importance of food in Chinese culture can be adequately captured, in the words of the great historian Sima Qian at the second century BC, 'Food is the first necessity of man.'²

There is no lack of archaeological evidence and historical records that paint a picture of a unique Chinese food culture. Archaeological assemblages indicate that Chinese culinary art existed quite early in history. Vivid descriptions of feasts and food-producing activities abound in numerous historical texts, notably in such early classics as *the Book of Odes*, *the Song of the South*, and *The Book of Rites*, among others. Chang (1976:115-148) has provided an excellent account of this fascinating aspect of Chinese civilisation.

The Tai have coinhabited with the Chinese for centuries. They were among the early agriculturalists in Asia. Their history and culture form part of a whole picture of the cultural history of this region. As such any study of regional Chinese culture would be incomplete without taking into account the interaction between the Han Chinese and the other ethnic groups.

¹ On this topic the reader is referred to Levi-Strauss (1964, 1965, 1966, 1968) who has investigated the culinary history of mankind from an anthropological point.

² Sima Qian. *Shiji*, 'Lisheng Lujia Liezhuan'.

Although information on Chinese culinary history is readily available, comparative work is relatively scarce. Little is known about the culinary culture of non-Han peoples in south China who have had a long historical relationship with the Han Chinese and who have played an important role in shaping the history of this region. The aim of this paper is to fill in this gap by offering a comparative study of food culture between Chinese and Tai from a linguistic perspective.

In this study we focus on lexical correspondences between Chinese and Tai in the semantic field of ‘to eat’. We first compare the lexical root of ‘to eat’ and its associated concepts before taking up discussion of food culture, which includes food stuff, food vessels, food preparation, cooking methods, and food taste. Chinese data is drawn from pre-Qin texts and early dictionaries. Tai data will be drawn from Gedney’s multi-volumed data series, the author’s fieldnotes as well as relevant literature in comparative Tai. For the purpose of this paper, Li’s (1972) Old Chinese (OC) reconstruction and Pulleyblank’s (1991) Early Middle Chinese (EMC) reconstruction will be adopted. Proto-Tai (PT) reconstructions are from Li (1977).

2. TERMS FOR ‘TO EAT’ IN CHINESE AND TAI

To begin with, it seems useful to introduce the concept of ‘to eat’ in Chinese and Tai. In both ancient and modern Chinese, there is a word for food and drink, 飲食 (*yin shi*), literally ‘drink-food’. Of these, 食 was found in the oracle inscriptions, where it was a drawing of food vessel with a lid. Hence it also means ‘food’, and ‘to feed’. By contrast, 飲 refers to ‘drink’, and is typically associated with liquid food. This character occurred in *Shi Jing* [*The Book of Odes*] in Zhou times.

Unlike Chinese, which makes a lexical distinction between ‘to eat’ and ‘to drink’, Tai has a cover term for both, reconstructed as **kin*^{Al} by Li (1977:187, item 30). This lexical root is uniformly represented across the Tai languages. It refers to any activity involving taking something into the mouth and sending it down the throat, whether it is solid or liquid.

Words associated with ‘to eat’ in Chinese and Tai appear to form several word groups, as will be discussed below.

2.1 The *K + V + n/t* Group

The Tai term ‘to eat’ appears to be etymologically related to the form for ‘to gnaw, to bite’. A correspondence can be established with Chinese for the latter item.

Gloss	Chinese character	Pin-yin	GSR	OC	EMC	Thai	DH	LM	Yay	FS	HCT ³
1. Gnaw, bite	齧	ken ³	—	khən x	khən’	heen C1	hen C1	hen C2	hen C2	heen C2	—

³ Abbreviations: GSR = Grammata Serica Recensa; OC = Li’s (1971) Old Chinese Reconstruction; EMC = Pulleyblank’s (1991) Early Middle Chinese Reconstruction; DH = Dehong (Luo 1999); WT = White Tai (Donaldson 1972); LM = Lungming (Gedney 1992); LC = Lungchow (Li 1977); FS = Fengshan (author’s own fieldnote); HCT = Proto-Tai reconstruction as proposed in *Handbook of Comparative Tai* (Li 1977).

The character 𪔐 is found in *Shuowen*, indicating its occurrence before the Han times. No reconstruction is offered in Li (1977) for Proto-Tai. From the reflexes, a proto **yen* C2 can be reconstructed for Tai (Luo 1997: 299).

Several words in Chinese meaning ‘to bite, to crunch with the teeth’ take velar initials and final *-t*.

Gloss	Chinese	Pinyin	GSR	OC	EMC
2. bite	𪔐	xie ⁴	327h	kriat	ɣəij ^h /ɣe:j ^h
3. gnaw	齧	nie ⁴	279e	ngjat	ɲet
4. bite	𪔐	he ²	517o	gət	ɣət

These forms appear to be related to Example 1. For Item 2, Pulleyblank reconstructs a vowel glide for EMC, while Li reconstructed a final *-t* for OC. Similarly, Karlgren reconstructs **g’ǎd* for OC. Items 3 and 4 are both reconstructed with a final *-t* by Karlgren, Li and Pulleyblank. Xing (1999: 4) has proposed Item 4 as a Sino-Tai cognate.

It appears that the above three forms are variants of the same proto root, which has a good comparandum in Tai ‘bite’, a form that is uniformly represented across the Tai languages.

Gloss	Thai	Lao	DH	WT	LM	LC	FS	Yay	Saek	HCT
bite	kat D1S	kat D1S	kat D1S	kat D1S	kat D1S	kat D1S	kat D1S	kat D1S	kat D1S	*kat D1S

To this group we may add ‘to swallow’ and ‘to choke’:

Gloss	Chin	Pin yin	GSR	OC	EMC	Thai	DH	LM	Yay	FS	HCT
5. swallow	咽; 嚥	yan ⁴	370h; 243c	’ienh	ʔen ^h	kliin A1	ʔun A1	kyɹn A1	---	cuan A2	*kliin A1
6. choke	哽	geng ³	475c’	kəngx	kaiŋ’/ kɛ:jŋ’	kheɛn C2	ken C2	Nung ken C2	cen C2	ceen C2	*gen C2

‘To swallow’ takes the departing tone (B) in Chinese, but the A tone in Tai. Tai reflexes point to a velar cluster. This item has been posited by Xing (1999:431) as a Sino-Tai word.

The Chinese comparandum for ‘choke’ shows a historically voiceless initial, contrasting with a voiced initial in Tai. The tone fits. An alternation of final *-ŋ* and *-n* can be observed, which is not uncommon.

2.2 The *K + V + m/p* Group

Associated with the concept of ‘eating’ and ‘biting’ are notions of ‘holding or carrying something in the mouth’, for which Chinese and Tai appear to have several items in common.

Gloss	Chin	Pin yin	GSR	OC	EMC	Thai	DH	LM	Yay	FS	HCT
8. hold in mouth	含	han ²	651l'	yām	yəm/ yam	kham A2	kam A2	---	kaam A2	kaam A2	---
9. mouth- ful	庵	an ³	---	ām̥x	ʔam'	---	---	ʔaam B1	ʔaam B1	ʔaam B1	*ʔaam B1
10. gob- ble	齒合	xia ²	---	yǎp	---	khop D1	xop D1	khop D1	hap D2	hap D2	*xep D1

For ‘hold in the mouth’, reflexes in Southwestern Tai point to a short /am/, while the Northern dialects show vowel lengthening. Chinese has a variant 衍 xian² (GSR 627c, 608a, OC *yām, EMC *yām/yə:m), with which Bodman (1980:110) has established a link for Sino-Tibetan. No reconstruction is offered in HCT for this item, although Li has proposed a separate etyma, *ʔom A1 ‘keep in the mouth’, which seems to be etymologically related to the next item, ‘mouthful’.

‘Mouthful’ is not found in the Southwestern Tai dialects in our data. But Li has posited a proto form *ʔom A1 (HCT p. 244, item 28) with the meaning ‘to keep in the mouth’, which seems to be etymologically related.

The character 齒合 is not found in *Shuowen*, but is recorded in *Yupian* and *Jiyun*, where it is glossed as ‘eat’ and ‘gobble’ respectively.⁴

2.3 ‘Chew’, ‘Drink’, ‘Sniff’ and ‘Spit’

Four items are found in this group. They take various initials and finals.

Gloss	Chin	Pin- yin	GSR	OC	EMC	Thai	DH	LM	Yay	FS	HCT
11. bite, chew	齧	yao ³	---	ngaux	ŋaiw/ ŋe:w	khiau C2	keu C2	keew C2	cew C2	cew C2	*giau C2
12. chew	啣	ran ²	622e	njām	ɲiam	Lao nyamC1	yem C2	Nung ɲam C1	ɲam C1	ɲam C1	---

齧 is not included in GSR, where 咬 (1166g) is found. The meaning of the Chinese form is ‘bite’. In Tai, it refers to the act of munching and chewing something hard.

A tonal mismatch can be observed for Chinese 啣 (A2) and Tai *ɲam C1. The Tai comparandum means ‘to chew something (hard)’. It is worth noting that the phonetic element 冉 (ran³) in Chinese shows the C tone, matching with the Tai tone.

⁴ 《玉篇·齒部》：“齒合，食也。”《集韻·洽韻》：“尽内（納）口中也。”

No reconstruction is offered in Li (1977) for Proto-Tai. A proto **hjam* C1 is reconstructable (Luo 1997: 286).

Two forms, ‘drink, eat’ and ‘to sniff, smell’, both taking dental initials, appear to exhibit correspondences.

Gloss	Chin	Pin-yin	GSR	OC	EMC	Thai	DH	LM	Yay	FS	HCT
13. drink, eat	啖	dan ⁴	617n	dâm ^h	dam [’]	dīim B1	Lue dum B1	nɔn C2	dum C2	dum C2	*ʔdīim (?)
14. sniff, smell	貼	tie ⁴	618p	t’iep	t ^h ep	dom A1	lom A1	nom A1	dum A1	dum A1	*ʔduom A1

Chinese 啖 means ‘to devour’. The Thai and Lue reflexes designate ‘to drink’, whereas the Lungming and Northern Tai forms mean ‘to swallow’, with a final -n, which may go back to a different source (Li 1977:110-1, note 33). A related form is found in Chinese, 口咽 dan⁴ (GSR 672k, OC dâm^h, EMC dam[’]) ‘to swallow’.

The character 貼 designates ‘taste’, as glossed in *Yupian*. The phonetic element points to a final -p. The corresponding Tai form means ‘to sniff, smell’, with a final -m. This item appears to have Tibeto-Burman links (Jeon 1996:189).

In addition, Chinese and Tai share the word for ‘to spit’, which takes a velar initial:

Gloss	Chin	Pin-yin	GSR	OC	EMC	Thai	DH	LM	Yay	FS	HCT
15. spit out (food)	咳 (欬)	kai ⁴	937b (937s)	khəg ^h	khəj ^h	khaai A2	xaai A2	haay A2	haay A2	haai A2	*yaai A2

Chinese 咳 mean ‘to cough’, with the shang tone (B). The character has a different reading, hai¹, which takes the A1 tone. The corresponding Tai form means to ‘spit (food)’, with the A2 tone.

2.4 Sibilant/Dental + V + t/p --- ‘Slurp’, ‘Sip’, ‘Suck’

Several correspondence sets can be established for these concepts. These typically take sibilant/dental initials, with final t/p.

Gloss	Chin	Pin-yin	GSR	OC	EMC	Thai	DH	LM	Yay	FS	HCT
16. slurp	歛	xi ⁴	675s	xjəp	xip	suut D2	sot D1	luup D2	θut D2	θut D2	—
17. inhale, suck	吸	xi ¹	681j	xjəp	xip	cu:p D1	tsup D1	šop D1	θup D2	θup D2	—
18. suck, inhale	歛	shu ⁴	1222 o	srjuk	—	cu:p D1	tsup D1	cop D1	sup D1	ɕup D1	*čuu p D1

‘Slurp’ is glossed as ‘to draw in, to contract’ in GSR and EMC. The Tai comparandum refers to the act of eating soup or porridge. There is an alternation of final -t and -p in Tai, probably due to contamination, with Lungming showing -p.

Chinese 吸 is defined as ‘to inhale, to sniff’ in *Shuowen*. The corresponding Tai forms mean ‘to suck, kiss’.

The character 歔 ‘to suck, inhale’ is also found in *Shuowen*, with no text examples. The phonetic element of the Chinese character points to a final -k, while Tai reflexes show final -p. As our data shows, the Southwestern Tai dialects do not distinguish between ‘inhale’ and ‘kiss’, but data from non-Southwestern dialects indicate that we are dealing with two separate but etymologically related forms.

Several items are found in Chinese with meanings related to ‘sip, inhale, suck’, which apparently belong to the same word group:

Gloss	Chin	Pinyin	GSR	OC	EMC
19. sip	歔	sha ⁴	631c	srăp	ʂəip/ʂɛ:p, ʂiap
20. suck	嚼	za ²	660o	dzăp	—
21. sip, suck	啞	za ¹	—	tsăp	tsəp/ tsap

Example 19 is glossed as ‘to smear mouth with victim’s blood’ in *Zuozhuan*, a pre-Qin text. Examples 20 and 21 belong to the same rhyme group. Item 21 is posited as a Sino-Tai word by Xing (1999:171).

Also in the same semantic field are two correspondence sets taking sibilant/dental initials and final back vowels plus -t:

Gloss	Chin	Pinyin	GSR	OC	EMC	Thai	DH	LM	Yay	FS	HCT
22. sip, suck	啞	chuo ⁴	295c	trwjət	tɕ ^h wiat	duut D1	lut D1	nɤt D1	duut D1	dot D1	*ʔduot D1
23. drink	歔	chuo ⁴	295i	trwjət	tɕ ^h wiat	duut D1	lut D1	nɤt D1	duut D1	dot D1	*ʔduot D1

These two roots appear to be closely related in Chinese, glossed as ‘to gulp’ and ‘to drink’ respectively in GSR. No such distinction is made in Tai, where the corresponding form means ‘to suck, to drink (liquor)’, as in Li (1977:109, #30). The two forms cited here have also been proposed by Xing as Sino-Tai cognates (1999: 238-9).

3. FOOD TASTES AND ASSOCIATED CONCEPTS

In addition to terms for eating and drinking, concepts of food tastes and associated psychological experiences are found to be remarkably similar between Chinese and Tai, as illustrated below.

3.1 'To Taste', 'to Lick'

Chinese and Tai appear to share terms for both basic concepts.

Gloss	Chin.	Pinyin	GSR	OC	EMC	Thai	DH	LM	Yay	FS	HCT
24. to taste	尝	chang ²	725f	drjang	dʒiaŋ	chim A2	tsim A2	cim A2	sim A2	ɕim A2	*jim A2
25. to lick	舐	shi ⁴	867f	dri / drjəu	ʒiə / ʒi'	lia A2	le A2	ley A2	ria A2	lia A2	*dlia A2

The correspondences in finals for 'to taste' are irregular, with Chinese taking the traditional Division III of 陽 group of rhymes in contrast with a high front /i/ in Tai. The alternation between /-ŋ/ and /-m/ is not uncommon, though (see 3.3 below for the correspondence for 'fragrant, good smell'). The tones also fit.

'To lick' takes a sibilant initial in Chinese, a liquid in Tai, which points to a sibilant cluster of some sort in the proto language (Luo 1998:116). A wider link can be established with Kadai languages (Ostapirat 2000: 241).

3.2 'Cooked/Ripe', 'Raw'

Like 'taste' and 'lick', Chinese and Tai share a nice pair of etyma for 'cooked/ripe' and 'raw'.

Gloss	Chin	Pin- yin	GSR	OC	EMC	Thai	DH	LM	Yay	FS	HCT
26. cooked, ripe	熟	shu ²	1026 b	djuk	dʒuwk	suk D1	suk D1	sok D1	suk D2	ɕuk D2	*suk D1
27. raw	噉	zhe ²	—	diap	—	dip D1	lip D1	nip D1	dip D1	dip D1	*ʔdlip D1

Both Li (1976) and Manomaivibool (1975: 341) have posited 'cooked, ripe' as an indisputable Sino-Tai cognate, a view shared by Xing (1999: 156-7).

Shuowen glosses 噉 as '(sliced) raw meat'. Xing (1999:289) is credited for proposing a Sino-Tai link for this etymon. Wider connections can be sought with Kadai (Ostapirat 2000: 236).

3.3 Food Taste and Flavours

If concepts for senses of smell and tastes are indicative of cultural traits, then Chinese and Tai unquestionably form an alliance. A rich set of etyma is found to have cognate relationship in this semantic field between these two languages.

Gloss	Chin.	Pin-yin	GSR	OC	EMC	Thai	DH	LM	Yay	FS	HCT
28. fragrant	香	xiang ¹	717a	xjəŋ	xiaŋ	hɔm A1	hɔm A1	hoom A1	hom A1	hoom A1	*hom A1
29. bad smell, odor	臭	chou ⁴	1088a	tshrjəuh	tɕ ^h uw ^h	khiau A1	xɛu A1	khiiw A1	haw A1	hau A1	*xau A1
30. stink, foul smell	臊	sao ¹	1134c	sâu	saw	khiau A1	xɛu A1	khiiw A1	haaw A2	haau A2	*yaau A2
31. sour	酸	chen ³	—	thrjəmx	—	som C1	som C1	som C1	θom C1	θəm C1	*som C1
32. sweet	甘	gan ¹	606a	kâm	kam	waan A1	waan A1	vaan A1	vaan A1	vaan A1	*hwaan A1
33. insipid, tasteless	𩚑	jie ³	—	tsju	—	čhīt D1	Lao cit D1	cit D1	sut D1	çut D1	*čhūt D1
34. bitter	𩚑	yan ³	651d	'jəmx	—	khom A1	xom A1	khom A1	ham A2	ham A2	*xem A1
35. salty	卤咸	xian ²	671f	yām	yəim/ yə:m	khem A2	tsem A2	kan A2	kem A2	ham A2	*gem A2

For 'fragrant', an alternation of final /-ŋ/ and /-m/ can be observed between Chinese and Tai, very similar to 'to taste' above. Two variants, 𩚑 *han'* and 𩚑 *xian'* (belonging under the 侵 and 谈 groups of rhymes respectively), recorded in *Guangya*, appear to be closer to the Tai form in phonetic shape. Xing (1999:308) has related the latter two forms with Tai.

'Bad smell, odor' takes a sibilant initial in Chinese, a laryngeal in Tai, which points to a sibilant-velar cluster of some sort in the proto language (Luo 1997a). So does the next example, 'to stink, foul smell'. In Chinese, this latter word refers to 'the smell of urine'. In Tai, it denotes the smell of raw fish or blood. A tonal alternation of the B tone and the A tone can be noted between Chinese and Tai for this item.

Both Manomaivibool (1975:341) and Xing (1999:185) have posited a Sino-Tai link for 'sour'. The Chinese character is recorded in *Guangya*.⁵ Neither GSR nor EMC includes this item.

An alternation of final /-m/ and /-n/ can be noted for 'sweet'. This item appears to have a good Tibeto-Burman comparandum, cf. Lepcha *khlyam* (Matisoff 2003: 275).

The character 'insipid' is not included in GSR nor EMC, but is recorded in *Yupian* and *Guangya*,⁶ indicating its occurrence at least around the Han times.

𩚑 is glossed as 'bitter (wine)' in *Shuowen*, with no text examples. The character occurs in the oracle bone inscriptions, indicating its antiquity. At least half a

⁵ 《广雅·释器》：酸，酢也。

⁶ 《玉篇零卷·食部》引《苍青篇》：“𩚑，无味也。”《广韵·马韵》：“𩚑，无食味也。”

dozen variants are found in *Shuowen*, *Yupian* and *Jiyun* for this concept, including 𩚑 *jian*³ (*Shuowen*); 𩚑監 *gan*⁴, 𩚑感 *gan*³, 𩚑今 *jin*¹ and 𩚑兼 *jian*³ (all found in *Yupian*); and 𩚑敢 *gan*³ (*Jiyun*). Xing (1999:304) has proposed a Sino-Tai link for this item. Wider links can be sought with Kadai (Ostapirat 2000:235).

‘Salty’ appears to form a word group with ‘bitter’. Both take a velar initial and with finals ending in -m. This item has good Tibeto-Burman connections (Matisoff 2003: 299).

To ‘salty’ we may add the word for ‘salt’.

Gloss	Chin.	Pin-yin	GSR	OC	EM C	Thai	DH	LM	Yay	FS	HCT
36. salt	鹽	gu ³	49q	kwagx	kəʔ	klīa A1	kə A1	kyuuu A1	kua A1	cua A1	*klīo A1

There is an alternation of the B tone and the A tone between Chinese and Tai for this item. Li (1976:45) and Xing (1999:344) have both posited this as a Sino-Tai word. Li (ibid) has also proposed a link with Chinese 𩚑(OC lagx). A proto form is reconstructable for Kadai (Ostapirat 2000: 232). There is a good Tibeto-Burman comparandum (see Appendix I).

3.4 ‘Full’, ‘Hungry’, ‘Drunk’

Closely associated with the sense of tastes and smell are concepts describing the psychological state of ‘full’, ‘hunger’, ‘drunk’. These all display Sino-Tai cognacy.

Gloss	Chin.	Pin-yin	GSR	OC	EMC	Thai	DH	LM	Yay	FS	HCT
37. full, satiated	饜	yan ⁴	616d	ˈjāmh	ʔjiam ^h	ʔim B1	ʔim B1	ʔim B1	ʔim B1	ʔim B1	*ʔim B1
38. hungry	食厄	e ⁴	—	ˈɛk	—	jaak D1	Lue yak D1	yaak D1	yaak D1	ʔjiak D1	*ʔjiak D1
39. drunk	酩	mao ²	—	māu	—	mau A2	mau A2	maw A2	—	—	*mau A2

‘Full’ has been proposed as a good cognate by Manomaivibool (1975:356) for Chinese and Thai. So has Xing (1999:300) for Sino-Tai.

Chinese 食厄 ‘hungry’ is recorded in *Shuowen*. The phonetic element 厄 indicates that we are dealing with the traditional 锡 (-ek) rhyme. Xing (1999:438) has posited this item as a Sino-Tai word. The character is not included in GSR or EMC, where the general term for ‘hungry’ 饿 e⁴ (GSR 2o, PL *ŋa*^h) is found. The latter takes the traditional 歌 (-ar) rhyme, going back to a different source.

No reflexes for ‘drunk’ are found in the Northern Tai dialects, where a different word, *fi* A2, is used, probably related to a different Chinese word 醅 *pei*¹ (not in GSR, but in EMC *p*^h*ej* ‘unstrained wine’).

All the above terms have cognates in Kam-Sui, Lin-gao and Hlai. The last example, ‘drunk’, is attested across Kadai (Ostapirat 2000: 235).

4. FOOD PREPARATION AND PROCESSING

4.1 Grinding, Pounding, Winnowing and Washing Rice

Chinese and Tai share a good number of terms describing food preparation and food processing. Most of these relate to preparing rice for cooking.

Gloss	Chin	Pin-yin	GSR	OC	EMC	Thai	DH	LM	Yay	FS	HCT
40. wash (rice)	洗	tao ²	1145s	tʰəgw	tʰaw	Lao saao A2	thau C2	WT taau A2	taaw A2	taau A2	—
41. grind	磨	mo ²	17f	mwar	ma	mo B1	mo B1	moo B2	WM mu B2	muwa B2	—
42. pound (rice)	春	chong ¹	1192a	srjuŋ	ɕuawŋ	tam A1	tam A1	tam A1	tam A1	tam A1	*tam A1
43. winnow, fan	簸	bo ³	25a	pwarx	paʔ	vi A2	vi A2	Nung vi A2	vi B1	vi B1	*wi A2

For ‘wash (rice)’, the initial of the Lao reflex is spurious, so is the tone in Dehong. No reflex is found in Thai. Xing (1999:145) has posited a Sino-Tai link for this item. This etymon is not included in HCT. A proto **ztaau* A2 is reconstructable based on the reflexes.

Chinese 磨 has another reading, mò ‘grindstone’, with the *departing* tone which corresponds with Tai B tone. This item is not included in HCT, either.

The Chinese form for ‘to pound (rice)’ takes a sibilant initial, Tai, a dental /t/, which points to a **st-* cluster of some sort in the proto language. There is an alternation of final *-ŋ* and *-m* between Chinese and Tai, which is not uncommon. This form has wider Kadai links (Ostapirat 2000: 232).

‘To winnow’ shows less full correspondences in finals, with Chinese taking the traditional 歌 /-ar/ rhyme, contrasting with the high front /i/ in Tai where we would expect /a/. Northern Tai dialects show the B1 tone, agreeing with Chinese. Non-Northern Tai reflexes point to a voiced initial, in contrast with a voiceless initial in Chinese and Northern Tai. A Kadai link can be established for this item (Ostapirat 2000:232). This form is included here as a problem to be solved.

4.2 Cooking, Eating/Serving and Storage Utensils

Several terms for serving utensils and vessels are also found to show good correspondences. These include ‘wine vessel’, ‘shallow cup’, ‘plate, dish’, ‘chopsticks’ and ‘ladle’.

Gloss	Chin	Pin-yin	GSR	OC	EMC	Thai	DH	LM	Yay	FS	HCT
44. wine vessel	觚	gu ¹	41f	kwar	ko	kɔk D1	kɔk D1	kok D1	kok D1	kook D1	—
45. shallow cup	盞	zhan ³	155f	djānx	tʂɔin' tʂɛn'	čaan A1	Lao caan A1	WT chen C1	saan C1	çen C1	*čaan C1
46. plate, dish	盘	pan ²	182e	bwan	ban	phaan A2	phaan C2	WT paan A2	paan A2	paan A2	*baan A2
47. chopsticks	箸	zhu ⁴	45j	trjagh	driə ^h	Lao thu B1	thu B1	thow B1	tu B2	tu B2	*thu B1
48. ladle	勺	shao ²	1120a	djakw	dziak	Lao lok B2	—	lok D2	rok B1	lok B1	—

'Wine vessel' takes the 歌 rhyme (open syllable) in Chinese, a final -k in Tai, for which a proto **kok* D1 may be proposed. No reconstruction is posited in HCT.

An alternation of final /aan/ and /en/ can be observed among Tai reflexes for 'shallow cup'. The same is also true of cognates in Kam-Sui, cf. Kam *ten*³, Maonan *tsa:n*³. There is a fluctuation between A and C tones in Tai. The Chinese form indicates that we are dealing with the C tone.

'Plate, dish' shows good correspondences except for the tone in Dehong. Manomaivibool (1975: 324) has proposed a Sino-Thai link for this item. A proto form is reconstructable at Proto-Kam-Tai level: Kam *pon*², Sui *ma:n*², Maonan *pən*², Lingao *fan*².

'Chopsticks' is a good Sino-Tai word, as proposed by Xing (1999: 333-4). Wider links can be sought with Kadai (Ostapirat 2000: 231).

A correspondence between a sibilant and a liquid initial can be established for 'ladle' for Chinese and Tai, pointing to a sibilant cluster of some sort in the proto language.

Also shared are terms for 'bucket' and 'basket'.

Gloss	Chin	Pin-yin	GSR	OC	EMC	Thai	DH	LM	Yay	FS	HCT
49. bucket	桶	tong ³	1185p	t ^h ungx	thəwŋ	thanj A2	thuj A2	thorj C1	torj C1	torj C1	—
50. basket	簋	gui ³	986a	kwjigx	kwi'	kruai A1	koi A1	kyuuy A1	coy A1	coi A1	*kluai A1

'Bucket' displays an alternation of A and C tones among the Tai dialects, similar to 'shallow cup'. The Chinese correspondence indicates that we are dealing with the C tone. This item is not included in HCT. A proto **toj* C1 may be proposed for Tai. Xing (1999:485) postulates this item as a Sino-Tai cogante.

There is an alternation of the C and A tone between Chinese and Tai for ‘basket’. A related form, 黄 *kui⁴*, is recorded in *Shuowen*, where it is glossed as ‘basket made of straw or bamboo.’

Of the above, ‘plate’, ‘chopsticks’, ‘ladle’ and ‘bucket’ exhibit Tibeto-Burman links (see Appendix I)

4.3 Granary and Preserving Utensils

Chinese and Tai share an important term for ‘granary’. The Chinese character occurs in both the bronze inscription of the Zhou times and the silk book of the State of Chu, indicating its antiquity. The initials, finals and tones show perfect correspondence.

Gloss	Chin	Pinyin	GSR	OC	EMC	Thai	DH	LM	Yay	FS	HCT
51. granary	倉	cang ¹	703a	ts ^h ang	ts ^h aŋ	čhaaŋ A1	Lao saan A1	saan A1	saan A1	caan A1	*čhaan A1

Four correspondence sets can also be established with the meanings ‘bowl, basin’, ‘water jar’, and ‘vat’. They typically refer to large-size pottery or earthenware jars for storing water or grain. Etymologically related, these take laryngeal/velar initials. Except for ‘bowl, basin’, no reconstructed forms are offered in HCT for Proto Tai.

Gloss	Chin	Pinyin	GSR	OC	EMC	Thai	DH	LM	Yay	FS	HCT
52. bowl, basin	盎	ang ⁴	718i	angh	?aŋ ^h	?aan B1	?aan B1	?aan B1	---	---	*?aan B1
53. water jar	甕	weng ⁴	1184p	ungh	?əwŋ ^h	?oon B1	?on B1	?on B1	?on B1	?on B1	---
54. jar, jug	罍	ying ¹	814h	eng	?e:ŋ	Lao ?eŋ B1	?eŋ B1	Lue ?on B1	?eŋ A1	?eŋ A1	---
55. vat, jar	亢瓦	gang ¹	---	kang	---	---	Jinping kaan A1	kaan A1	kaan A1	kaan A1	---

A tonal fluctuation between the A and the B tone can be observed for Tai dialects for ‘jar, jug’, with Northern Tai reflexes showing the A1 tone, corresponding with the Chinese form.

Now written as 缸, Chinese 亢瓦 is recorded in *Fangyan*, where it is glossed as ‘big jar, vat’, according to Guo Pu.⁷ Neither GSR nor EMC includes this item. Although no reflexes are found in Thai or Lao, our data shows that this etymon is attested across all the three branches of the Tai dialects.

⁷ 《方言》卷五：亢瓦，罍也。郭璞注：“今江东通名大瓮为亢瓦”。

Of the above, ‘granary’, ‘basin, bowl’, and ‘water jar’ are posited by Manomaivibool (1975:305, 355, 356) as Sino-Thai cognates.

5. COOKING METHODS

5.1 Fire, Firewood, Charcoal, Torch, and Related Fire-Building Tools

Among terms for fire and fire building materials, Chinese and Tai have cognates for ‘fire’, ‘firewood’, ‘charcoal’, and ‘torch’.

Gloss	Chin.	Pin-yin	GSR	OC	EMC	Thai	DH	LM	Yay	FS	HCT
56. fire	燬	hui ³	356b	hwjər x	xwi'	fai A2	fai A2	fay A2	fi A2	fi A1	*vei A2
57. fire-wood	焚	fen ²	474a	bjən	bun	fīn A2	fun A2	fɤn A2	fūn A2	fūn A2	*vīn A2
58. charcoal	炭	tan ⁴	151a	thanh	tʰanʰ	thaa B1	thaa B1	thaa B1	taan B1	taan B1	*thaa B1
59. torch	燎	liao ²	1151e	ljiauw	liaw	---	—	—	liaw A1	liao A1	---

An alternation of C and A tones can be observed between Chinese and Tai for ‘fire’. Both Manomaivibool (1975:327) and Xing (1999:192) have posited this item as a Sino-Tai word. Reconstruction can be proposed at Proto Kadai level (Ostapirat 2000: 229). Wider links can be sought with Austronesian (cf. PAn *apui).

Chinese 焚 means ‘to burn’. The corresponding Tai form is the generic term for ‘firewood’.

‘Torch’ is of limited distribution in Tai, found mainly in the Northern dialects in our data. Apart from a noun, the Chinese form is also used as a verb, meaning ‘to torch, burn’.

Associated with fire and fire-building are fire-building tools, several of terms for which are found to be shared by Chinese and Tai:

Gloss	Chin	Pin-yin	GSR	OC	EMC	Thai	DH	LM	Yay	FS	HCT
60. tube for fanning a fire	箴	fu ²	934g	bjəkw	buwk	bɔ̌k D1	mɔ̌k D1	mook D1	bok D1	bok D1	*bɔ̌k D1
61. tongs	鉗	jia ²	630i	kiap	kep	khaa p D2	kaap D2	kaap D2	kaap D2	kaap D2	*gaap D2
62. pincer, tongs	鉗	qian ²	606i	giam	giam	khii m A2	kim A2	kyim A2	cim A2	cim A2	*gim A2

Shuowen glosses 箴 as ‘quiver’. This character appears in the bronze inscriptions, which is a drawing of a case for holding arrows. From the radical it can

be inferred that the utensil was made of bamboo. The Tai form means a bamboo tube or barrel.

Tai correspondences for ‘tongs’ can be used as a verb, meaning ‘to pick up with an instrument’. This item appears to be etymologically related to the next item, ‘pincer, tongs’. The Tai comparandum for the latter shows a high front vowel /i/, with final bilabial nasal ending -m.

5.2 Stove, Cooking Pot and Related Items

Also shared are terms for ‘stove’ and ‘tripod’.

Gloss	Chin	Pin-yin	GSR	OC	EMC	Thai	DH	LM	Yay	FS	HCT
63. stove	竈	zao ⁴	1027b	tsəgw ^h	tsaw ^h	tau A1	sau B1	saw B1	θaw B1	θau B1	—
64. tripod	鼎	ding ³	834a	tiengx	tejŋ ^ʔ	Lao khiaŋ A2	keŋ A2	kiŋ A2	ciaŋ A2	ciaŋ A2	*gieŋ A2

No reconstruction is offered in HCT for ‘stove’. Our data shows that this item is widely attested across the Tai languages, for which a proto *sau B1 can be reconstructed. Reflexes are attested in Kadai, eg. Mulam tɔʔ, Lin-gao tsau³, Hlai tso¹.

‘Tripod’ shows only partial correspondences. The Chinese form takes a dental initial with the C tone, while Tai, a velar initial with the A2 tone, similar to ‘fire’.

Other shared terms for cooking utensils include ‘cooking pot’, ‘steamer’ and ‘cauldron’.

Gloss	Chin	Pinyin	GSR	OC	EMC	Thai	DH	LM	Yay	FS	HCT
65. cooking pot	釜	fu ³	—	bjwag x	buǎ ^ʔ	mɔw C1	mo C1	moo C1	mo C1	mo C1	*hmo C1
66. steamer	甗	lei ²	577l	lwāi	lwəj	hai A1	hai A1	lay A1	ray A1	lai A1	*hrai A1
67. cauldron	鬲	li ⁴	855a	glik	lejk	lek D1	lek D1	lyak D1	Buyi liak D1	Tianli n liak D1	*hlek D1

The character 釜 occurs in *Shi Jing*, but is not included in GSR, where a related word, 甗 fu³ ‘pot’, is found (GSR 102y, EMC *buǎ^ʔ). Xing (1999:339) has posited the Tai form as cognate with Chinese 釜, while Manomaivibool (1975:328) has proposed yet another related form, 甗 wu³ ‘wine jar’ (GSR103k, OC mjwagx, EMC muǎ^ʔ).

Chines 甗 refers to ‘jar, vase’, as glossed in *Shi Jing* and *Erya*. The Tai comparison means ‘steamer’, which points to a voiceless initial in contrast with a historical voiced initial in Chinese.

𩰫 is glossed as ‘tripod with hollow legs’ in GSR and EMC, according to *Shuowen*. The related Tai term means ‘iron’ (HCT p.137). In some Northern and Central dialects, the reflexes designate ‘boiler, wok, pan’, eg. Wuming *ye:k²*, Yongbei *le:k²*, Shanglin *hje:k²*, Long’an *hle:k²*, Ningming *he:k²* (Zhang et al 1999:668). Tai reflexes appear to lend strong support for a proposed proto form **qhleks* ‘iron’ for Sino-Tibetan (Chang 1972:436-445).

Of the above correspondence sets, ‘cooking pot’ appear to have Tibeto-Burman links (See Appendix I).

5.3 STEAMING, COOKING, BOILING, AND SIMMERING

Four terms are found in our data, ‘steam’, ‘cook’, ‘boil’, ‘fully cooked’, and ‘to warm’.

Gloss	Chin	Pin-yin	GSR	OC	EMC	Thai	DH	LM	Yay	FS	HCT
68. steam	蒸	zheng ¹	896k	trjəŋg	tɕiŋ	nīŋ C1	liŋ C1	ນາງ C1	naŋ C1	naŋ C1	*hnīŋ C1
69. cooked grain	饗	yong ¹	1184 m	ˈwung	ʔuawŋ	huŋ A1	huŋ A1	luŋ A1	ruŋ A1	luŋ A1	*thru ŋ A1
70. boil soft	燂	tan ²	646d	dām	---	tom C1	tom C1	tom C1	tum B1	tum B1	*tʰo m C1
71. fully cooked	飪	ren ⁴	667p	njəm ^h	nim ^ʔ	Lao ʔom B1	Lue ʔom B1	ʔon B1	ʔom A1	ʔoom A1	---
72. to warm	温	wen ¹	426c	ˈuən	ʔwən	ʔun B1	ʔun B1	ʔon B1	---	---	*ʔun B1

‘To steam’ shows the A tone in Chinese, C tone in Tai, with Chinese taking a sibilant initial, in contrast with a nasal in Tai, which may come from a different source. Steaming is a preferred method for cooking glutinous rice among the Tai communities.

Tai correspondence for ‘cooked grain’ means ‘to cook (rice)’, and can also refer to the act of cooking in general. Manomaivibool (1975: 310) has established a link between Chinese and Thai for this etymon.

Chinese 燂 means ‘boil soft, roast’. The Tai form designates ‘boil’, and is a cover term for cooking something in water. There is an alternation of tone A and C/B between Chinese and Tai.

The character 飪 means ‘thoroughly cooked, overdone’. The Tai form designates ‘to boil slowly for a long time’. This item displays partial correspondence, with Chinese taking the 日(nj-) initial while Tai, a zero initial. Also, non-Northern dialects show the B tone, corresponding with that of the Chinese form, in contrast with the Northern reflexes which show the A tone. No reconstruction is offered in HCT for this item.

‘To warm’ is attested in non-Northern dialects in Tai. An alternation between tone A and B can be observed between Chinese and Tai, otherwise the initials and finals show good correspondence.

To this group we may add ‘to scald, blanch, parboil’, ‘to grill/roast’ and ‘to fry’.

Gloss	Chin	Pin-yin	GSR	OC	EMC	Thai	DH	LM	Yay	FS	HCT
73. brand, burn	烙	lao ⁴	766n	glak	lak	luak D2	lok D2	lok D2	lok D2	look D2	—
74. grill, roast	炙	zhi ⁴	791a	dzjiak	tɕiajk	čii B1	tsi B1	Nung chi B1	sa A2	θa A2	*čǐ B1
75. fry	煎	jian ¹	245g	tsjen	tsian	Lao cu:n A1	Lue tsu:n A1	ciin A1	sen A1	ɕen A1	—

The character 烙 means ‘to scorch, to brand, to bake’ in Chinese. The corresponding Tai form refers to the tender cooking of vegetables in boiling water. This item is not included in HCT. A proto **luok* is reconstructable for Proto Tai (Luo 1997:268). There is a good comparandum in Tibeto-Burman (see Appendix 1).

‘To grill, roast’ takes the historical *Ru* (D) tone in Chinese, the B tone in Tai. In addition to tonal fluctuations between B1 and A2, there is an alternation of final /i/ and /a/ between non-Northern and the Northern dialects in Tai, which is quite unusual. The Chinese term refers to the act of cooking something over a fire. In Tai, it designates cooking something through applying it close to strong heat, including roasting something in hot ash.

Although no reflexes are found in Siamese or in Dehong for ‘fry’ in our data, this item appears to have a wide distribution across the Tai languages. No reconstruction is offered in HCT. This etymon is reconstructable at proto Kadai level: Mulam *tjen¹*, Sui *tsjen¹*, Maonan *chen¹*, Lingao *tsin¹*, Hlai *tsi:n³*.

6. FOOD PRESERVATION

Like many other parts of the world, food preservation in this region is done through fermentation, drying and smoking.

6.1 Fermentation

Fermentation is not just for food preservation. It is also an alternative way of cooking. Two terms are found in our data, ‘brew/ferment’ and ‘pickle’.

Gloss	Chin.	Pin-yin	GSR	OC	EMC	Thai	DH	LM	Yay	FS	HCT
76. brew, ferment	酿	niang ⁴	730j	njengh	nriang ^h	ดวอญ A1	มวญ A1	moom A1	donj A1	donj A1	ʔblovj A1
77. pickle	腌	yan ¹	—	jiām	ʔiam	Lao ʔom B1	ʔom B1	ʔoom A2	ʔam B1	ʔom B1	—

酿 in Chinese is more often than not associated with wine and alcohol making. The corresponding Tai form is glossed as ‘to pickle’ in HCT, but it can also refer to

‘ferment’. There is an alternation of tones, with the Chinese showing the B tone, Tai, the A tone. A related Chinese form, 酉茸 *rong*², is recorded in *Shuowen* and *Guangya*,⁸ meaning ‘to brew a second time’, which appears to be closer to the Tai form in tone. *Shuowen* has yet another form, 醲 *nong*², meaning ‘strong alcohol’, which may also be related.

腌 is recorded in *Shuowen* as ‘to preserve (meat) with salt’. The Tai form means ‘to put away (for ripening), to pickle’. Note that Chinese shows the A tone, contrasting with the B tone in Tai, with the exception of Lungming, which shows the A2 tone.

6.2 Drying and Smoking

The humid climate conditions in this region mean that food preservation typically needs to be done by drying over the fire, which often involves smoking and fumigating.

Gloss	Chin	Pin-yin	GSR	OC	EMC	Thai	DH	LM	Yay	FS	HCT
78. dry over fire	烘	hong ¹	1182r	xung	xwəŋ	khaaŋ A1	WT khaaŋ B1	khaaŋ B1	Nung khaaŋ B1	hɯaŋ B1	*khaaŋ B1
79. roast over fire	煬	yang ²	720i	jəŋ	jiəŋ ^h	jaaŋ C1	yaŋ C1	leen C1	yiaŋ C2	ʔjiaŋ C2	*ʔjiaŋ C1
80. fumig-ate, smoke	熏	xun ¹	461a	xwɔŋ	xun	lon A2	Nung lon A2	lɔn A2	lɯan A2	luan A2	—
81. smoke (noun)	烟	yan ¹	370i	ien	ʔen	khwa n A2	xɔn A2	van A2	hon A2	hɔn A2	*ɣwɔn A2

‘Dry over fire’ shows the A tone in Chinese, the B tone in Tai, except for Siamese which sides with Chinese. Reflexes in both languages point to a historically voiceless initial.

A tonal fluctuation can also be observed in ‘to roast over fire’, with Chinese taking the A2 tone, contrasting with the C tone in Tai. This etymon is proposed as a Sino-Tai word by Xing (1999:382-3).

Chinese ‘to smoke, fumigate’ goes back to a historically voiceless velar fricative initial, in contrast with a voiced liquid initial in Tai, suggesting that we are dealing with a velar cluster of some sort, reconstructable as *ɣr/- for the proto language. This seems to form a pair with the next item, ‘smoke (noun)’, for which Tai reflexes take a voiced initial, while the Chinese form a voiceless initial. Manomaivibool (1975:322) has made a connection between Chinese 熏 ‘to smoke/fumigate’ and Thai *khwan* A2 ‘smoke (noun)’ (PT *ɣwɔn A2). A proto form is reconstructable at proto Kadai level for the latter (Ostapirat 2000:230).

⁸ 《说文·酉部》：酉茸，酒也。段注：酉茸，重酿酒也。《广雅·释器》：“酉茸，酉爰也。”

7. WIDER CONNECTIONS

A comparison with Tibeto-Burman languages shows that nearly half of the 81 Sino-Tai correspondence sets discussed above in the lexical field under discussion have possible Tibeto-Burman links. Appendix I illustrates. The results are in line with current knowledge of phonological correspondence between Chinese and Tibeto-Burman (Bodman 1980, Cobblin 1986, Jeon 1996). They throw additional light on Old Chinese and Sino-Tibetan reconstruction. For example, Sino-Tai correspondences for ‘cauldron’ (‘tripod with shallow legs’ in Chinese) provide further evidence for the reconstruction of the proto velar cluster **qhl-* for Sino-Tibetan. Similarly, words like ‘chopsticks’, ‘bad smell’ and so on, supply supporting evidence for the reconstruction of sibilant and velar clusters for Old Chinese and Sino-Tibetan.

Equally worth noting is the significant number of shared lexical items in Miao-Yao, as exemplified in Appendix II. Of these correspondences, some are found to be more widely distributed while others are sporadically represented, suggesting that the latter may have been early loans into particular dialects rather than pan-Miao Yao.

More significantly still, a good number of Sino-Tai words appear to have possible Mon-Khmer and Austronesian connections, as Appendices III and IV have shown. Of the fifty-six correspondences in our database, forty-three are found to be in complementary distribution: twenty-three items have Mon-Khmer connections only, while twenty with Austronesian links only. Such patterns of correspondence seem to be the results of loan contact between Mon-Khmer, Austronesian, Chinese, Tibeto-Burman and Tai-Kadai at different stages in history, as further evidenced by the fact that of the thirty-six correspondences in Mon-Khmer, eight are not shared by Tibeto-Burman, while nine items out of thirty-five correspondences in Austronesian are not shared by Tibeto-Burman, either.

Finally, comparative work shows that a dozen lexical items are shared by all the languages in comparison. These include such daily words as ‘to bite’, ‘to drink’, ‘to hold in the mouth’, ‘to lick’, ‘to suck’, ‘to taste’. It may be too premature to assume that the historical relationship between Sino-Tai/Sino-Tibetan and the Mon-Khmer and Austronesian are similar in nature. While the Mon-Khmer links can be safely said to be the result of areal convergence, the Austronesian connections must be seen from a different perspective, for Austronesian speakers have not been in contact with Chinese, TB and Tai-Kadai for several thousand years since they spread out to the islands. Also, Austronesian shares with Sino-Tibetan and Tai-Kadai such key vocabulary items as ‘fire’, ‘bird’, ‘chew’, ‘choke’, ‘cooked/ripe’, ‘to eat’, ‘pig’, among others. These words are not found in Mon-Khmer in our data.

8. CONCLUSION

This paper has presented a rich array of words shared by Chinese and Tai in the lexical field of eating and drinking, as well as terms for food stuff, food preparation, food processing, serving utensils and vessels, psychological words associated with food tastes, among others. Several dozen correspondence sets can be established, of which nearly a half show Tibeto-Burman connections. The findings are at variance with the commonly-held view that Chinese and Tai are lacking in common vocabulary.

Sino-Tai words for ‘to eat’ supply compelling evidence for a close historical relationship between Chinese and Tai. Although a definitive answer to the issue is beyond the scope of the present paper regarding the nature of historical relationships between the two groups and their higher genetic affiliation, it has provided fresh insight into the debate. The data can be interpreted in different ways. Either they can be regarded as genetic, or as loan contact. However, it is sobering to realize that at this stage we are far from being able to sort out loans from cognate words. There is still a lot to learn about the complexities of the linguistic situation in Asia and Southeast Asia. A task awaiting us is to build on earlier work (Wulff 1934, Manomaivibool 1975, Li 1976, Xing 1999) by systematically investigating words which show clear Sino-Tai relationships and which are also represented in other nearby languages. Until then, we will be in a better position to form hypotheses about what the relationships might mean.

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APPENDIX I. Sino-Tai Words for ‘To Eat’ with Tibeto-Burman Connections

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Gloss	Tibeto-Burman
1. bite (1)	WT <i>so brgjab</i> ; Lhasa <i>so</i> ⁵³ <i>cap</i> ¹³ , Dafla <i>gam</i> , Rawang <i>ŋap</i> ⁵⁵
2. bite (2)	rGyarong <i>ka nəntsok</i> , Ergong <i>zqa le</i> , Achang <i>kzat</i> ⁵⁵ , Yi <i>khaw</i> ⁵⁵ , Pumi <i>xə</i> ¹³ <i>qa</i> ¹³ , Kachin <i>ma</i> ³¹ <i>kzei</i> ³¹ , Moso <i>kha</i> ⁵⁵ , Burmesese <i>kai</i> ¹⁴ , Rawang <i>a</i> ³¹ <i>grɔl</i> ⁵⁵ , Maru <i>khai</i> ³⁵ , Lhoba <i>kək</i> ³³ ,
3. bite, chew	WT <i>kha btɕag</i> ; Monba <i>kha tɕap</i> ; Yi <i>ya</i> , Nu <i>ŋau</i> ⁵³
4. bitter	WT <i>kha tig</i> ; Monba <i>khalu</i> ; Qiang <i>qha</i> ; Yi <i>khu</i> ³³ ; Burmese <i>kha</i> ⁵⁵ ; Dafla <i>ka</i> ⁵⁵
5. boil, cook	Lhasa <i>tsə</i> ⁷³ ; Monba <i>zɔŋ</i> , Pumi <i>sqa</i> ⁵⁵ ; Yi <i>tɕə</i> ⁵⁵ ; Lahu <i>tsa</i> ³⁵ ; Achang <i>zau</i> ⁵⁵ ; Midu <i>so</i> ⁵⁵
6. blanch, burn	WT <i>lag pa</i> , sreg, Achang <i>lək</i> ⁵⁵ , Xiandao <i>lək</i> ⁵⁵ , Yi <i>lɔ</i> ³³
7. bucket	Lhasa <i>zaj</i> ⁵³ ; Yi <i>thu</i> ²¹ ; Akha <i>thuj</i> ²¹ ; Achang <i>thuj</i> ⁵⁵ ; Dafla <i>a tuj</i>
8. chew	Tibetan (Batang) <i>tɕa</i> ⁵³ , Monba <i>kha</i> ⁵⁵ <i>tɕap</i> ⁵³ , Dafla <i>ngə ga</i> , rGyarong <i>ka wa gkɛr</i> , Kachin <i>ma</i> ³¹ <i>ja</i> ⁵⁵ , Yi <i>ŋgu</i> ³³ , Lisu <i>gua</i> ³¹ , Moso <i>gu</i> ³³
9. chopsticks	Lhasa <i>sa</i> ¹² <i>thu</i> ⁵³ ; Qiang <i>duə</i> ³³ ; Yi <i>dzu</i> ²¹ ; : Lisu <i>a</i> ⁵⁵ <i>dzu</i> ³³ ; Burmese <i>tu</i> ²² ; Nu <i>dzu</i> ⁵⁵
10. cooked	Lhasa <i>thsə</i> ⁵⁵ <i>po</i> ⁵³ ; Monba <i>tshə</i> ⁷³ ; Burmese <i>tɕe</i> ¹⁴ ; Achang <i>tɕua</i> ⁷⁵ ; Midu <i>ju</i> ⁵⁵
11. cooking pot	Qiang <i>tshie</i> ⁵⁵ <i>pa</i> ⁵⁵ ; Namuyi <i>phu</i> ⁵⁵ ; Moso <i>bv</i> ³³ ; Akha <i>se</i> ⁵⁵ <i>va</i> ³³
12. drink	WT <i>skyem</i>
13. drunk	WT <i>bzi</i> , Akha <i>pv</i> ³³ ; Lahu <i>bu</i> ⁵⁴ ; Jino <i>mo</i> ³³ ; Burmese <i>mu</i> ⁵⁵
14. eat	WT <i>gzan-pa</i> , rGyarong <i>ka za</i> , Zhaba <i>kə</i> ³⁵ <i>ta</i> ⁵³
15. eat	WT <i>thuj</i> ‘to drink’; Monba <i>dzam</i> ; Digaru <i>tim</i> ³⁵ ; Midzu <i>tau</i> ⁵⁵
16. ferment	WT <i>sʔal</i> , Lhasa <i>laŋ</i> ¹³ , Digaru <i>ntuŋ</i> ⁵³ , Midzu <i>suŋ</i> ⁵⁵ , Dafla <i>luŋ</i>
17. fire	WT <i>me</i> ; Monba <i>mi</i> ; Qiang <i>mi</i> ³³ ; Moso <i>mi</i> ³³ ; Burmese <i>mi</i> ⁵⁵ ; Achang <i>pi</i> ³¹ ; Nu <i>mi</i> ⁵⁵ ; Midzu <i>mai</i> ⁵³
18. fragrant	Tibetan (Zeku) <i>ɕəm</i> ; Qiang <i>xu</i> ⁵⁵ ; Lahu <i>xə</i> ⁵⁵ ; Written Burmese <i>hmwe</i> ³ ; Maruxɕm ³⁵ ; Atsi <i>xom</i> ⁵⁵ ; Rawang <i>ŋəm</i> ⁵⁵
19. granary	WT <i>fɪbru khai</i> ; Monba <i>tshaŋ</i> ⁵⁵ ; rGyarong <i>zgɛ</i> ; Pumi <i>zɛ</i> ³⁵ ; Yi <i>tsa</i> ³³ ; Achang <i>tɕə</i> ⁵⁵ <i>saj</i> ³¹ ; Atsi <i>tshaŋ</i> ⁵⁵ ; Dafla <i>nam ɕuŋ</i>

20. hammer for pounding rice	Tibetan (Zhongdian) <i>te</i> ⁵⁵ ; Pumi <i>stfɯ</i> ¹³ ; Yi <i>tʃhɿ</i> ²¹ ; Lisu <i>tshe</i> ⁴⁴ <i>du</i> ³¹
21. hold in the mouth	Tibetan <i>gam-pa</i> , <i>gams</i> (J:107); Monba <i>jum</i> , Written Burmese <i>ɣum</i> ² , Achang <i>om</i> ⁵⁵ , Maru <i>ɣam</i> ³¹ , Atsi <i>ɣum</i> ³¹ , Kachin <i>mā</i> ³¹ <i>um</i> ³³
22. tripod with hollow legs	WT <i>ltɕags</i> , Monba <i>lek</i> ⁵³ , Tsangla <i>tɕa</i> ?, Pumi <i>ɕe</i> ⁵⁵ ; Lhoba (Bogaer) <i>ɕak</i> ; Karen <i>tha</i> ⁵⁵
23. lick	Tibetan (Dege) <i>dʒɿ</i> ⁵³ ; Monba <i>klɿ</i> ¹³ ; Pumi <i>dʒe</i> ⁵⁵ ; Yi <i>le</i> ¹³ ; Achang <i>liap</i> ⁵⁵ , <i>le</i> ⁵⁵ ; Rawang <i>la</i> ⁵⁵ ; Digaru <i>lio</i> ⁵³ ; Burmese <i>je</i> ⁴⁴
24. pound, pestle	Tibetan <i>rdur</i> , Monba <i>thuɣ</i> , Kachin <i>thu</i> ³¹ , Burmese <i>thoɣ</i> ³ , Achang <i>thuɣ</i> ³¹ , Nung <i>thoɣ</i> ⁵⁵ , Akha <i>thɔ</i> ³¹ , Jino <i>tho</i> ⁴⁴ , Karen <i>do</i> ³¹
25. roast	Tibetan <i>sro</i> ; Lhasa <i>tʃɕɿ</i> ⁵³ ; Pumi <i>ɕi</i> ⁵³ ; Yi <i>tsa</i> ⁵⁵ ; Burmese <i>ki</i> ²²
26. salt	Tibetan <i>tshwa</i> , Monba <i>tshɿ</i> ⁵³ , Qiang <i>tshɕ</i> , Yi <i>tshur</i> ³³ ; Achang <i>tɕɔ</i> ⁵⁵ ; Burmese <i>hsa</i> ⁵⁵
27. salty	Tibetan <i>tsha</i> ⁵³ <i>khu</i> ⁵³ ; Monba <i>tshɿ</i> ⁵³ <i>ku</i> ⁵³ ; Written Burmese <i>ɣam</i> ² ; Tujia <i>xan</i> ²¹ ; Kachin <i>kha</i> ⁵⁵
28. sip	Tibetan <i>hab</i> ; Burmese <i>hap</i>
29. sniff, smell	WT <i>snom</i> , Lhasa <i>tshi</i> ¹³ <i>mɕ</i> ⁵⁵ <i>num</i> ⁵² , Xiahe <i>hnəm</i> , Monba <i>num</i> ⁵⁵ , Tsamgla <i>num</i> , Queyu <i>snor</i> ¹³ , Kachin <i>mā</i> ³¹ <i>nam</i> ⁵³ , Rawang <i>pu</i> ³¹ <i>nam</i> ⁵³ , Digaru <i>nuɣ</i> ⁵⁵ , Dafla <i>nam</i> , Written Burmese <i>nam</i> ³ , Achang <i>nam</i> ³¹ , Atsi <i>nam</i> ³¹ , Leqi <i>na:m</i> ⁵¹
30. spit	Yi <i>phi</i> ²¹ ; Moso <i>phi</i> ¹³ ; Tujia <i>phi</i> ³⁵ ; Burmese <i>htwe</i> ⁵⁵ ; Maruphe ³⁵ ; Midu <i>me</i> ⁵⁵
31. steam	WT <i>gtoɣ</i> ; Lhasa <i>laɣ</i> ⁵⁵ <i>tsɕ</i> ⁵² <i>taɣ</i> ⁵⁵ , Tsangla <i>zoɣ</i> , Tujia <i>thoɣ</i> ⁵⁵
32. stove	Tibetan (Zhongdian) <i>tho</i> ⁵³ <i>kha</i> ⁵⁵ ; Pumi <i>lo</i> ¹² <i>tso</i> ¹³ ; Lahu <i>tʃAo</i> ³⁵ <i>qo</i> ¹¹ ; Jino <i>tso</i> ⁵⁵ ; Kachin <i>tsau</i> ³³ ; Achang <i>xɔ</i> ³¹ <i>tsau</i> ⁵⁵ ; Nu <i>tso</i> ⁵⁵
33. suck, inhale	WT <i>dbugs fidzib</i> , Lhasa <i>tɕip</i> ¹³ , Dafla <i>ntsɔv</i> , Kachin <i>mā</i> ³¹ <i>zop</i> ³¹ , Rawang <i>sap</i> ⁵⁵ , Achang <i>tʃop</i> ⁵⁵ ; cf. WT <i>snom</i> 'sniff', Xiahe <i>hnəm</i> , Monba <i>num</i>
34. swallow (1)	Tibetan (Zeku) <i>ngam</i> ; Tibetan (Dege) <i>ngar</i> ⁵⁵ , Ergong <i>sqhlɛ</i> , Lahu <i>xɛ</i> ; Yi <i>yu</i> ⁵⁵
35. swallow (2)	WT <i>mid khjur btay</i> , Monba <i>ju</i> ⁵³ <i>tho</i> ⁵³ , Qiang <i>thən</i> ⁵⁵ <i>tha</i> ³³ ; Achang <i>thun</i> ³¹ ; Yi (Nanjian) <i>thuɣ</i> ³³ <i>dza</i> ²¹ , Yi (Dafang) <i>ndɔ</i> ²¹
36. sweet	Tibetan (Zeku) <i>ɣar</i> ; Lhasa Tibetan <i>ɣa</i> ⁵⁵ <i>mo</i> ¹³ ; Guiqiong <i>qhua</i> ⁵⁵ ; Written Burmese <i>khjo</i> ²
37. tasteless, insipid	Tibetan (Zhongdian) <i>ndʒa</i> ⁵⁵ <i>mɕ</i> ⁵⁵ ; Pumi <i>bʒa</i> ¹³ ; Moso <i>so</i> ³¹ ; Kachin <i>sit</i> ³¹
38. tube for fanning fire	WT <i>sbud pa</i> , Lhasa <i>pi</i> ¹³ <i>pɕ</i> ⁵⁵ , Qiang <i>phete</i> , Pumi <i>mɕ</i> ¹¹ <i>phzɿ</i> ³⁵ , rGyarong <i>tɔ mtʃɛk sɛ wɛ phu</i> , Zhaba <i>kha</i> ⁵⁵ <i>mɕ</i> ⁵⁵ , Lhoba <i>mit ba</i> ; Written Burmese <i>mi</i> ³ <i>proɣ</i> ³ , Maru <i>mi</i> ³¹ <i>pjauɣ</i> ³⁵ , Hani <i>mɣ</i> ³³ <i>pu</i> ³¹ ; Karen <i>me</i> ³¹ <i>u</i> ⁵⁵ <i>bɔ</i> ³³
39. winnow	Tibetan (Zeku) <i>tsak ma</i> ; Qiang <i>po</i> ³¹ <i>po</i> ³¹ ; Shixing <i>mi</i> ³⁵ ; Yi <i>o</i> ⁵⁵ <i>mo</i> ³³ ; Achang <i>lam</i> ³¹ <i>pɕ</i> ³¹ ; Atsi <i>pjo</i> ⁵¹ ; Lhoba (Sulong) <i>a</i> ³³ <i>por</i> ³³

APPENDIX II: SINO-TAI WORDS FOR 'TO EAT' WITH MIAO-YAO LINKS

Sources:

Liu, Baoyuan. 1999.

Mao, Zongwu. 1992.

Miao-Yao Research Centre. 1987

Wang, Chunde. 1992.

Wang, Fushi, and Mao Zongwu. 1995.

Xiang, Rizhen. 1992.

Abbreviations: E.G = Eastern Guizhou; W.H = Western Hunan, S.Y.G = Sichuan, Yunan and Guizhou border areas, NE YN = Northeast Yunan

Gloss	Miao				Yao			
	E.G	W.H	S.Y. G	NE YN	Bunu	Mien	Biao- min	Lakja
1. bite	---	---	---	---	---	ŋa:t ⁸	---	ka:t ¹
2. bite; chew	tɕa ⁵ ɕɔ ⁷	ca ⁵	sao ⁵	---	---	dziu ⁶	dziu ⁴	---
3. blanch, burn	lhu ¹	ko ¹	---	law ¹	toi ³	tu ¹	---	luk ⁸
4. boil, cook	---	tɕɔ ^{3/7} ɬu ^{3/7}	---	---	---	tsou ³	təu ³	to ³
5. bucket	---	thoŋ ⁵	thoŋ ¹	---	toŋ ³	thoŋ ³	doŋ ³	thoŋ ³
6. choke	---	qɣ ^{3/7}	---	---	X'jiang jeŋ ⁵	ŋeŋ ⁵	Daping jaŋ ⁵	ka ²
7. chopstick	tiu ⁶	tu ⁶	deu ⁶	su ¹	tu ⁶	tsou ⁶	təu ⁴	tsu ⁶
8. cooked	---	ɕe ^{3/7}	so ⁵	sie ³	---	tsuo ³	tho ⁴	tsok ⁸
9. eat	---	---	---	Lanjin ŋjin ⁶	X'jiang nen ⁶	nen ⁶	Daping nan ⁶	tsen ¹
10. gnaw	ki ¹	ku ^{3/7}	keu ¹	---	---	khlan ³	---	---
11. granary	noŋ ⁴	---	---	---	θaŋ ¹	---	---	tsa:ŋ ¹
12. grind	---	---	---	---	mu ⁶	mɔ ⁶	mia ⁴	muə ⁶
13. hammer for pounding rice	tɕə ⁴	tɕə ^{4/8}	dzo ⁶	tɕə ⁴	co ⁴ te ⁵	tɔi ⁵	tuai ⁵	tuəi ⁵
14. hold in the mouth	---	---	---	---	kan ⁴	gɔm ¹	gan ¹	kəm ²
15. cauldron	---	---	---	---	---	---	---	khjek ¹
16. ladle	he ¹	thɔ ¹	ntɕa ⁵	---	ce ⁵	---	---	tsiek ¹
17. lick	ɬa ⁸	ɬa ^{4/8}	ɬa ⁸	ɬai ⁸	ja ⁸	---	---	jie ²
18. pound, pestle	to ³	ɬo ¹	tua ⁵	ɬhie ³	tɔ ³	tsorŋ ¹	tau ³	fa:ŋ ¹
19. roast	ta ⁵	du ⁵	nɛ ⁵	mi ⁵	nɛ ⁵	dza:u ⁵	dau ⁵	tsik ¹

20. salt	tɕi ³	dzu ³ ₇	ntse ³	ntɕɔ ³	ntse ³	dzau ³	dza ³	kjie ¹
21. steam	tɕi ¹	tɕe ¹	tɕo ¹	tɕu ¹	cuŋ ¹	tsa:ŋ ¹	---	tsaŋ ¹
22. stove	so ³	---	tso ¹	tso ¹	θho ³	tsu ³	tɕu ³	ta:u ³
23. suck	hə ¹	hu ¹	hou ¹	hu ¹	hop ¹	hop ¹	hup ¹	hop ¹
24. swallow	ŋaŋ ¹	GY ³	NGao ¹	Nqo ¹	ŋku ³	---	---	jen ¹
25. sweet	---	---	---	---	ken ¹	ka:m ¹	kan ¹	khwa:n ¹
26. taste	tɕoŋ ²	ʃhaŋ ³ ₇	---	saʊ ⁶	ɕin ⁴	sei ³	ʃuɔ ²	si ³
27. tasteless	ɕin ⁶	tɕ ¹	zɕua ⁶	tɕa ⁶	ɕit ¹	---	tsan ³	tsi:p ¹
28. tripod	---	kaŋ ²	ntse ²	---	---	tshɛ:ŋ ^{1,2}	thiɛ ^{1,7}	tsiŋ ²
29. urn	oŋ ¹	qo ¹	kaŋ ¹	---	kaŋ ³	oŋ ¹	---	ka:ŋ ¹
30. wine cup	ten ¹	---	---	---	ɕin ³	---	---	---

APPENDIX III. POSSIBLE MON-KHMER LINKS

Sources:

Mon-Khmer: Yan, Qixiang, Zhou, Zhizhi. 1995.

	Mon-Khmer						
	Wa		De'ang		Blang		Khmu
	Masan	Ai-shuai	X.C. Gou	Chayeqing	Man'e	Pangpin	Pusin
1. bite, gnaw	khiat	kiat	kau?	gāk	ket ³³ kial ³³	kak ³¹	?ak
2. blanch, parboil	lɔk	lɔk	---	---	klok ³³	ʔɪk ³¹	lɔh
3. chopstick	---	thu	thyu	thu ³⁵	thu ³⁵	thu ¹³	thu
4. to cook	kauh	kuih	---	---	kyɿ	---	tʃau
5. drink	zuat	zɔt	ɲɔt	Nanhu ɲat	mut ³⁵	dhuat ⁵¹	---
6. fragrant	M.G hɔm	---	ŋjun	ŋju ⁵¹	hɔm ³⁵	hɔm ⁵¹	---
7. hold in the mouth	---	kum	ŋǎm	ŋǎm ⁵¹	ɲym ³¹	---	Khmu ʔam
8. ladle	lak	lɔk	la?	la ⁵⁵	Gantang lak ⁵¹	lak ⁵¹	---
9. lick	let	let	lia?	ler ³³	liat ³³	lEt ³¹	liǎh
10. salt	khiuh	kih	---	---	khil ³³	---	---
11. salty	---	---	džem	tʃem ⁵¹	ʔym ³⁵	---	kEm
12. suck, inhale	rhyp	rhup	ɾup	Nanhu ɾup	ɣup ³³	srot ³³	srup
13. sweet	---	---	ŋam	ŋam ⁵¹	---	---	---

14. taste	<i>tchim</i>	<i>tchim</i>	<i>tchim</i>	<i>dzim</i> ⁵¹		<i>ʔim</i> ⁵¹	<i>sim</i>
15. tasteless		<i>tɕim</i>	Nanhu <i>tɕim</i>	<i>tɕaj</i> ³⁵	<i>tɕim</i> ⁵¹		<i>tɕua</i> ?
16. tripod	---	<i>pham</i> ?	<i>geij</i>	<i>kaɪ</i> ⁵¹	---	---	Manmai <i>glaj</i>
17. winnow	<i>bia</i>	<i>bia</i>	<i>ma na</i>	<i>pa na</i> ⁵¹	<i>mpeh</i>	---	Manmai <i>mpiar</i>
18. urn	<i>khaug</i>	<i>ʔaj</i>	<i>glau</i>	<i>klan</i> ⁵¹	<i>ʔaj</i> ³⁵	<i>ʔom</i> ⁵¹	<i>ʔom hEɲ</i>

APPENDIX IV. COMPARISONS WITH AUSTRONESIAN FORMS

Sources: Tryon, Darrell T. (ed.) 1995.

Gloss	Austronesian		
	Indonesian	Tagalog	Javanese
1. bite, gnaw	<i>kagat</i>	<i>məŋ-gitgit</i>	<i>ñakot</i>
2. bowl	<i>manjuk</i>	<i>manjok</i>	<i>manju</i> ?
3. chew	<i>guya</i> ?	<i>kuñah</i>	Aceh <i>kuñeh</i>
4. choke	Balanese <i>sukak</i>	<i>məñ-čəkik</i>	Aceh <i>cukia</i> ?
5. to cook	Paiwan <i>k-am-sa</i>	<i>lūtu</i> ?	<i>ma(ŋ)sa</i> ?
6. cooked, ripe	<i>luto</i> ?	<i>masak</i>	Sundanese <i>asak</i>
7. drink	<i>inom</i>	<i>minum</i>	Balanese <i>ŋ-inum</i>
8. drunk	Malagasy <i>mamu</i>	<i>mabuk</i>	<i>mabu</i> ?
9. eat	<i>kāʔin</i>	<i>makan</i>	<i>maŋan</i>
10. fire	<i>apoy</i>	<i>api</i>	Aceh <i>apuy</i>
11. fragrant	<i>harum</i>	Paiwan <i>saʔum</i>	Madurese <i>ruʔum</i>
12. hold in the mouth	<i>pəgaŋ</i>	Kalinga Limos <i>aggom</i>	<i>ŋ-gəgəŋ</i>
13. lick	Aceh <i>lelet</i>	<i>mən-ʃilat</i>	<i>n-dilat</i>
14. mill, pound	<i>giliŋ</i>	<i>məŋ-gliŋ</i>	<i>ŋ-giliŋ</i>
15. pestle (mortar)	<i>lusuŋ</i>	<i>ləsuŋ</i>	Sundanese <i>lisuŋ</i>
16. roast	<i>paŋgaŋ</i>	Madurese <i>g^huriŋ</i>	<i>ŋ-goreŋ</i>
17. sour	<i>asam</i>	<i>āsīm</i>	<i>kəcut</i>
18. suck, inhale	<i>sipsip</i>	<i>məŋ-isap</i>	Balanese <i>ñə(p)səp</i>
19. swallow	Murut <i>tolon</i>	<i>təlan</i>	<i>ŋə-lək</i>
20. sweet	Yamei <i>itlən</i>	<i>təlan</i>	<i>ŋə-lək</i>
21. to taste	<i>mən-čičip-i</i>	---	<i>ŋ-ičip-i</i>