Subclassification of Amis Dialects*

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This study presents a subclassification of Amis dialects, based on 593 lexical items collected from twenty Amis locations in Hualien and Taitung. The Amis dialects are divided into five groups: Sakizaya, the Northern, Tavalong-Vata'an, the Central, and the Southern, based on both lexical and phonological evidence. No regular phonological innovation has been attested in any Amis dialect group different from the others. Amis dialects can be classified by lexical forms and sporadic phonological innovations, but not lexicostatistics alone. Linguistically modern Sakizaya is definitely a dialect of Amis, but not a separate language from Amis, even though it has some peculiar features not found in any other Amis dialects and it has been officially recognized as a separate ethnic group by the Council of Indigenous Peoples in Taiwan. Amis dialects in the north are far more diverse than the central and southern dialects, so it is most likely Amis originated in the north. Proto-Amis may have first split into the North and South dialect groups, or alternatively Sakizaya may have been the very first offshoot, and then further split into the North and South dialect groups.

Key words: Amis, dialect, subgrouping, lexical, innovation

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INTRODUCTION 1.

This paper is written up by the first author based on the Amis data collected by the second author.

Classification of dialects in individual Formosan languages has been done for Rukai, Puyuma, Paiwan, Tsou, Atayalic, and Bunun. But there is no published classification of Amis dialects, although there was a talk on this topic given by Tsuchida (1982). An aim of this paper is to fill this gap.

Shigeru Tsuchida made an extensive Amis dialect survey in 1980, collecting 593 lexical items from 20 Amis villages or districts from the north to the south, based on mostly male speakers (except three female speakers from Macaar旭海) born between 1900 and 1930. The local names, their abbreviations (as given by Tsuchida), village names in Chinese, and dialect group names are in the following:

Table 1. Amis dialects investigated by Shigeru Tsuchida in 1980 (see map in Appendix)

	Abbr.	Local name	Village location	Dialect group
1.	SMa	Ma'ibor	瑞穗鄉舞鶴	Sakizaya
2.	SJi	Kaloloan	豐濱鄉磯崎	
3.	SSa	Sakor	國慶里德興	
4.	Cib	Cibidian	壽豐鄉水漣村	Northern
5.	Nat	Nataoran	吉安鄉南昌村	
6.	Pok	Pokpok	吉安鄉仁里村	
7.	Rin	Rinahem	壽豐鄉光榮村	
8.	Tav	Tavalong	光復鄉南富村	Tavalong-Vata'an
9.	Vat	Vataqan	光復鄉大平村	
10.	Pai	Pa'ilasen	瑞穗鄉富民村	Central
11.	Kiv	Kivit	瑞穗鄉奇美村	
12.	Vak	Vakong	豐濱鄉豐濱村	

Abbr.	Local name	Village location	Dialect group
13. Mak	Makota'ay	豐濱鄉港口村	
14. Kak	Kakacawan	長濱郷長濱村	
15. Van	Vanaw	池上鄉大埔村	Southern
16. Tor	Torik	成功鎮信義里	
17. Ato	Qatolan	東河鄉都蘭村	
18. Hal	Halapawan	東河鄉泰源村	
19. Fal	Valangaw	台東市	
20. Mac	Macaar	屏東縣牡丹鄉旭海村	

Tsuchida prepared a comparative wordlist of 593 lexical items, which greatly facilitates further study. This study is based on Tsuchida's data and manuscripts. I have generally followed his transcriptions, but I have made two minor changes in phonetic symbols: Q > q to stand for the pharyngealized stop and L > l to stand for the flap. I have spot-checked some items with Namoh Rata's (2019) Amis Dictionary. The transcriptions are generally reliable although there is at least one discrepancy: Tsuchida's soleda vs. Namoh's soreda 'snow' < *SuReNa, in which the form *soleda* is a regular derivation.

From Proto-Austronesian to modern Amis dialects 2.

Modern Amis dialects have 18 or 19 consonants /p, t, k, q, ?, b, d, c, s, z, x, h, m, n, ng, l, r, w, y/ and 4 vowels /i, u, e, a/. The consonant /z/ appears only in Sakizaya, e.g., kazizeng 'ox cart'. The vowels u and o are in complementary distribution, so we can dispense with the five-vowel system as officially adopted by the Council of Indigenous Peoples and Ministry of Education (1995: 7). Every Amis content word ends with a consonant; a phonetic glottal stop is inserted after the vowel if there is no other consonant. Also a phonetic glottal stop is automatically

There is a mixture of IPA and romanization in the transcriptions, ng for η , and e for ∂ .

inserted between two vowels, e.g., ka?en 'eat'. The glottal stop is left out in the traditional Amis orthography. Consonant clusters occur only in word-medial position, e.g., tamdaw 'person'.

Proto-Amis has the following 18 consonants: /p, t, k, q, ?, b, d, c, s, z, h, l, r, m, n, ng, w, y/ and four vowels /i, u, e, a/. From PAN to modern Amis is as follows: p > p, *t, *C > t, *k, *g > k, *q > q (pharyngealized), *b > b, *d, *D, *z, *r > r, *1, *N, * \acute{n} > d, * \acute{s} > c, * \acute{s} > s, * \acute{h} > h, * \acute{l} , *R > \acute{l} , *m > m, *n, * \acute{l} > n, *ng > ng, *w> w, *y > y, *i > i, *u > u, *a > a, *e > e, e.g., *pitu > pito? 'seven', *piliq > mipiliq 'choose', *talaw > ma-talaw 'fearful', *kalih > mi-kali? 'dig', *kaRaC > mikalat 'bite', *kiRim > mi-kilim 'look for', *Cabu > mi-tabo? 'wrap', *bukeS > bokes 'head hair', *qubaN > ?obad 'gray hair', *punuq > ponoq 'brain', *maCa > mata? 'eye', *qaCay > ?atay 'liver', *baRaq > balaq 'lung', *biCuka > bitoka? 'stomach', *ngalay > ngangay (< A)² 'drool', *Cinaqi > tinaiq (< M) 'intestines', *luSeg > losag 'tears', *lugeS > doles 'marrow', *susu > cocol 'breast', *Calingah > tangila? (< M) 'ear', *biRbiR > bilbil 'lips', *qabaRa > ?abala? 'shoulder', *Suab > ma-soab 'yawn', *Sema > sema? 'tongue', *liqeR > li?el 'neck', *tiaN > tiad 'belly', *uRaC > olat 'blood vessel', *CingaS > tingas 'food particle', *tuduq > t < ar > odoq 'finger', *zaRami > rarami? (< A) 'straw', *Nihib > dihib 'cave', *CaqiS > mi-taqis 'sew', *CuNuh > mi-todoh 'burn', *Sajek > misanek 'smell', *Cangis > tangic 'weep', *bajaq > ma-banaq 'know', *paliSi > paisi-n 'taboo', *pajay > panay 'rice plant', *beRas > belac 'husked rice', *buluq > boloq 'bamboo', *keRiw > keliw 'flax, hemp fiber', *siku > ciko? 'elbow', *quzaN > qorad 'rain', *Cawa > ma-tawa? 'laugh', *waliS > wadis 'tooth', *sikuh > ciko? 'elbow', *gaRan > kalang 'crab', *tuzuq > mi-turuq 'to point at', *gerger > mi-ka-kerker 'shiver, tremble' (all the preceding Amis examples are cited from the Northern dialect). Notice the glottal stop has developed word-finally after a vowel in Amis. This seems to indicate that all content words in Amis must end with a coda.

² The symbol < A indicates assimilation and < M metathesis.

There are several phonological mergers in all Amis dialects: *t, *C > t; *d, *D, *l > d; *z, *r > r; *k, *g > k; *n, *j > n; *l, *R > l. The condition for the split of *1 into l (mostly) and d (a few) or lost (only one) is intriguing; cf. *luSeq > losaq 'tears', *luqeS > do?es 'marrow', with *l occurring initially before *u in both cases.

No regular phonological innovation is attested in any Amis dialect group different from the others. There are only a few phonetic differences between Amis dialect groups, such as b or v vs. f, d or δ vs. t (voiceless lateral). In other words, some dialects have undergone these phonetic changes: (1) *b > v > f, and (2) $*N > d > \delta > 1$ (voiceless lateral), but no further merger or split.

I shall demonstrate how Amis dialects can be classified by lexical forms and sporadic phonological innovations, but not lexicostatistics alone, as in Tsuchida (1982). One general assumption of lexicostatistics is that languages sharing a higher number of cognates are more closely related, and it is unreliable.

3. Classification of Amis dialects

Amis, spoken in Hualien and Taitung counties, has five main dialects: Sakizaya, Northern, Tavalong-Vata'an, Central, and Southern, as classified by the Taiwan Government (台灣總督府) during the Japanese period in the early 1900s, Mabuchi (1954), and Tsuchida (1982, 1988), with minor differences. Tsuchida's "Southern" dialect is divided into two separate dialects, Peinan (卑 南) or Malan (馬蘭) and Hengchun (恆春) by the Taiwan Government/Mabuchi and the Council of Indigenous Peoples; see Wu (2018: 3). There is no significant linguistic difference between them.

Tsuchida's (1982) classification is mainly based on lexicostatistic evidence. It can be used as a working hypothesis. He was the first to postulate a subgrouping hypothesis of Amis dialects, with two alternative diagrams, the main difference being the position of Tavalong-Vata'an, whether they group with Sakizaya and Northern or with Central and Southern dialect group, and they share roughly about the same number of cognates with both dialect groups; see Tables 2 and 3 below. In other words, lexicostatistics is not decisive for Amis dialect classification. We may have to turn to phonological innovations for evidence.

3.1 Sporadic sound changes

At least two sporadic phonological innovations exclusively shared by the Central and Southern dialect groups indicate that they are more closely related to each other. (1) *S > s > h, e.g., *tapeS > sa-tapes > ha-tapes 'sieve'. However, the shift s > h is attested in this instrumental nominalization prefix, but rarely attested elsewhere. 4 (2) *R > l > ?, e.g., *SuReNa > solda? > solda? 'snow, ice'. Again, the shift l > 2 is only attested in this word-medial position, but nowhere else. Both cases indicate that the Tavalong-Vata'an group agrees with Sakizaya and Northern rather than Central and Southern; see Table 2 below.

3.2 Lexical differences

Lexical differences indicate that there are two primary dialect groups of Amis: Sakizaya and Northern in one group, labeled as 'North', and Central and Southern in another group, labeled as 'South', with Tavalong-Vata'an grouping either with the North or with the South. There are 38 lexical differences in which Tavalong-Vata'an group with Sakizaya and Northern, as in Table 2.5

The regular reflex of *S is s and the regular reflex of *R is l in Amis; see the next example.

⁴ For instance, the form sa-plek 'eye lids' appears in the dialects of all five dialect groups without any sound shift. However, the shift s > h is attested in *hinang* 'blade' in the Southern Vanan dialect vs. sinang in Sakizaya, Northern, Tavalong-Vata'an, and three other Southern dialects.

There are minor phonetic variants from dialect to dialect. The Amis data is all based on Tsuchida's field notes and unpublished manuscripts.

Table 2. Lexical differences between Sakizaya/Northern/Tavalong and **Central/Southern (38 examples)**

Sak/Nor/Tav ⁶	Centr/South	Gloss
tangah/tangal	vongoh	'head'
hanhan	selaq	'breath'
ta-tamos	vati?	'ring'
ba?sing	ma-?sing	'sneeze'
sa-dokod	sa-tnok	'heel'
(o?)tah	?avih	'chaff'
abih	Papel	'rice bran'
tabayar	lawilaw	'Alocasia'
kamacal	(?e)łok	'strawberry'
kabi?	kohaw	'soup'
ma-beroro?	ma-vayoq	'drunk from betel-chewing'
pa(?)nan	vawah-an	'entrance'
ma-lahol	ma-nahol	'rot'
selaq	mi-?kor	'snoring'
ta-lomaq	mi-nokay	'go home, return'
mi-qalaw	mi-qavas	'rob, snatch away'
sa?piq	sa?mel	'cool'
bahdil	viłngal	'Japanese cypress'
padingad	talacay	'pandanus'
belek	ciciw	'piglet' ⁷
qorang	qavar	'shrimp'
rita?	sorila?	'octopus'

⁶ Abbreviations are as follows: Centr, Central; Nor, Northern; Sak or Sakiz, Sakizaya; Tav, Tavalong; TV, Tavalong and Vata'an.

⁷ There is a semantic shift in this lexical item in the North: *beRek 'domesticated pig' > belek 'piglet', probably after the semantic shift *babuy 'wild pig' > baboy 'pig' in all the dialects.

Sak/Nor/Tav	Centr/South	Gloss
banol	topi?	'dove'
ka-ktol	vangaw	'bedbug'
lingasaq	singaraq	ʻgills'
ba?ket	ka-rteng	'heavy'
besi?	tiraq	'gall bladder'
calaped	kaver	'trousers'
ma-likalik	ma-wakang	'lie down'
mo-nabaw	ma-pawpaw	'float up'
qongcong	qongcoy	'rock'
ba?oq	raqo?	'soapberry'
kararayan	malonem	'deer'
paik/parik	voa?	'dolphin, dorado'
ko-ini	ko-nini	'this, nominative'
tia	tora	'that, oblique'
solda?	so?da?	'snow, ice'
sa-tapes	ha-tapes	'sieve'

Most of these lexical differences are manifested in the base forms. Only the last example above differs in the initial of the prefix: a sound change in the South dialect group: s > h. The difference between balang and ma-lang 'sneeze' < *baqeSing may look like a sound shift b > m in the South dialect group. The fact is probably that the South has lost the initial syllable ba and attached the verbal prefix ma- to the base.

Lexical differences between Sakizaya/Northern and the other dialect groups (Tavalong-Vata'an, Central and Southern), as in Table 3 below. There are about the same number of examples.

Table 3. Lexical differences between Sakizaya/Northern and the other dialect groups (39 examples)

Sak/Nor	Others	Gloss
ma-tolek	ma-łoqeng	'deaf'
ngangay	ngalay	'drool'
babaq	calaq	ʻjaw'
besi?	tiraq	ʻgall'
ma-bolad	lalad	'menses'
mi-melaw	mi-nengneng	'see'
lomingay	kalitang	'string beans'
padingad	talacay	'pineapple'
sapor	capox	'rice seedling'
salang no coco?8	hacol	'milk'
cilmin	qacicim	'sour'
malahol	ma-nahol	'rotten'
badidiw	vasolan	'rattan mat'
naba?	tivek-an	'mortar to husk rice'
ma-ngroq	ma-lolay	'tired'
ta-hkal	ma-sałak	'go out, come out'
kazizing	paliling	'ox cart'
mi-limad	mi-linah	'remove or transfer something'
mi-holak	mi-tłal, mi-hłał	'untie'
sakor	toqel	'plant sp., 茄苳'
apalo?	vaciłol	'breadfruit'
balidas	sarngał	'plant sp.,山棕'
naniq	posi?	'cat'
ongay ⁹	lotong	'monkey'

⁸ Literally it means 'juice of breasts'.

⁹ This form *ongay* is a loanword from a Puyuma dialect, Katripul or Kasabakan *ungay* 'monkey'

Sak/Nor	Others	Gloss
rapic	rawal	'flying squirrel'
ta-takong	lołak	'hundred-pace snake'
banoh	opih	'feather'
sakobad	sa-pikpik	'wing'
ma-baher	ma?ver	'to fly'
ma-sa-ki-molmol	qa-rawraw	'round'
mali-ka(k)oq	mali-qakong	'bent'
ra?cos	ta-tiqih	'bad'
ma-loman	ma-tlang	'old, not new'
ma-honaq	ma-hokaq	'loose (of a belt)'
?i-hkal	pangta?	'shallow (hole)'
sang-sangdeb	ła-łaya?	'evening'
ko-btol	ki-vtol	'thick'
?a-hmaw	ka-hmaw	'light (not heavy)'

Usually the differences are in the base forms, but in a few cases the differences are in the prefixes, as in the last two examples above.

If the split of Amis dialects is not binary, it may be tripartite, such as (1) Sakizaya and Northern, (2) Tavalong-Vata'an and Central, and (3) Southern, as in Table 4, or (1) Sakizaya, (2) Northern and Tavalong-Vata'an, and (3) Central and Southern, as in Table 5 below.

⁽Ting 1978), while the corresponding form lotong in the other group is a cognate derived from *Rutung.

Table 4. Lexical differences between Sakizaya/Northern, Tavalong-Vata'an/Central, and Southern (18 examples)

Sak/Nor	TV/Centr	Southern	Gloss	
	vaha?	ko?ec	'cough'	
kopa?	parok	takomoł	'cotton'	
ciak		kacawas	'watermelon'	
kama?	mamiq	qasiro?	'tangerine'	
a-soq	ka-?soq	qa-r l et	'tasty'	
a-ldah	ka-ʔłah	ka-cłah	'peppery hot'	
?elon	qanengang	?axnan	'chair'	
tokal	qiłoc	kotang	'spear'	
lako?	vonon	?ecan	'paddy field'	
titic	kamoraw		'type of banyan tree'	
kaporos vohet sovor		sovor	'squirrel'	
pada?icaw	pada?icaw qalolil va-ta-toqong-ay		'swallow (bird)'	
tiroc	cirot	cicax	'shrike'	
tadok	hoak	maymay	'goode'	
kinesq	cikav	cihap	'scales (of fish)'	
?adidi?	ma-amang	miiming	'small'	
tarakaw	takaraw	akaraw qa-kawang-ay 'high'		
i-labo?	ta-lolong	?a-ngongol-ay	'deep (of a pit)'	

It is clear from Table 4 above that there are only 18 lexical differences between the three dialect groups, only half the number of the lexical differences between two dialect groups, as in Tables 2 and 3 above. This tripartite division is not borne out. Likewise, there are only 19 examples in Table 5 below.

Table 5. Lexical differences between Sakizaya, Northern and Tavalong-Vata'an, and Central and Southern (19 examples)

Sakizaya	Nor/TV	Centr/South	Gloss
dikoc	bodoy	rikoq	'clothing'
dawa?	kidodong	kirałom	'cloth'
tobah	vonga? ¹⁰	konga?	'sweet potato'
mo-?akik	mi-qidqid	mi-tapay	'heat and dry'
ma-ngalay	ma-solep	ma-cahiw	'hungry'
cokez	salili?	hecek	ʻpillar'
riring	cabeng		'wall'
bakan	hawan	vonos	'sword, bolo'
mi-dang	mi-holol	mi-sa-lama?	'play'
mi-ba?tong	mi-vahkal	mi-tahkol	'throw underarm'
liken	vonak	tavok	'sand'
ma-?ibok	ma-kota?	ma-ngota?	'muddy'
katararan	kararayan	malonem	'type of deer'
badakoang	kadaboang	tola-tolaw	'white heron'
t <om>lek</om>	ma-mcel	mo-?cel	'straight'
?a-hbal	da-dahal	ka-kahał	'wide'
ma-dobaq	ma-vkac	c ikay	'run'
ta-ta-ina?	ba-bahi?	va-vahiy-an ¹¹	'woman'
co?det	li-?tec	ki-?tec	'cold (of water)'

Again they differ mostly in the base forms; only the last two differ in affixes. The difference between ba-bahi? and va-vahi-an is in the suffix -an, and that

¹⁰ The form *vonga?* is probably a loan from Puyuma *bunga* 'sweet potato'.

¹¹ The transcription form as given by Tsuchida is *va-vahi-an*, in which the phonetic glide *y* after vowel i is left out, cf. the form fafahiyan in Namoh (2019: 106). A phonetic glottal stop between two vowels i a would be expected.

between *li-?tec* and *ki-?tec* is in the prefix.

Lexical differences between Sakizaya, the Northern dialects, and Tavalong-Vata'an include the following:

Table 6. Lexical differences between Sakizaya, Northern, and Tavalong-Vata'an (19 examples)

Sakizaya	Northern	Tavalong-Vata'an	Gloss		
A Different lexical forms in all three groups (3 examples)					
la-lapi?	sa-mado?	siam	'rush'		
porawir	koliol	koliwis	'rabbit'		
biranga?	ra-rokoh	qepiq	'tortoise'		
B Sakizaya d	iffers from the	other two groups (17	examples)		
ma-ngalay	ma-solep	ma-solep	'hungry'		
mi-idang	mi-holol	mi-holol	'play around'		
dawa?	kidodong	kidodong/kilolong	'cloth'		
cokez	salili?	sariri?	ʻpillar'		
ma-dobaq	ma-bekac	ma-vekac	'run'		
liken	bonak	vonak	'sand'		
tobah	bonga?	vonga?	'sweet potatoes'		
bakon	hawan	hawan	'native sword'		
ta-ta-ina?	ba-bahi?	va-vahi?	'woman'		
mi-ba?tong	mi-vahkol	vahkol	'throw underarm'		
ma-?ibok	ma-kota?	ma-kota?	'muddy'		
katararan	kararayan	kararayan	'deer'		
ba?to?	bekloh	vokloh	'stone'		
biri?	tiad	tiał	'belly'		
mo-apa?	mi-baba?	mi-vava?	'carry a child on one's back'		
ba-balaki?	ma-toqas-ay	ma-toqas-ay	'aged'		
wado?	odal	qołal	'honey'		

Sakizaya	Northern	Tavalong-Vata'an	Gloss		
C Tavalong/Vata'an differs from the other two groups (7 examples)					
rikit	rikit	cohoq	'back of knee'		
tipos	tipos	qonip	'rice'		
toper	toper	kavong	'hat'		
ma-likalik	ma-likalik	sa?sa?	'lie down'		
taring	taring	lako?	'paddy footpath'		
lalami?	rarami?	qasisiw	'rice straw'		
sapol	sapor	capox	'rice seedling'		

It is clear from Table 6 above, Sakizaya has quite a few lexical forms (3+17=20 items) entirely different from the other two dialects, as shown in A and B. Sometimes Sakizaya shares the same or similar lexical forms (7) with Northern, as in C, while in other times Northern shares the same lexical forms (17) with Tavalong-Vata'an, as in B. Northern and Tavalong-Vata'an share more lexical items (17) than Sakizaya and Northern (7). This seems to indicate that Northern and Tavalong-Vata'an are more closely related to each other than either of them is to Sakizaya. Moreover, the form tangah 'head' in Sakizaya corresponding to the form tangal in Northern and Tavalong-Vata'an, differing only in the final consonant, also indicate that Northern is more closely related to Tavalong-Vata'an.

Only occasionally does Sakizaya share a similar form with Central and Southern instead of Northern and Tavalong/Vata'an, e.g., a-olec-an 'type of snake' in Sakizaya, qa-qoLec-an in Central and Southern, cf. ca-caklaw in Northern and Tavalong- Vata'an.

A tentative tree diagram shows the internal relationship of the Amis dialects, as in Figure 1:

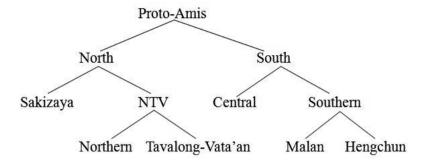


Figure 1. Amis subgrouping

I have not found any phonological or morphological evidence that may indicate that Tavalong and Vata'an are more distantly related to Sakizaya and Northern, as shown in Tsuchida's (1982) lexicostatistic study. I can find little linguistic evidence between Malan and Hengchun, as adopted by the Council of Indigenous Peoples.

Sometimes the difference between dialect groups is in only one segment or two of a lexical form. These differences seem to provide strong evidence for the clear demarcation of the two major dialect groups in Amis, as in Table 7 below:

Table 7. Lexical difference in only one segment or two (in boldface)
between two primary dialect groups

	Sakizaya	Northern	Tav-Vat	Central	Southern	Gloss
1	m o -paneng	m i -paneng	mi-paneng	mi-pałeng	mi-paleng	'extinguish'
2	sa-tapes	sa-tapes	sa-tapes	ha-tapes	ha-tapes	'sieve'
3	solda?	solda?	solda?	so ? da?	so ? da?	'snow, ice'
4	b a?sing	va?sing	pa?sing	ma-?sing	ma-?sing	'sneeze'
5	Pongcong	?ongcong	qongcong	qongcoy	qongcoy	'rock'
6	di-hpic	do-hpic	lo-hpic	ki-hpic	ko-hpic	'thin'
7	mi-na-nabaw	mo-navaw	ma-nawnaw	ma-pawpaw	ma-pawpaw	'float up'
8	ko-ini	ko-ini-an	k-ini?-an	ko- n ini	ko- n ini	'this'

	Sakizaya	Northern	Tav-Vat	Central	Southern	Gloss
9		bonga?	vonga?	konga?	konga?	'potato'
10		li?tec	li?tec	ki?tec	ki?tec	'cold'
11		ma-kota?	ma-kota?	ma -ng ota?	ma- ng ota?	'muddy'
12		la-Ionah	qa-lonah	ka- k onah	ka- k onah	'ant'
13		ma- m cel	ma-mcel	mo- ? cel	mo-7cel	'straight'
14		mi-vahkol	vahkol	mi- t ahkol	mi- t ahkol	'throw'
15	tanga h	tangal	tangal			'head'
16	b a d akoang	kadaboang	kalavoang-ay			'heron'
17	pangi d a d	palingad	paringal			'pandanus'
18	panan	panan	pa ? nan			'entrance'

The first five lexical items in Table 7 above manifest that the difference between two primary dialect groups is only in one consonant, and that seems to lend further support for these two main dialect groups of Amis. The forms in Item 6 differ in the prefix. Items 9-14 show that Sakizaya may have entirely different lexical forms from all the other dialect groups, and they also show that Northern and Tavalong-Vata'an are more closely related. Items 15-17 also show that Northern and Tavalong-Vata'an are more closely related than either of them is to Sakizaya although Item 18 shows that Sakizaya is closer to Northern. In short, Sakizaya has quite a few peculiar linguistic features of its own, distinguishing it from all the other dialects. Moreover, Sakizaya has quite a few (21) lexical innovations not shared with most other Amis dialects, as in Table 8:

Table 8. Lexical innovations only in Sakizaya (21 examples)

Proto	Sakizaya	Others	Gloss
*tiaN	biri?	tiad	'belly'
*ngusuq	cihek	nga-ngoso?-an	'nose'
*Cinaqi	sawadaq	tinaiq (< M)	'intestines'

Proto	Sakizaya	Others	Gloss
*Cangis	mo-angic	t angic	'weep, cry'
*tapiN(?)	mi-kodpo?	mi-tapid	'repair'
*NaCeng	lamiq	dateng	'vegetable'
*qapuR	apuk	qapol	'lime'
*quSaw	ma-ngaroh	ma-soqaw (< M)	'thirsty'
*bawah	mi-wawah	mi-bawah	'open (door)'
*bubu	pobo?	bobo?	'fish trap'
*qumah	marok	ma-omah	'work in the field'
*Cakaw	mi-kidem	mi-takaw	'steal'
*taRuqan	dabek	taloq-an	'field hut'
*bahi	ta-ta-ina?	ba-bahi?	'woman'
*Cuqas	ba-b <al>aki?</al>	ma-toqas-ay	'old, elders'
*baba	mo-apa?	mi-baba?	'carry on back'
*taRah	mo-halhal	mi-tala?	'wait'
*balis	pa-lion	mi-balic	'exchange'
*bajaq	ma-tineng	ma-banaq	'know'
*qauR	?aok	qaol	'bamboo'
*kiriq	ta-kiki?-an	ka-kiri?-an	'under the arm'

On the other hand, only very few lexical innovations (8) have taken place in all or most other dialects while Sakizaya retains the cognates, as in Table 9.

Table 9. Lexical innovations in dialects other than Sakizaya (8 examples)

Proto	Sakizaya	Others	Gloss
*buSuk	ma-bosok	ma-lasang	'drunk'
*Sepi	spi?	ngitih, -ti?i	'dream'
*asawa	?acawa?	ma-ramod-ay	'spouse'
*dakep	mo-zakep	mi-lpel	'catch'

Proto	Sakizaya	Others	Gloss
*batu	ba?to?	bekloh	'stone'
*Raqem	la?am	waheng	'molar tooth'
*lima	lima?	kamay	'hand'
*tuduq	ta-tozoq	t <ar>odoq</ar>	'finger'

Sakizaya may have been the very first split from Proto-Amis, as shown in Figure 2:

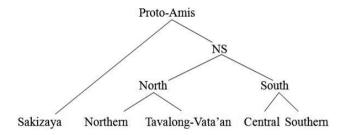


Figure 2. Amis subgrouping

More careful work is required to find further evidence to confirm or disconfirm this alternative subgrouping; cf. Figure 1 in Section 2.2 above.

3.3 Lexical innovations distinguishing North and South dialect groups

Lexical innovations exclusively shared by the North dialect group (Sakizaya, Northern, and Tavalong-Vata'an) include *bungah > tangah 'head' (cf. vongoh in the South dialect group (Central and Southern)). Lexical innovations exclusively shared by the South dialect group include *Rumaq > minokay 'go home' (cf. mo-lomag in the North group), *beRek > ciciw 'piglet' (cf. belek in the North group). These lexical innovations provide further evidence for distinguishing the two primary subgroups, North and South.

North	South	Gloss	PAN forms
A			
tangah	vongoh	'head'	*bunguh
В			
mo-lomaq	mi-nokay	'go home'	*Rumaq
belek	ciciw	'piglet'	*beRek

Table 10. Exclusively shared lexical innovations in the North or South group

Tavalong and Vata'an have more than one exclusively shared lexical innovation, pala? 'cultivated field' vs. omah < *qumah in all the other dialects; s<in>avel 'vegetable' vs. lateng < *NaCeng in other dialects.

4. Discussion

Mutual lexical borrowing may have taken place between dialects that are geographically adjacent to each other, such as between Sakizaya and Northern, and between Central and Southern; see appendix. Tavalong and Vata'an are geographically located between Northern and Central dialects, so it is conceivable that they may have had much mutual lexical borrowing with both the Northern dialect to the north and the Central dialect to the south. This may explain why we find that Tavalong and Vata'an share a fairly large number of the same or similar lexical forms with both groups.

Linguistically modern Sakizaya is definitely a dialect of Amis, not a separate language from Amis, even though it has some peculiar features not found in any other Amis dialects and it has been officially recognized as a separate ethnic group by the Council of Indigenous Peoples in Taiwan.

Where was the center of dispersal of Amis dialects? Linguistic evidence indicates that Central and Southern are very similar and extremely close to each other, while the other Amis dialects in the north are far more diverse; see Tables 4 and 5 above. Notice that Sakizaya, which seems drastically different from all the other dialects (see Section 3.2 above) and originally settled in the northern tip of the Amis settlement of Hualien, was attacked by the Qing government in 1878 and scattered to the geographical area of the central dialects (Mabuchi 1954). It is most likely that Amis originated in the north rather than in the geographical center or south of Hualien. Most of the Amis oral traditions also say that Amis originated in the north.

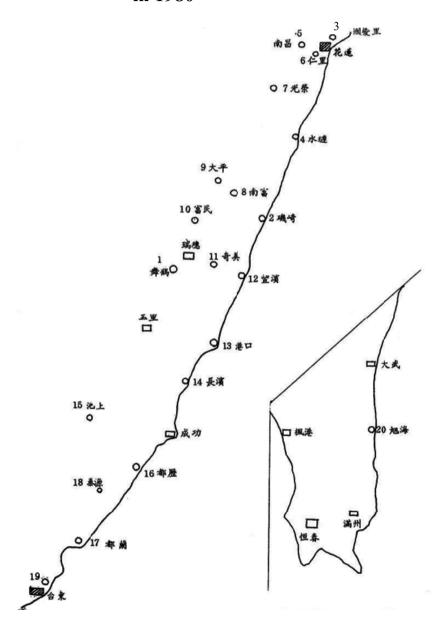
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[Appendix] Geographical distribution of the Amis villages investigated by Shigeru Tsuchida in 1980



阿美語五大方言的分群

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本文根據土田滋在1980年調查阿美語五大方言,從二十個 地點所記錄的 593 個詞彙資料,仔細進行比較研究,整理出方言 分化的過程及其親疏遠近的關係,都以詞彙差異和特殊音韻演 變為證據。阿美語有可能先分化為北部和南部兩大方言群,再 進一步分化。另外一個可能是撒奇萊雅最先分化出來,再進一步 分化為北部和南部兩大方言群。各種證據顯示,花蓮北部地區的 方言最分歧,因此最有可能是阿美語的發源地。

關鍵詞:阿美、方言、分群、詞彙、演變