CHAPTER 51

Pazeh and Kaxabu

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51.1 Introduction

The goal of the present paper is to provide a contrastive study of two moribund dialects, Pazeh and Kaxabu. The data on Pazeh date back from the early 1970s until the late 1990s, while the data on Kaxabu were largely collected after 2010 (see § 51.1.3). There are thus some discrepancies in terms of language change and language loss. Kaxabu exhibits interesting morphosyntactic changes that are due to language contact and language obsolescence.

51.1.1 *Geographical Distribution and Speakers*

Pazeh (also known as Pazih) and Kaxabu are two closely related dialects of a language referred to as Pazeh-Kaxabu in the literature (see Ferrell 1968).[1] They are both spoken in Puli Township, Nantou County: Pazeh (P) is spoken in the village of Auran, while Kaxabu (K) is spoken in four villages, Shou-Cheng, Wu-Gong-Lun, Da-Nan, and Niu-Mian-Shan. Inhabitants of these two communities mainly speak Taiwan Southern Min (henceforth TSM) in daily conversation. Pazeh is still spoken by a few speakers, but the exact number is not currently known; Kaxabu is spoken to some extent by about 10 people over 70 years old (as of May 2021). At the time of writing, the Pazeh-Kaxabu language is still not officially recognized by the government.

Ferrell (1968) was the first to mention dialectal distinctions between Pazeh and Kaxabu, while Blust (1999b, p. 323) states that "the relatively clear-cut dialect distinction that Ferrell [1968] suggests should be viewed with caution". However, there is no reason to doubt their dialectal relationship. Pazeh and Kaxabu primarily differ phonologically (see § 51.2.1) and lexically, including (P) *tawtaw* vs. (K) *baunay* 'peanut', (P) *lasu* vs. (K) *pinaxuan* 'rice'. Morphosyntactically, they used to share similar linguistic traits, but there are now noticeable differences between them, because in recent years, Kaxabu has undergone the loss of productivity of certain verbal and voice affixes, which have been replaced by other morphosyntactic devices as a result of language contact. As a result, Pazeh preserves many more archaic features than Kaxabu.

51.1.2 *Position within Austronesian Phylogeny*

The position of Pazeh and Kaxabu within the Austronesian phylogeny has not yet been definitively settled, and four different hypotheses have been given in the literature, namely, those of Li (1985), Blust (1999a, 1999b), and Sagart

1 Raleigh Ferrell did fieldwork in March 1969. He submitted an article in the summer of 1969, which was published in 1970 but backdated November 1968.

(2004). Reassessing the position of Atayal among the Formosan languages, Li (1985) posits, on the basis of phonological and lexical evidence, the existence of a "Northern group", which divides into two major subgroups, Atayalic and Northwestern, which comprises Pazeh and Saisiyat (PS), on the one hand, and Taokas, Babuza, Papora, and Hoanya (TBPH) on the other. Following Li's (1985) hypothesis, Blust (1999a) suggests that Pazeh, Kulon, and Saisiyat (with the exclusion of TBPH) form one of the ten primary subgroups descending from PAN. Two types of evidence are given by Blust—the shift of PAN *C to /s/ and the shift of PAN *q to /ʔ/ in Saisiyat and ∅ in Kulon and Pazeh, none of which is unique to these three languages, the first also being found in the Western Plains languages (Taokas, Hoanya, and Papora), while the second also appears in several other languages, including East Formosan, Tsouic, the Western Plains, and Rukai. Within Blust's (1999b, p. 338ff.) revised classification, on the basis of lexical evidence, Pazeh is found to be related to a different primary subgroup, that of the Western Plains (which also includes Thao), as they probably share the following lexical innovations: Proto Western Plains (PWP) *bunaj, (P) *bunad* 'sand', PWP *iRi, (P) *ixi* 'left side', PWP *kahuy, (P) *kahuy* 'wood, tree', PWP *kaul, (P) *kaur* 'hook', PWP *NaSuq, (P) *lasu* 'husked rice'. Sagart (2004) proposes that Luilang, Pazeh, and Saisiyat subgroup together based on their shared quinary numeral system, which can be reconstructed for PAN. That is to say, numerals up to five are monomorphemic, while 'six' to 'nine' are additive forms (5 + 1, 5 + 2, 5 + 3, 5 + 4). This system is best preserved in Pazeh.

51.1.3 *Documentation and Previous Linguistic Studies*

Vocabulary lists were first recorded by Bullock (1874), Inō (1897, 1899)[2], and Ogawa (2006) for Pazeh, which was later documented by Ferrell (1968), Tsuchida (1969), Lin (1989, 2000), Blust (1999b), Li (1998, 2000), and Li & Tsuchida (2001, 2002). A few linguistic aspects are discussed in other sources (see, among others, Zeitoun & Huang 2000, Lu 2003, Zeitoun & Wu 2006). Many texts have been collected for Pazeh (Li & Tsuchida 2002).

There are fewer studies on Kaxabu. Long after Ferrell (1968), Lim (2016) provides the first thorough phonological study of Kaxabu, while Lim (2012, 2019, 2022), Lim & Zeitoun (2023), and V. Chen (2016) explore morphosyntactic aspects. A few texts have been made available: one text was recorded by Ferrell (1968); one text and five songs are included in Li & Tsuchida (2002); Quan (aka Wong, 2018) provides the longest text but without any linguistic analysis. While phonological and lexical discrepancies between Pazeh and Kaxabu

2 Fewer than 180 words are recorded by Bullock (1874) and Inō (1897, 1899).

have been recorded by Ferrell (1968) and Li & Tsuchida (2001), there is only morphosyntactic comparison of these two dialects (on interrogative constructions, see Y. Chen 2018), a gap that the present paper intends to fill. Our analysis of Pazeh relies primarily on the documentation that has been published since the early 1970s and to a lesser extent our own data collection.[3] Note that we attempted to conduct fieldwork on Pazeh, but were unable to collect reliable language data that could be compared with our Kaxabu corpus, which has been compiled primarily through the fieldwork of Hong-sui Lim since 2014.[4]

51.2 Phonology and Orthography

Pazeh and Kaxabu have fairly simple phonological systems that quite closely reflect the system reconstructed PAN (Blust 1999b, Li & Tsuchida 2001).

51.2.1 *Phonemic Inventory and Orthographic System*

We follow earlier studies in assuming that Pazeh has 17 consonants and 4 vowels, while Kaxabu features 16 consonants and 6 vowels. The orthographic system used in this chapter was developed by Li (1992, p. 54) for Pazeh and by Lim (2015) for Kaxabu. In Tables 51.1. and 51.2, the orthographic symbols are in italics and placed on the left, while the IPA symbols are placed on the right in slashes. The velar nasal /ŋ/ is represented by *ng*, the glide /j/ by *y*, and the mid vowels /e/ and /ə/ are transcribed respectively as *é* and *e*; in the text, the glottal stop [ʔ] is indicated by an apostrophe, ’.

TABLE 51.1 Pazeh and Kaxabu consonants

		Bilabial	Alveolar	Velar	Pharyngeal / Glottal	
Stop	VL	*p* /p/	*t* /t/	*k* /k/		
	VD	*b* /b/	*d* /d/	*g* /g/		

3 Elizabeth Zeitoun worked with the last known fluent speaker of Pazeh (Chin-yu Pan) in 2000, 2001, and 2005 and more recently with Mei-yu Pan. She also worked at times with the two Kaxabu speakers Tik-hing Phuann (male, born in 1925, deceased 2021) and Ing-Lik Phuan (male, born in 1935).

4 Hong-sui Lim worked mostly with Tik-hing Phuann and Ing-Lik Phuann until 2021. The first was the oldest informant in the Kaxabu community and the second the compiler of the

TABLE 51.1 Pazeh and Kaxabu consonants (*cont.*)

		Bilabial	Alveolar	Velar	Pharyngeal / Glottal	
Nasal		*m* /m/	*n* /n/	*ng* /ŋ/		
Fricative	VL		*s* /s/	*x* /x/	*h* (P)/ħ/, (K) /h/	
	VD		*z* /z/			
Lateral			*l* /l/			
Flap			*r* /ɾ/ (P)			
Glide		*w* /w/	*y* /j/			

TABLE 51.2 Pazeh and Kaxabu vowels

	Front	Central	Back
High	*i* /i/		*u* /u/
Mid	*é*/e/ (K)	*e* /ə/	*o* /o/ (K)
Low		*a* /a/	

The glottal stop, which has been recorded sporadically in Pazeh (Li & Tsuchida 2001, 2002) and Kaxabu (Lim 2016), is not included here, as it is predictable in initial or final position or is found when a morpheme is added to a base. If necessary, it will be indicated as ʼ.[5] There is some disagreement regarding

Kaxabu dictionary (see Phuann 2015). Data were also elicited and/or confirmed with Ing-Ngoo Phuann (born in 1930), Giok-Sim Tsu, and Miau-Im Thoo (both born in 1936).

5 With the deaffixation of *='en* 'UVP', *='an* 'UVL', and *='i* 'IMP.AV/IMP.UVP' in Kaxabu, the glottal stop has become contrastive in certain environments. Compare, for instance, *holak'en* [hol**ak?ən**] 'steal (UVP)' and *saaken* [s**aakən**] '(side) dish (INST.NMLZ)', *aitukuan* [aituku**an**] 'seat (LOC.NMLZ)' and *aituku'an* [aituku**?an**] 'sit (UVL)', *pakahalipit'i!* [pakahalip**it?i**] 'A little thinner!' and *tangiti* [taŋ**iti**] 'angry'.

Pazeh in terms of both phoneme count and pronunciation, which are not taken into account here. Ferrell (1968) recognizes the phonemic status of a voiced lateral /ɬ/, which he distinguishes from /ɾ/, and contrasts with /n/ in word-final position, e.g., /ɾahaɬ/ ~ /ɾahan/ 'mouth'.[6] Lin (1989, p. 196) distinguishes the retroflex /ɖ/ from the alveolar /d/, but claims that there is no distinction between /ɬ/ and /l/, and states that /l/ is pronounced as /ɾ/ and even confused with /d/. Lin (1989, pp. 196–197, 2000, p. 44) mentions that *x* /x/ and *h* /h/ are pronounced respectively as [χ] or [h] and [ɦ]. Blust (1999b, p. 325) contrasts *t* /t/, which is said to be postdental, and *d* /d/, which is an alveolar.

Differences between Pazeh and Kaxabu include the following. The sound *h* is a pharyngeal fricative in Pazeh but has become a glottal in Kaxabu, perhaps under the influence of TSM. Lin (2000, p. 44) and Li & Tsuchida (2001, p. 2) report that there is a free variation between [k] and [q], as in *hakezeng* [hakəzəŋ] ~ [haqəzəŋ] 'old'. There are also pronunciation differences between Pazeh and Kaxabu regarding *ih*/*iah* in final position. Compare (P) *mazih* [mazɛh] ~ (K) *maziah* [maziah] 'cooked', (P) *pazih* [pazɛh] ~ (K) *paziah* [paziah] 'Pazih' ~ (P) *alih* [alɛh] ~ (K) *aliah* [aliah] 'almost'.

The flap *r* /ɾ/ found in Pazeh has been lost in Kaxabu.[7] Compare (P) *rima* /ɾima/ 'hand' and (K) *ima* /ima/, (P) *manarip* /manaɾip/ 'close one's eyes' and (K) *manaip* /manaip/. The loss of *r* may lead to gliding and resyllabification in word-medial position, as in (K) *mataw* /mataw/ vs. (P) *mataru* /mataɾu/ 'big', and vocalic compensatory lengthening in word-final position, as in (K) *makatoo* /makatoo/ vs. (P) *makatur* [makatoɾ] 'shave one's beard'. If the vowel *a* /a/ occurs before and after *r*, as in (P) *paray* /paɾaj/ 'money', there is a phenomenon of haplology, with the deletion of the identical vowel *a*, after the loss of the flap *r*, cf. (K) *pai*. No gliding is found here, as lexical words need to be minimally disyllabic. The loss of *r* in Kaxabu may lead to superficially similar forms, which

6 There is indeed a contrast between Pazeh *-l* and Kaxabu *-n*, preserved by some Kaxabu elders. Compare, for instance, (P) *bintul* /bintul/ and (K) *bintun* /bintun/ 'star', (P) *udal* /udal/ and (K) *udan* /udan/ 'rain', (P) *belebel* /bələbəl/ and (K) *beleben* /bələbən/ 'banana'. There are other phonological sound changes that are discernible among the younger generation of Kaxabu speakers, *-s* ~ *t*, as in *asikis* /asikis/~ *asikit* /asikit/ 'painful', *d* ~ *l*, as in *tadaw* /tadaw/~ *talaw* /talaw/ 'knife', *e* ~ *u selem* /sələm/ ~ *sulum* /sulum/ 'pork', *x* ~ *k͡x*, as in *tuxubus* /tuxubus/~ *tuk͡xubut* /tuk͡xubut/ 'sweet' (see Lim 2016).

7 In a few instances, the flap /r/ is reflected as l /l/ in Kaxabu, for instance (P) *rupazeng* /ɾupazəŋ/ vs. (K) *lupazeng* /lupazəŋ/ 'tip', (P) *raulu* /ɾaulu/ vs. (K) *laulu* /laulu/ 'turtle', (P) *tapuru* /tapuɾu/ vs. (K) *tapulu* /tapulu/ 'Taiwanese'. In the case of Pazeh *paray* /paɾaj/ 'money', we find the doublets *pai* /pai/ and *palai* /palaj/ in Kaxabu.

are not in fact cognate. Compare, for instance, Kaxabu *azem* /azəm/ 'New Year' and Pazeh *azem* /azəm/ 'stupid' (note that in Pazeh, the word for 'New Year' is *razem* /ɾazəm/).

Kaxabu has developed a phonemic contrast between /i/ and /e/, as well as between /u/ and /o/, as shown in the following (near) minimal pairs: (K) *hipu* /hipu/ 'face' vs. *hépet* /hepət/ 'cockroach', *tunu* /tunu/ 'brain' vs. *tono* /tono/ 'stupid'. The diphthong *au* /au/ in Pazeh, occurring in a CVVC syllable structure in word-final position, has monophthongized and corresponds to *o* in Kaxabu. Compare (P) *tibaun* /tibaun/ and (K) *tibon* /tibon/ 'mosquito', (P) *mudaux* /mudaux/ and (K) *mudok* /mudok/ 'drink'. We have not witnessed the monophthongization of the diphthong *ai* /ai/ to *é* /e/.

There are six loan phonemes in Kaxabu, which come mostly from Taiwanese Southern Min, three aspirated stops /pʰ/, /tʰ/, /kʰ/, two affricates /ts/, /tsʰ,/ and the nasalized vowel /ã/, which are written as *pʰ*, *tʰ*, *kʰ*, *ts*, *tsʰ*, and *ann*, respectively; cf. *pʰapʰalit* /pʰapʰalit/ 'wing', *tʰay* /tʰaj/ 'how come?', *kʰa* /kʰa/ 'more', *maputsiék* /maputsiek/ 'dazzled', *tshay* /tsʰaj/ 'where?', *mangayann* /maŋajã/ 'blue'.

51.2.2 *Distribution*

In both Pazeh and Kaxabu, all the consonants can appear in word-initial and word-medial positions (see Tables 51.3–51.4). The voiced stops *b*, *d*, *g* /b, d, g/ and the voiced fricative *z* are not found in word-final position, and Blust (1999b) posits a voicing process in intervocalic position in Pazeh, e.g., Pazeh *malep* /maləp/ 'close (AV)' vs. *alebi* /aləbi/ 'close (IMP.UVP)'. There is no such voicing (or devoicing) in Kaxabu.

51.2.3 *Syllable Structure, Stress, and Intonation*

Pazeh and Kaxabu allow the following syllable structures, CV, CVV, CVN, and CVC, which can combine as CV.CVC / CV.CVN, CVV.CVC / CVV.CVN, CVN.CVC / CVN.CVN, but never as *CVC.CVC / *CVC.CVN, e.g., (P/K) *dadas* 'sweet potato', *meken* 'eat (AV)', *saaken* 'dish', (P) *bintul* /(K) *bintun* 'star'. Words can consist of three to five syllables (or more, e.g., *maxadaxedaxe* 'become a ghost') due to affixation or reduplication but follow the same syllabic distribution.

Stress falls on the last syllable in both dialects and moves onto the last syllable when a suffix attaches to a base, e.g., *meken* [məkə́n] 'eat (AV)' vs. *takani* [takaní] 'Let's eat! (HORT)'. In contrast to Pazeh, pitch in Kaxabu is intrinsically related to stress, perhaps as a result of language contact. In Kaxabu, the stressed syllable has a high pitch (henceforth H). It follows a low pitch if the word is disyllabic, e.g., *punu* 'head' (L.H), or a mid pitch (M) if the word is trisyllabic, as in *tulala* 'flower' (L.M.H). Words of four and five syllables rep-

resent a combination of disyllabic and trisyllabic, respectively: L.H.L.H, e.g., *dinaluman* 'domestic animals', L.H.L.M.H, e.g., *aba'abasan* 'middle-aged people'. In all these instances, the first syllable of the word is always a light syllable. If a word contains a heavy syllable in initial position, the first syllable is H rather than L. In disyllabic words, the pitch is H.H, as in *dauik* 'eye'. The first high syllable is followed by a low syllable and another high syllable in a trisyllabic word, e.g., *saabazu* [sa:bazu] 'soap'. Words of four and five syllables have the following pitch: H.L.M.H, as in *saatikipu* [sa:tikipu] 'stairs', and H.L.H.L.H, as in *maatonotono* [ma:tonotono] 'fight with each other.'

TABLE 51.3 Distribution of consonants in Pazeh and Kaxabu in word-initial position

#CV	**#C*a*_**	**Gloss**	**#C*i*_**	**Gloss**	**#C*u*_**	**Gloss**	**#C*e*_**	**Gloss**
p	*patakan*	bamboo	*pila*	money	*punu*	head	(P) *pedesax* (K) *pedesak*	shine
t	*tadaw*	knife	*tilikat*	trap	*tubus*	sugarcane	(P) *terehen* (K) *teehen*	black
k	*kaxang*	crab	*kixiw*	hemp fibre	*kuang*	not exist	*kelem*	stingy
b	*babaw*	above	*binayu*	mountain	*buxu*	body	*bekes*	hair
d	*dadas*	sweet potato	*dinaluman*	domestic animal	*dulut*	tail	*delem*	corn
g	*gagam*	figure	*giu*	same name	*gunugun*	bucket	(P) *gesia*	beggar
m	*magizem*	strong	*midem*	sleep	*mulasi*	rice plant	*meken*	eat
n	*nahaza*	have	*nita*	our	*nuang*	cow	–	–
ng	*ngadus*	treetop	–	–	–	–	–	–
s	*salaman*	bowl	*siatu*	clothes	*sumay*	rice	*selem*	grease
z	*zaaxu*	aborigine	*ziku*	elbow	*zukuzuk*	corner	*zezet*	scales
x	*xalam*	vegetable	*xipu*	female	*xumak*	house	*xesek*	stop
h	*hakezeng*	old	*hinis*	heart	(P) *hubih* (K) *huza*	shellfish relatives	(P) *heray* (K) *helay*	lazy
r (only in P)	*rangaw*	fly	*rizik*	bottom	*rutuh*	monkey	*rese*	tears
l	*lalawa*	cloth	*lizax*	sun	*luzung*	mortar	*lepeng*	tooth
w	*wazu*	dog	*wili*	leech	–	–	–	–
y	*yaku*	I	–	–	(P) *yuka*	again	–	–

TABLE 51.4 Distribution of consonants in Pazeh and Kaxabu in word-final position

VC#	_aC#	Gloss	_iC#	Gloss	_uC#	Gloss	_eC#	Gloss
p	*tilap*	roof	*kakazip*	chopsticks	*musiup*	stroke	*xasep*	five
t	*inusat*	wine	*halipit*	thin	*ahut*	west	*lapet*	electricity
k	*kakak*	crow	*lamik*	cold	*ituk*	top	*mutalek*	cook
b	–	–	–	–	–	–	–	–
d	–	–	–	–	–	–	–	–
g	–	–	–	–	–	–	–	–
m	*ayam*	bird	*aakim*	female name	*dalum*	water	*magizem*	strong
n	*balan*	cat	*takin*	basket	*sibabun*	duck	*iteken*	low short
ng	*haidang*	bean	*lubahing*	red	*kuzung*	shrimp	*hakezeng*	old
s	*ilas*	moon	*mamais*	woman	*kakumus*	hat	*xames*	root
z	–	–	–	–	–	–	–	–
x	*balax*	tool	(P) *masirix* (K) *masilix*	smooth	*kalikux*	nail	*tangadex*	bear
h	*lailah*	clam	(P) *alih*	near	–	–	*kizeh*	stand up
r (only in P)	*dauguar*	bamboo hat	*saagirigir*	saw	*muxaur*	cut grass	*mikuder*	sick
l (only in P)	*rahal*	mouth	*takil*	basket	*mitul*	get up	*hatel*	hundred
w	*alaw*	fish	*isiw*	you	–	–	–	–
y	*gamay*	horse	–	–	*hapuy*	fire	–	–

51.2.4 *Phonological Rules and Morphophonemic Alternations*

Pazeh and Kaxabu share a few phonological rules. The two fricatives *s* and *z* undergo palatalization, e.g., *siatu* [ɕiatu] 'clothes', *ziku* [ʑiku] 'elbow'. Lin (2000, p. 60) mentions that *i* and *u* are lowered to [e] and [o] before /h/, e.g., (P) *rakihan* [ɾakehan] 'child', *uhuda* [ohoda] 'before'. Lowering must have been also found in Kaxabu, since this is one of the factors that led this dialect to develop mid-vowels, along with the loss of the flap /ɾ/ (see § 51.2.5).

The prefix *mu-* 'AV' exhibits the same three phonological allomorphs in both dialects, *mi-*, *me*, and *m-*, whose occurrence depends on (i) the vowel of the first syllable of the root and (ii) the absence of an onset. The prefix *mu-* attaches to roots with a vowel *u* or *a* in the first syllable, e.g., ***mu-kudung*** 'hit, strike with something heavy (AV)', ***mu-baxa*** 'give (AV)'; the prefix *me-* attaches to those whose first vowel is *e*, ***me-depex*** 'read, study (AV)'; the prefix *mi-* attaches to those whose first vowel is *i*, ***mi-kiliw*** 'call (AV)'; the prefix *m-* attaches to vowel-initial roots, e.g., ***m-adu*** 'put, put away (AV)'.

51.2.5 *Diachronic Phonology*

The main sound changes that have taken place in Pazeh and Kaxabu include the following: (1) the mergers of *C and *S to *s*, *d and *z to *d*, *k and *g to *k*, and *s and *j to *z* and *-t*; (2) the complete loss of *q; and (3) the split of *S into *s* and h. For a more detailed discussion, see Blust (1999b, pp. 332–337) and Li and Tsuchida (2001, pp. 6–9).[8]

(1)	*p	>	*p* /p/	e.g.,	*panaq > *mu-pana* 'shoot, throw', *Sapuy > *hapuy* 'fire', *sepsep 'suck' > *mu-zezep* 'kiss (AV)'
	*t	>	*t* /t/	e.g.,	*tumaNa > *tumala* 'hear', *kita > *mi-kita* 'see (AV)', *Sepat > *supat* 'four'
	*k	>	*k* /k/	e.g.,	*sakay > *zakay* 'walk', *Sajek 'smell' > *mu-sazek* 'smell (AV)'
	*q	>	∅	e.g.,	*qabaRa > *abaxa* 'shoulder', *bajaq > *ma-baza* 'know'
	*b	>	*b* /b/	e.g.,	*bukeS > *bukes* 'hair', *qabu > *abu* 'ashes'
	*d	>	*d-* /d/	e.g.,	*daReq > *daxe* 'soil, ground'
	*g	>	*k* /k/	e.g.,	*gemel > (P) *me-kemer* 'grag (AV)', *tageRang > *takaxang* 'ribs'
	*s	>	*z* /z/	e.g.,	*siku > *ziku* 'elbow', *wasu > *wazu* 'dog'
		>	*-t* /-t/	e.g.,	*Cumangis > *mangit* 'cry (AV)'
	*z	>	*d* /d/	e.g.,	*zalan > (P) *daran*, (K) *daan*, *quzaN > (K) *udan* 'rain'
	*S	>	*s* /s/	e.g.,	*Sajek 'smell' > *mu-sazek* 'smell (AV)', *usa > *usa* 'to go', *bukeS > *bekes* 'hair'
		>	*h* /h/	e.g.,	*Sapuy > *hapuy* 'fire', *kaSiw > *kahuy* 'tree' (<M)
	*C	>	*s* /s/	e.g.,	*Cau > *saw* 'person', *qaCay > *asay* 'liver', *RameC > *xames* 'root'
	*N	>	*l* /l/	e.g.,	*Nanguy > *languy* 'swim', *daNum > *dalum* 'water', (P) *udal* 'rain'
		>	*-n* /n/ (K)	e.g.,	*quzaN > *udan* 'rain'

8 The reflexes of *r require further investigation. Li & Tsuchida (2001, p. 9) provide two dubious examples that show that PAN *r > (P/K) *x*, as in *tagerang (where Blust's (1999b, p. 363) reconstruction is *tageRang) > *takaxang* 'rib', *baruj > *baxut* 'dove'; in their analysis, PAN *r and *R have merged as *x*. Blust (1999b, p. 334), on the basis of three examples, posits that PAN *r >

*l	>	*r* /ɾ/ (P)	e.g.,	*langaw > (P) *rangaw*, (K) *angaw* 'house-fly', *bali and ∅ (K) > (P) *bari*, (K) *bai* 'wind', *Cemel > (P) *semer*, (K) *seme* 'grass'
*R	>	*x* /x/	e.g.,	*Rumaq > *xuma* 'house', *zaRum > *daxem* 'needle'
*j	>	*z* /z/	e.g.,	*mujing > *muzing* 'nose'
	>	*-t* /-t/	e.g.,	*bunaj 'sand' > *bunat* 'sand'
*m	>	*m* /m/	e.g.,	*mujing > *muzing* 'nose', *(qa)lima > (P) *rima*, (K) *ima* 'hand', *qayam > *ayam* 'bird'
*n	>	*n* /n/	e.g.,	*panaq > *mu-pana* 'shoot, throw', *zalan > (P) *daran*, (K) *daan* 'road'
*ng	>	*ng* /ŋ/	e.g.,	*Nanguy > *languy* 'swim', *dadang > *dadang* 'broil'
*w	>	*w* /w/	e.g.,	*wasu > *wazu* 'dog', *kawaS > *kawas* 'year', *Cakaw > *ma-sakaw* 'steal (AV)'
*y	>	*y* /j/	e.g.,	*qayam > *ayam* 'bird'
*a	>	*a* /a/	e.g.,	*qabu > *abu* 'ash', *sakay > *zakay* 'walk'
*i	>	*i* /i/	e.g.,	*bali > (P) *bari*, (K) *bai* 'wind'
*u		*u* /u/	e.g.,	*DuSa > *dusa* 'two', *uSa > *usa* 'go'
*e		e /ə/	e.g.,	*Cemel > (P) *semer*, (K) *seme* 'grass', *taNek > *mu-talek* 'cook'

51.3 Morphology

Pazeh and Kaxabu are both agglutinative languages, that is, words typically contain more than one morpheme with an easy identification of each morpheme. However, Kaxabu is now undergoing morphological change and becoming a more isolating language, as result of language contact.

51.3.1 *Morphological Units*

Pazeh and Kaxabu morphological units include both free and bound morphemes. Free morphemes include lexical words, which are usually disyllabic and occur independently, e.g., *wazu* 'dog', *kita*! 'see!', and grammatical words, which are mono- or disyllabic, such as (P) *u*/*yu*/*iu*, (K) *iu* 'and', *di* 'LOC'. Bound morphemes include (lexical) bound roots, most notably constituting stative

r, *banger > *tu-banger* 'smelly, malodorous', **kureqit* > *mu-kurit* 'to scratch, as a cat', *turik > *turik-an* 'spotted, dappled', and argues that *r merged with *l rather than *R.

verbs, e.g., |*ideng*| vs. *ha-ideng* 'heavy', clitics (although cliticization is not reflected in the orthography), e.g., *=lia*[9] 'COS', and affixes, e.g., *pa-* 'CAUS', as in *pa-kita* 'cause to see'.

51.3.2 *Morphological Processes*

Some differences can be observed between Pazeh and Kaxabu in the areas of affixation and reduplication. They are discussed in turn in § 51.3.2.1 and § 51.3.2.2, and a brief outline of compounding follows in § 51.3.2.3.

51.3.2.1 Affixation

Pazeh and Kaxabu have prefixes, infixes, suffixes, circumfixes, and complex affixes and include both grammatical and lexical affixes, which attach mostly on nouns and verbs, e.g., *saa-ken* 'side dish', *m⟨in⟩e-ken* 'eat (AV.PFV)', (P) *da~depex-an*, (K) *depex-an* 'school', *ta-kan-i* 'let's eat (HORT.AV)', *pa-ka-lamik* 'make cold'. Interesting to note is that Li & Tsuchida (2001, pp. 10–19) report 68 affixes in Pazeh, while only 24 of these affixes are found in Kaxabu. This discrepancy can be explained by two factors. First, a number of affixes are no longer productive in Kaxabu. They may have been recorded in the past, but cannot be elicited anymore and are no longer found in Kaxabu texts collected in the past few years. For instance, Pazeh *kali-meken* 'fond of eating' has been replaced by *haaput meken* 'fond of eating' instead. Other affixes are found only rarely. Compare (2a–b) and (3a–b):

(2) Kaxabu

a. *ta-kan-i* *sumay!*
HORT-eat-HORT.AV rice
'Let's eat!'

b. **ta-dok-i* *inusat!*
HORT-drink-HORT.AV wine
Intended for: 'Let's drink!'

(3) Pazeh

a. *ta-kan-i* *sumay!*
HORT-eat-HORT.AV rice
'Let's eat!'

9 We follow the conventional orthography for the clitic *=lia*, actually pronounced [lja].

b. *ta-daux-i* *inusat!*
HORT-drink-HORT.AV wine
'Let's drink!'

Second, Kaxabu is now undergoing a process of "deaffixation"[10] as a result of language contact. Specifically, three affixes (*-en* 'UVP', *-an* 'LOC.NMLZ', and *-i* 'IMP') have become clitics; cf. *='en* 'UVP', e.g., *holak='en* 'be robbed', *='an* 'UVL', e.g., *a-ituku='an* 'sit (UVL)', and *='i* 'IMP.AV/IMP.UVP', e.g., *ngazip='i*! 'Bite (AV)!', *kani='i* 'Eat it (UVP)!'; two others have become free words; cf. *paka* 'CAUS' and *mati* 'to wear'.

Two notes are in order. First, the change from affixes to more independent morphemes is regulated by the minimal word requirement, i.e., every lexical word must consist of at least two syllables. Thus, monosyllabic affixes have become clitics, and bimorphemic affixes have become independent words. Second, these morphemes maintain their functions as affixes, e.g., (K) *kudis-en* 'cut (UVP)', *a-ituku-an* 'seat (LOC.NMLZ)', *patus-i*! 'Shoot (with a gun) (IMP.AV)!', *pa-ka-tahayak* 'thank you (IMP.AV)!' (lit. 'make you (feel) tired'), *mati-kakumus* 'wear a hat (AV)'. Lim (2019) shows that when an enclitic is attached to a base in Kaxabu, its phonological characteristics are different from that of an affix in at least three respects. First, the (derived) word does not undergo resyllabification: the coda of the original form does not become the onset of the derived form, e.g., *nga.zi.pen; nor is there any voicing of (original) coda, e.g., *nga.zi.ben (as is found in Pazeh; see Li & Tsuchida 2001, p. 19). Second, stress does not shift rightward onto the last syllable. Finally, the word does not feature the expected pitch, e.g., *ngazip='en* is pronounced [ŋa.zip.ʔən], with the L.H.L pitch rather than the expected *L.M.H pitch (see Lim 2016, p. 129, 2019).

51.3.2.2 Reduplication

Full and partial reduplication is highly productive in Pazeh, but only sporadic in Kaxabu. In both dialects, reduplication occurs primarily on verbs and marks plurality when found on nouns, e.g., *apu~'apu* 'ancestors' (< *apu* 'grandmother'), *aba~'abasan* 'middle-aged people' (< *abasan* 'elder siblings'). Full reduplication consists of the reduplication of two syllables at most minus the coda.[11] Reduplication of dynamic verbs implies a continuous meaning, e.g.,

10 Deaffixation is an instance of degrammaticalization (Viti 2015).

11 Unlike Pazeh, Kaxabu may undergo full reduplication with the coda. Compare Kaxabu *maa-kudung~kudung* and Pazeh *maa-kudu~kudung* 'beat each other'.

mi-kita~kita 'keep on seeing (AV)' (< *mi-kita* 'see (AV)'), (P) *kipu~kipud-i*! 'Keep wrapping it! (IMP.UVP)' (< *mu-kiput* 'wrap (AV)'); reduplicated stative verbs, however, have an intensive meaning, e.g., (P/K) *luba~lubahing* 'very red' (< *lubahing* 'red'). Full reduplication also occurs quite productively with reciprocal verbs to mark a plurality of relations (Lichtenberk 2000), e.g., (P) *maa-tunu~tunur* / (K) *maa-tono~tono* 'to beat one another'. Li & Tsuchida (2001, p. 21) report both CV- and CVV- reduplication as encoding the progressive aspect in Pazeh; cf. (P) *su~suzuk* 'be hiding' (< |*suzuk*| 'hide') vs. (P) *dee~depex* 'be studying, reading' (< |*depex*| 'to study, read'). Only CVV-reduplication appears in Kaxabu, e.g., (K) *kii~kita* 'be seeing' (< |*kita*| 'to see'), *dee~depex* 'be studying, reading' (< |*depex*| 'to study, read'). One distinction that is found between full reduplication and partial reduplication is that the stem that is partly reduplicated is unmarked for AV, while it is overtly marked when it undergoes total reduplication. Compare *kii~kita* 'be seeing' and *mi-kita~kita* 'keep on seeing (AV)'. C*a*-reduplication is found in both dialects, with a common nominalizing function (i.e., 'instrumental nominalization'), e.g., *da~dius* 'spoon' (< |*dius*| 'to scoop out'), *la~luzuk* 'comb' (< |*luzuk*| 'to comb'). In Pazeh, C*a*-reduplication is also used to derive locative nominals, e.g., (P) *da~depex-an* 'school' <|*depex*| 'to study, read'; as well as to encode the irrealis, e.g., (P) *da~daux-ay yaku* 'I shall drink (OPT.AV)' (Ogawa 1923, cited in Li & Tsuchida 2001, p. 76).

51.3.2.3 Compounding

Some compounds are found in Pazeh and Kaxabu. They consist of two juxtaposed nouns, as in *zezet titay* 'psoriasis' (< *zezet* 'fish scale', *titay* 'mouse'), *xumak ayam* 'sparrow' (< *xumak* 'house', *ayam* 'bird'), (K) *akhéhan beleben* 'banana seedling' (*akhéhan* 'child', *beleben* 'banana'), or one verb followed by a noun, e.g., *masezem xalam* 'garlic chives' (< *masezem* 'long', *xalam* 'vegetable'), *kanen dalum* 'fungal feet infection' (< *kanen* 'eat (UVP)',[12] *dalum* 'water') (Lim 2022).

51.4 Word Classes

Pazeh and Kaxabu distinguish 13 word classes: nouns; pronouns; verbs; coverbs (developed in Kaxabu); demonstratives; adverbs; negators; case mark-

12 The form *kanen* 'eat (UVP)' is fossilized.

ers; a topic marker (*ka*); a ligature (=*a*); conjunctions, including the coordinating conjunction (P) *u*/*yu*/*iu*, (K) *iu* 'and', and the comitative conjunction *maki* 'with'; exclamations; and interjections. Major missing classes include auxiliaries and adjectives (treated here as stative verbs). No overt distinction seems to be made between personal and common nouns. Among kinship terms, Pazeh and Kaxabu possess—in a very unusual manner—the specific terms for *iah* 'elder sister', *mamah* 'elder brother', *atan* 'elder sister-in-law', and *mahu* 'elder sister's husband'. Verbs can be divided into dynamic and stative verbs. Dynamic verbs usually take the AV prefix *mu-*, e.g., ***mu****-baxa* 'give', (P) ***mu****-baiw*, (K) 'buy', while stative verbs are marked by *ma-* (which alternates with *ka-*), e.g., ***ma****-baza* 'know'; although a few are unmarked, e.g., (P) *riak* / (K) *iak* 'good', or are prefixed by *ha-*, e.g., ***ha****-lipit* 'thin'. None of these two dialects exhibits the ⟨*um*⟩ infix, which is found productively in most Formosan languages. Rather, the main AV prefix is *mu-*, which has three allomorphs, *mi-*, *me-*, and *m-* (see § 51.2.4). Blust (1999b, p. 342) assumes that in Pazeh, "stative verbs do not participate in the focus system" and treats *ka-…-an* and *ka-…en* as circumfixal variants marking an "adversative passive", but we believe that stative verbs can be UV-marked (i.e., *ka-* should be treated as 'stative' and the alternative form of *ma-*). There are very few adverbs, (P) *re*(*e*)*zaw*, (K) *eezaw* 'only', and *hinaw* 'very', e.g., (P) *hinaw riak=a saw* / (K) *hinaw iak=a saw* [very good/beautiful LNK person] '(a) very good/beautiful person' since temporal adverbs are actually nouns, e.g., *adang=a daali* 'everyday', and other adverbial concepts are rendered by verbs, cf. (P) *inang* ~ *minang*, (K) *inah* ~ *minah* 'again (AV)'.

51.5 Syntax

In this section, aspect regarding simple and complex sentences is outlined, although the discussion of complex sentences will be rather superficial due to the limited amount of data currently available.

51.5.1 *Basic Clause Structure*

Two word orders occur in Pazeh and Kaxabu, VXS and SVX, in both AV and UV clauses, S standing for a noun or a pronoun as the nominative subject (it is unmarked when appearing in clause-initial position) and X for a non-subject undergoer in AV clauses (it is usually unmarked) and a non-subject actor (NSA) (usually preceded by the case marker *ni*) in UV clauses. Interestingly enough, in Kaxabu (but not in Pazeh), =*lia* 'COS' always attaches the nominative case marker *ki* or may follow the verb phrase as a phrasal clitic. In Pazeh, *ki* can occur independently of =lia, although the same constructions hold, e.g., Paz/Kax *mu-*

dawan ***lia=ki*** *yaku* [AV-take.a.shower COS=NOM 1SG.NEUT] 'I have bathed' and *yaku mu-dawan=****lia*** [1SG.NEUT AV-take.a.shower=COS] 'I have bathed', both clauses meaning 'I have already taken a shower'.

Pazeh and Kaxabu are ergatively aligned (Starosta 1988, Aldridge 2016), in that the nominative subject is the actor in AV clauses and the patient in UV clauses, as shown in the following examples:

(4) Pazeh (Lin 2000, p. 125)
a. *mu-kalapu rakihan* ***ki ina.***
AV-hold.in.arms child NOM mother
'Mother holds the child in her arms.'

a'. *kalapu='en* ***ni*** *ina* ***ki rakihan.***
hold.in.arms=UVP GEN mother NOM child
'The child is held by (his) mother in her arms.'

Kaxabu
b. *mu-ngazip titay* ***lia=ki balan.***
AV-bite mouse COS=NOM cat
'The cat bit the mouse.'

b'. ***titay*** *ngazip='en* ***ni*** *balan=lia.*
mouse bite=UVP GEN cat=COS
'The mouse was bitten by the cat.'

51.5.2 *Clause Types*

There are both nominal and verbal clauses in Pazeh and Kaxabu. They are negated differently: *uzay* negates nominal clauses, as in (5a'–b'), while *ini* occurs in verbal clauses, as in (5c'–d').

(5) Pazeh
a. *pazeh yaku.*
Pazeh 1SG.NEUT
'I am Pazeh.' (Li & Tsuchida 2001, p. 35)

a'. *yaku ka uzay pazeh.*
1SG.NEUT TOP NEG Pazeh
'I am not Pazeh.' (Li & Tsuchida 2001, p. 315)

Kaxabu
b. *yaku ka kaxabu=a saw.*[13]
1SG.NOM COP Kaxabu=LNK person
'I am a Kaxabu.'

b'. *yaku uzay kaxabu=a saw.*
1SG.NEUT NEG Kaxabu=LNK person
'I am not Kaxabu.'

Pazeh (Li & Tsuchida 2001, p. 314)
c. *mu-kusa ki isiw?*
AV-go NOM 2SG.NEUT
'Did you go?'

c'. *ini mu-kusa yaku.*
NEG AV-go 1SG.NOM
'I did not go.'

Kaxabu
d. *yaku meken sumay.*
1SG.NEUT AV:eat rice
'I ate.'

d'. *yaku ini meken sumay.*
1SG.NEUT NEG AV:eat rice
'I did not eat.'

Nominal clauses can be classified as equational clauses or nominal(ized) interrogative clauses (whereby *ima* 'who?' and (P) *asay*[14] / (K) *axay* 'what?' function as the predicate).

Verbal clauses include declarative, causative, imperative, existential/possessive/locative, and verbal interrogative clauses, whereby the interrogative word may either function as an argument (O) of the verb, e.g., (P) *ma-baza=siw* ***asay?*** [STAT-know=2SG.NOM what] 'What do you understand?' / (K) *isiw ka meken*

13 Note that the use of a ligature followed by the noun 'person' in (5b)–(5b') might be a change due to contact with TSM. The morpheme *ka* usually functions as a topic, but in nominal clauses, it can be tentatively analyzed as a copular, as a result of calque from TSM.

14 In contrast with Kaxabu, in Pazeh, *asay* means not only 'what?' but also 'where?' and 'why?'.

axay? [2SG.NEUT TOP AV:eat what] 'What (are/did) you eat(ing)?', or a verb (*xaima* 'how much, how many?', *muaxay* 'why, how?'), e.g., (K) ***xaima*** *kawas pay isiw*? [how year QST 2SG.NEUT] 'How old are you?', ***muaxay****=lia?* [happen:what=COS] 'What happened?/What's going on?'.

In addition to the two negators introduced briefly above, there are at least two other negators in Pazeh and Kaxabu. The negators *ana* (and the more colloquial form *ausin*)[15] 'Don't!' marks prohibition, e.g., ***ana*** *meken sumay*! [NEG.IMP AV:eat rice] 'Don't eat rice!'; *kuang* 'not exist, not have' is an existential negator, which occurs in existential/possessive clauses. The negator *kuang* is always followed by a ligature *a*, which occurs before the following NP (O), perhaps as an analogy to the vocalic ending of its affirmative counterpart (P) *nahada* / (K) *nahaza* 'exist'.

(6) Pazeh (Li & Tsuchida 2001, p. 47)
a. *yaku ka nahada paray.*
1SG.NEUT TOP exist/have money
'I have money.'

a'. *yaku ka kuang a paray.*
1SG.NEUT TOP not exist/have LNK money
'I do not have money.'

Kaxabu
b. *yaku nahaza pai.*
1SG.NEUT exist/have money
'I have money.'

b'. *yaku kuang a pai.*
1SG.NEUT not exist/have LNK money
'I do not have money.'

51.5.3 *Structure of the Noun Phrase*

51.5.3.1 Nominal and Verbal Modifiers

A noun phrase consists of a single noun, a noun preceded by a case marker, a demonstrative, or a genitive pronoun, the latter two followed by a ligature; cf. *imisiw=a siatu* [that=LNK clothes] 'that (piece of) clothes' and *naki=a siatu*

15 In Kaxabu, *ausin* can also imply an impossibility (of doing something), e.g., *yaku ausin meken selem* [1SG.NOM NEG AV:eat meat] 'I cannot eat meat', an usage that has not been reported for Pazeh.

[1SG.GEN=LNK clothes] 'my clothes'. The ligature occurs also in nominal and verbal complements; the modifier (viz. the noun or the verb) usually preceding the head (noun), as in (P) *rakihan=a siatu*, (K) *akhéhan=a siatu* [child=LNK clothes] 'the child's clothes', (K) *paxuma=a xalam* [plant=LNK vegetables] 'the vegetables that (s.o.) planted'. There is no morphosyntactic distinction whatsoever between a relative clause and any other verbal modifiers within a noun phrase: the verb that modifies the noun is always nominalized.

51.5.3.2 Case Markers

Pazeh and Kaxabu both retain (prenominal) case markers, which are no longer productively used (see Huang 2017, pp. 4–7); cf. *ki* 'NOM' (which can combine with the aspectual clitic *=lia* 'COS' as *liaki* 'COS.NOM'), *u* 'OBL', *ni* 'GEN', *di* 'LOC'. While *ki* and *ni* are found postverbally, nouns occurring in non-subject undergoer (i.e., object) position are usually bare nouns, i.e., they are not preceded by any case marker.[16] It is therefore possible that *ki* should be treated as a subject marker, and Huang (2017, p. 7) raises the possibility that *di* should be treated as a preposition in Pazeh. In Kaxabu, we find also *haki*, whose function is more difficult to ascertain. In Ferrell's (1968) text, *ha* consistently occurs before personal (free) pronouns (e.g., *ha yaku*) and could be interpreted as a copula in a pseudo-cleft sentence, as in *ba~baiw-ay tating* ***ha yaku*** [RED~buy-IRR a.little HA 1SG.NEUT] 'It is me who will buy a little (of it).' It now occurs with *ki*, as *haki*, and precedes either a noun or a pronoun. Compare (7a–c).

(7) Kaxabu

a. *mu-tuting Damuli* ***ki*** *takaat.*
AV-beat PN NOM teacher
'The teacher beat Damuli.'

b. *mu-ngazip yaku* ***haki*** *wazu.*
AV-bite 1SG.NEUT NOM dog
'The dog bit me.'

c. *imini ka yaku=a siatu* ***haki*** *imini.*
this COP 1SG.NEUT=LNK clothes NOM this
'These are my clothes.'

16 The morpheme *a* sometimes occurs after the verb, before the undergoer (i.e., object), and it is treated here tentatively as an oblique marker.

51.5.3.3 Demonstratives

There are three demonstratives in Pazeh and Kaxabu, which distinguish distance and visibility; cf. *imini* 'this', *imisiw* 'that (+DIST, +VIS)' and *isia* 'that (+DIST, -VIS)'. They function as adnominal demonstratives and (with some variability in the two dialects) as demonstrative pronouns that are usually used to refer to third-person participants and nonhuman referents. These three demonstratives can also refer to time, e.g., *isia* 'then'. Li & Tsuchida (2001, pp. 130, 132) mention locative demonstratives in Pazeh that also function as locative pronouns (cf. *iminiyan* 'here', *imisiwan* 'there', *isiaan* 'there'), but are not found in Kaxabu. There is another set of locative demonstratives, cf. *dini* 'here' and *disiw* 'there' (**disia* has not been reported), which can combine with the locative morphemes *ka* 'DIR' and *i* 'LOC', as in *kaidini* 'be, stay, reside here', *kaidisiw* 'be, stay, reside there'.

51.5.4 *Pronominal System*

Pazeh, on the one hand, has four sets of personal pronouns, neutral, nominative, genitive, and locative (see Li & Tsuchida 2001, p. 33). Kaxabu, on the other hand, has preserved only two (full) sets of pronouns, neutral and genitive. The two clitics *=aku* 'I' and *=siw* 'you' represent the remnants of the nominative clitic set that is still found in Pazeh; cf. (P) *mu-riat isiw=aku* [AV-defeat 2SG.NEUT=1SG.NOM] 'I defeated you'. On the morphological level, there is a distinction between inclusive and exclusive in the first-person plural. There is no personal pronoun for third-person participants in either set (neutral and genitive). In the neutral set, this gap is filled by the use of the three demonstrative pronouns discussed above. Gender is not marked, but plural marking is expressed by the prefixation *a-* (Zeitoun 2009), but only sporadically in Kaxabu, e.g., *imisiw* '3SG.NEUT' vs. *y-**a**-misiw* '3PL.NEUT'.

Pazeh locative pronouns encode a location, i.e., a non-core argument, e.g., (P) *alu* (*di*) ***yakuan*** *malaleng*! 'Come stay with me!' (Lit. 'Come to stay at my place!'). Due to lack of space, they will not be further discussed here (but see Li & Tsuchida 2001, p. 37). Neutral pronouns are marked morphologically with an *i*, e.g., ***i**siw* '2SG.NEUT', sometimes realized as a glide, *y*, e.g., ***y**aku* '1SG.NEUT', etc. These forms correspond to the free neutral set reconstructed by Ross (2015, p. 116) for PNucAN (cf. *i-aku, *iSu[qu], *ita, *i-ami, *i-mu[qu], *i-amu), and encode a topic, subject or non-subject undergoer (8). The second-person singular *isiw* differs from PAN *Su (Blust 1977) and PNucAN *iSu[qu] (Ross 2015). Bullock (1874, p. 40) recorded the form *issu*, and Ferrell (1968, pp. 84, 93) recorded both *isiw* and *isu*. Li & Tsuchida (2001, p. 34) mention that the change from *su* to *siw* must have happened recently, perhaps through analogy with *imisiw* 'that; 3SG.NEUT'.

TABLE 51.5 Pazeh and Kaxabu pronominal system

		NEUT		NOM		GEN		LOC	
		P	K	P	K	P	K	P	K
1SG		*yaku*		*=aku*		*naki*		*yakuan* *yakunan*	–
2SG		*isiw*		*=siw*		*nisiw*		*isiwan*	–
	CLOSE	*imini*		*mini*	–	*nimini*	–	*iminiyan*	–
3SG	DIST	*imisiw*		*misiw*	–	*nimisiw*	–	*imisiwan*	–
	INVIS	*isia*		*sia*	–	*nisia*	–	*isiaan*	–
1PL.INCL		*ita*		*=ta*	–	*nita*		*itaan*	–
1PL.EXCL		*yami*		*=ami*	–	*niam*		*yamian* *yaminan*	–
2PL		*imu*		*=mu*	–	*nimu*		*imuan* *imunan*	–
	CLOSE	*yamini*	–	–		–		–	
3PL	DIST	*yamisiw*		*amisiw*	–	*namisiw*		*yamisiwan*	–
	INVIS	*yasia*	–	*asia*	–	*nasia*	–	–	

(8) Pazeh (Li & Tsuchida 2001)

a. *yaku*$_{SUBJ}$ *mu-ngazip rumut.*
1SG.NEUT AV-bite meat
'I bite meat.' (p. 33)

a'. *mu-ngazip yaku*$_{OBJ}$ *ki wazu.*
AV-bite 1SG.NEUT NOM dog
'The dog bit me.' (p. 34)

b. Kaxabu
yaku$_{SUBJ}$ *saisiman* *isiw*$_{OBJ}$.
1SG.NEUT love.dearly 2SG.NEUT
'I love you dearly.'

b'. *isiw*$_{SUBJ}$ *saisiman* *yaku*$_{OBJ}$.
2SG.NEUT love.dearly 1SG.NEUT
'You love me dearly.'

Genitive pronouns are formed by prefixing *n-*, as is found in PAN and PNucAN (Ross 2015, p. 118); cf. PAN *n-aku, *n-iSu, *n-ita, *ni-am, *n-ami, *ni-mu. As in other Formosan languages, genitive pronouns may refer to the possessor or to the non-subject actor (9).

(9) Pazeh
a. *imini rakihan ka* ***naki.***
this child TOP 1SG.GEN
'This is my child.'

a'. *kaa~kan-en* ***naki*** *isia=a* *alaw.*
RED~eat-UVP 1SG.GEN that=LNK fish
'I will eat that fish.'

b. Kaxabu
imini ka ***nimu****=a* *beleben say?*
this COP 2PL.GEN=LNK banana QST
'Is this your banana?'

b'. *tuting='en* ***naki*** *lia=ki* *wazu.*
beat=UVP 1SG.GEN COS=NOM dog
'I beat the dog.'

A summary of case; thematic roles; and grammatical relations encoded through neutral, nominative, and genitive pronouns is given in Table 51.6.

TABLE 51.6 Case, thematic roles, and grammatical relations in Pazeh and Kaxabu

Pronominal form	**Case**	**AV**	**UV**
Clitic	Nominative	$\text{Subject}_{\text{Actor}}$	$\text{Subject}_{\text{Patient}}$
Free	Neutral	$\text{Subject}_{\text{Actor}}$	–
		$\text{Non-subject undergoer}_{\text{Patient}}$	–
		$(\text{Non-subject}_{\text{Actor}})$ (K)	–
	Genitive	–	$\text{Non-subject}_{\text{Actor}}$

There are two interesting changes that are taking place in Kaxabu and need to be mentioned here. First, the third-person plural *yamisiw* is being replaced by the second-person plural *imu*, glossed as 2>3PL.NEUT in (10b) (see also Phuann 2015). This replacement can be explained by the abandonment of the use of the third-person pronouns, which are not used as frequently as the first- and second-person pronouns.

(10) Kaxabu

a. *imu dusa mu-puza yami=a humak.*
2PL.NEUT two AV-come 1PL.EXCL.NEUT=LNK house
'You two came to my house.'

b. *imu ka kaidisiw mu-dok tamaku.*
2>3PL.NEUT TOP be:there AV-drink cigarette
'They are smoking there.'

Second, there are three ways to encode the possessive in Kaxabu, e.g., *naki=a ina* [1SG.GEN=LNK mother] (as in Pazeh), *yaku=a ina*, *yaku=é ina* [1SG.NEUT=LNK mother] 'my mother'. However, there are discrepancies among speakers. Elder speakers employ either the genitive form or the neutral form followed by *=a* 'LNK', while younger speakers prefer to substitute the possessive particle *é*, borrowed from TSM. The change from GEN=LNK N to NEUT=LNK N likely took place by analogy. More specifically, the ligature *=a* in *naki=a* must have been reanalyzed as a possessive particle when the genitive pronouns were replaced by the neutral set. This can be analyzed as indirect borrowing from TSM, since the function of Kaxabu *=a* 'LNK' in this construction corresponds to that of TSM *=e*. The possessive particle *=é* borrowed from TSM is now supplanting *=a*, yielding *yaku=é*, a case of direct borrowing.

51.5.5 *Structure of the Verb Phrase and Verbal Morphology*

The voice system of Pazeh distinguishes AV-UV, and UV subsumes UVP, UVL, and UVC (restricted, though, in terms of forms and functions).[17] Kaxabu exhibits an even more reduced voice system consisting of only AV and UVP, and the affixes *-an* or *saa-* function only as nominalizers, e.g., *depex-an* 'school' (cf. *me-depex* 'study, read'), *saabazu* 'soap' (cf. *mu-bazu* 'wash (AV)'). As a result of this deficient voice system, Kaxabu has developed the co-verb *saanu* to express instrumental (11a) or beneficial (11b) meanings, although it can also introduce an agent in pseudo-passive sentences, as in (11c), calqued from TSM (11c').

(11) Kaxabu

a. *yaku* ***saanu*** *tatoko mu-tuting wazu.*
1SG.NEUT SAANU stick AV-beat dog
'I used a stick to beat the dog.'

b. *yaku* *m-aa* *tulala* ***saanu*** *isiw.*
1SG.NEUT AV-take flower SAANU 2SG.NEUT
'I give/gave you a flower.' (Lit. 'I take/took a flower for you.')

c. *yaku=a* *akhéhan* ***saanu*** *takat* *mu-tuting.*
1SG.NEUT=LNK child SAANU teacher AV-beat
'My child was beaten by the teacher.'

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c'. *guá=ê* *gín-a* ***hōo*** *lāu-su phah.*
1SG.NEUT =LNK child HOO teacher beat
'My child was beaten by the teacher.'
Lit. 'My child (is) for the teacher to beat.'

In Kaxabu, obvious morphosyntactic changes include the lexicalization of certain forms that are no longer productive (marked by two asterisks ** in Table 51.7); the syncretism of certain forms, e.g., *='i* as 'IMP.AV/IMP.UVP', cf. *midem='i*! 'Sleep! (AV.IMP)' vs. *dadang='i*! 'Roast! (IMP.AV)'; the cliticization (rather than the suffixation) of UVP morphs, e.g., *='en* 'UVP' (12) (see § 51.3.2.1).

17 Li (2000, pp. 90–95) and Li & Tsuchida (2001, p. 24ff.) give an overview of Pazeh voice, mood, and aspect systems with numerous examples, which will not be repeated here. Our analysis, on the basis of the data currently available to us, differs slightly from theirs.

(12) Pazeh (Li & Tsuchida 2001, p. 219)

a. *wazu* ***mu-ngazip*** *rakihan.*
dog AV-bite child
'The dog bit a child.'

a'. ***ngazib-en*** *wazu=lia ki rakihan.*
bite-UVP dog=COS NOM child
'The child has been bitten by a dog.'

Kaxabu

b. ***mu-ngazip*** *yaku haki wazu.*
AV-bite 1SG.NEUT NOM dog
'The dog bit me.'

b'. ***ngazip='en*** *ni wazu=lia.*
bite=UVP GEN dog=COS
'(It) was bitten by the dog.'

This voice system interacts closely with mood, aspect, and the aforementioned dynamic/stative verb classes. Furthermore, a distinction is made between indicative and non-indicative mood (Ross 1995), as shown in Table 51.7.

The indicative mood is used in both the affirmative and the negative to make an assertion or ask a question, and subsumes the realis and the irrealis. In the realis, a distinction is made among different aspects in Pazeh (i.e., perfective, neutral, and progressive). In Kaxabu, however, the infix ⟨*in*⟩ is found only in fixed forms, e.g., *m⟨in⟩eken* 'eat (AV.PFV)', and has otherwise been systematically replaced by the clitic *=lia* 'COS'.

The non-indicative mood is used to give a command or make a request, a wish, or a suggestion. In Pazeh, the AV imperative consists of a bare stem (e.g., *ituku dini*! 'Sit there!'), while the UVP imperative is formed by the suffixation of the stem by *-i*, e.g., *sungusung-i*! 'Count it!'. In Kaxabu, the AV imperative is only rarely found (e.g., *usa!* 'Go (IMP.AV)!', *alo* 'Come (IMP.AV)!'). Instead, both the AV and the UVP imperative are encoded by *='i*, e.g., *pasalang='i* '(You) put (it) (here) (IMP.AV)!', kani='i 'Eat it (IMP.UVP)!'. In Pazeh, the hortative is marked by *ta-...-i* (HORT.AV/UVP), e.g., *ta-kan-i*! 'Let's eat (AV)!' *ta-kan-i ki alaw*! 'Let's eat the fish (UVP)!' and *ta-...-aw* (HORT.UVP), e.g., *ta-baked-aw ki balan*!' 'Let's beat the cat!'. Only the hortative *ta-...-i* is found in Kaxabu, in remnant forms such as *takani* 'Let's eat!', one of the rare forms that were uncovered. The optative is found only in Pazeh, e.g., ***da***~*daux-**ay*** *yaku* [RED~drink-OPT.AV 1SG.NEUT] 'I want/am going to drink'. The non-indicative mood also includes dependent forms.

Table 51.7 provides a summary of Pazeh and Kaxabu voice, mood, and aspect (TAM) morphology.

TABLE 51.7 Overview of Pazeh and Kaxabu voice, mood, and aspect morphology

			AV		UV			
					UVP		UVL	UVC
			P	K	P	K	P	P
IND	REAL	PFV	M⟨*in*⟩	**M⟨*in*⟩	⟨*in*⟩	–	⟨*in*⟩...-*an*	–
		NEUT	M-		-*en*	='en	-*an*	*saa*-
		PROG	RED, M⟨*a*⟩		RED...-*en*	–	RED...-*an*	*sa*-RED
	IRR		M-*a*-...-*ay* M-...-*ay*		C*a*-...-*en*	–	C*a*-...-*ay*	C*a*-
			RED~...-*ay*	–				
NIND	IMP	STEM	**STEM, ='*i*	-*i*	='*i*	–	–	
	HORT		*ta*-...-*i*	**ta*-...-*i*	*ta*-...-*i* *ta*-...-*aw*	–	–	
	OPT		C*a*-...-*ay*	–	–	–	–	–
	DEP		M-	M-	–	='*i*	–	–

51.5.6 *Valency-Adjusting Operations*

In Pazeh and Kaxabu, causative dynamic verbs are prefixed by *pa-* (e.g., *m-idem* 'sleep' vs. ***pa-idem*** 'cause to sleep'), while stative verbs are prefixed by *pa-ka-* (e.g., *ma-ngesen* 'afraid' vs. ***pa-ka-ngesen*** 'to frighten'). Kaxabu differs from Pazeh in the lexicalization of the causative prefix *paka-* as a full word, leading to the use of two different forms in this dialects; cf. *paka-* vs. *paka* 'CAUS' (see Chen 2016, Lim 2019). While the prefix *pa-ka-* 'CAUS-STAT' can only attach to stative verbs in both dialects, e.g., ***pa-ka-tahayak*** 'thank you' (lit. 'make s.o. tired') (< tahayak 'tired'), ***pa-ka-lamik*** 'make ... cold', the word *paka* 'make' in Kaxabu can precede a noun (the causee), with the (dynamic or stative) verb that follows occurring in its finite form, as shown in (13). This morphological change has not been witnessed in Pazeh.

(13) Kaxabu

a. ***paka*** *nita* *umu* *ma-ziah!*
cause 1PL.INCL.GEN rice.cake STAT.cooked
'Let our rice cake be cooked!'

b. ***paka*** *isiw* *ma-habay* *taating.*
let 2SG.NEUT STAT-comfortable a.little.bit
'Make yourself comfortable a little bit!'

c. *yaku* *pa-ka-tahayak* *a* *apu* ***paka*** *yaku*
1SG.NEUT CAUS-STAT-tired OBL grandfather cause 1SG.NEUT
mu-baza *kaxabu=a* *ahan.*
AV-understand Kaxabu=LNK language
'I thank grandfather for making me understand the Kaxabu language.'

V. Chen (2016) proposes that *paka* should be treated as an applicative-like free morpheme and viewed as equivalent to the TSM and Mandarin Chinese disposal markers *ka* and *ba*.[18] She assumes that (K) *paka* and (TSM) *ka* occur in causative constructions, as in (14A), and ditransitive constructions, as in (14B):

(14) A. Causative construction (based on Chen 2016)
Kaxabu

a.

NP_{CAUSER}	*paka*	NP_{CAUSEE}		$V_{STATIVE}$
adi	***paka***	*naki=a*	*siatu*	*mu-payak.*
Adi	PAKA	1SG.GEN=LNK	clothes	AV-wet

'Adi made my shirt wet.' (p. 674)

b. TSM

NP_{CAUSER}	*ka*	NP_{CAUSEE}		$V_{STATIVE}$
adi	***ka***	*gua=e*	*sann*	*tshong-tam=ah.*
Adi	DISP	1SG=GEN	shirt	CAUS-wet=PFV

'Adi made my shirt wet.' (p. 673)

18 The phonological similarity between Kaxabu *paka* and TSM *ka* is pure coincidence, as *pa-ka-* can be reconstructed for PAN (cf. Zeitoun & Huang 2000 and Blust 2003).

B. Ditransitive construction (based on Chen 2016, p. 674)

Kaxabu

NP_{AGENT}	*paka*	NP_{THEME}	$V_{RECIPIENT}$	
yaku	***paka***	*tulala*	*baxa=lia*	*atun.*
1SG.NEUT	PAKA	flower	give=COS	Atun

'I gave the flowers to Atun.'

TSM

NP_{AGENT}	*ka*	NP_{THEME}	$V_{RECIPIENT}$		
gua	*ka*	*hue*	*theh*	*hoo*	*Atun.*
1SG	DISP	flower	give	PREP	Atun

'I gave the flowers to Atun.'

What we found, however, is that the Kaxabu example in (14B) is calqued on TSM and does not represent a prototypical example. The development of *saanu* 'for, use for, in order to' takes its roots in characteristics from PAN but is largely influenced by TSM (see Lim & Zeitoun 2023).

Reflexives are marked by *talima* 'oneself', as shown in (15).

(15) a. Pazeh (Li & Tsuchida 2001, p. 274)
mu-kusa ***talima*** *xumak maakuas nisia ina.*
AV-go REFL house AV:say 3SG.GEN mother
'She went home by herself to talk to her mother.'

b. Kaxabu (Lim 2022, p. 276)
Atun ka ma-isat ***talima.***
Atun TOP STAT-scold REFL
'Atun scolds/scolded himself.'

Reciprocals are formed by the prefixation of *maa-* on dynamic verbs, which usually undergo full reduplication, as in (P/K) *maa-kita~kita* 'see each other', (P) *maa-tebe~teber*, (K) *maa-tebe~tebe* 'punch each other', and *maa-ka-* on stative verbs, as in (P) *maa-ka-hape~hapet*, (K) *maa-ka~haaput* 'love each other'.

(16) a. Pazeh (Li & Tsuchida 2002, p. 73)
dusa aba iu rakihan ***maa-'angi~'angit.***
two father CONJ child RECP-RED~cry
'Both the father and the son cried.'

b. Kaxabu (Lim 2022, p. 273)
mama iu suazi kaidisiw
elder.brother CONJ younger.brother be.at.there
maa-dudun~dudun.
RECP-RED~push
'The elder brother and the younger brother push(ed) each other over there.'

51.5.7 *Complex Sentences*

This subsection presents a brief overview of complex sentences in Pazeh and Kaxabu, including verb serialization, coordination, complementation, and subordinate clauses.

In serial verb constructions (SVCs), two verbs form a complex predicate, and both are marked as AV, as shown in (17a–b).

(17) a. Pazeh (Li & Tsuchida 2001, p. 369)
dusa=a batan mu-kusa masi-karum di binayu…
two=LNK friend AV-go AV-enter LOC mountain
'The two friends went into the mountains …'

b. Kaxabu (Lim 2022, p. 390)
Atun mu-kusa m-adu tilikas.
Atun AV-go AV-put trap
'Atun went to put traps.'

The coordinating conjunction in Pazeh is *iu* (*yu ~ u*) and *iu* in Kaxabu. It can coordinate both phrases (NP and VP) and clauses.

(18) a. Pazeh (Li & Tsuchida 2001, p. 133)
kaaken dukul ***iu*** *ba~baket wazu ki rakihan.*
RED:eat taro CONJ RED~beat dog NOM child
'The child is eating taros and beating a dog.'

b. Kaxabu (Lim 2022, p. 415)
yaku=a aba ka ha-aput meken tana,
1SG.NEUT=LNK father TOP STAT-like AV:eat ailanthus.prickly.ash
iu *yaku=a ina ka ha-aput meken hapus.*
CONJ 1SG.NEUT=LNK mother TOP STAT-like AV:eat moss
'My father loves to eat ailanthus prickly ash and my mother edible moss.'

In Pazeh and Kaxabu, complement (19) and adverbial clauses (20–21) are not introduced by any conjunction or subordinator, though *na*, borrowed from TSM (Li & Tsuchida 2001, p. 214), is sometimes found in conditional clauses (21). The interrelationship between two clauses is encoded through the occurrence of a topic marker.

(19) a. Pazeh (Li & Tsuchida 2001, pp. 26, 87)
yaku ka ma-baza imisiw ukuazixa mu-puzah.
1SG.NEUT TOP STAT-know 3SG.NEUT yesterday AV-come
'I know that he came yesterday.'

b. Kaxabu (Lim 2022, p. 400)
yaku mu-baza sawan ka nahaza udan.
1SG.NEUT AV-know tomorrow TOP have rain
'I know that it will rain tomorrow.'

(20) a. Pazeh (Li & Tsuchida 2001, p. 48)
isiw m-apa rakihan ***ka,*** *yaku m-apa'-ay*
2SG.NEUT AV-carry child TOP 1SG.NEUT AV-carry-OPT.AV
rakihan.
child
'If you carry a child on your back, then I'll do so too.'

b. Kaxabu (Lim 2022, p. 404)
ini mu-sinaw a ima ***ka*** *ana meken sumay hann!*
NEG AV-wash OBL hand TOP NEG.IMP AV:eat rice SFP
'If you do not wash your hands, then do not eat!'

(21) a. Pazeh (Li & Tsuchida 2001, p. 214)
na *kuah* ***ka,*** *wailu alu xumak!*
if none TOP quickly come.IMP.AV house
'If there is none, come home quickly!'

b. Kaxabu (Lim 2022, p. 407)
isiw ***na*** *maahan yaku* ***ka*** *yaku nang=a*
2SG.NEUT if cheat 1SG.NEUT TOP 1SG.NEUT not.want=LNK
maki isiw batan.
COM 2SG.NEUT friend
'If you cheat me, then I do not want to be your friend.'

51.6 Conclusion

In this paper, we have outlined major grammatical features of Pazeh and Kaxabu by trying to compare these two dialects, a list being given in Table 51.8.

TABLE 51.8 Overview of major phonological and morphosyntactic differences between Pazeh and Kaxabu

Phonological variation		
Pazeh	**Kaxabu**	
	Older speakers	**Younger speakers**
-s	*-s*	*-t*
d	*d*	*l*
x	*x*	*kh*
e	*e*	*u*
au/__C#	*o*/__C#	
–	Loan phonemes: p^h, t^h, k^h, *ts*, ts^h, *ann*	

Morphosyntactic variation	
Pazeh	**Kaxabu**
1. Productive reduplication (a) Full reduplication (without coda) (b) Partial reduplication (i) CV-reduplication (ii) CVV-reduplication (iii) C*a*-reduplication	1. Sporadic reduplication (a) Full reduplication (with or without coda) (b) Partial reduplication, including the following: (i) CV-reduplication *not* found (ii) CVV-reduplication (iii) C*a*-reduplication
1. Productive affixation, e.g., *kali-meken* 'like eating' 2. *-en* 'UVP', *-i* 'IMP.AV/UVP' 3. *pa-ka-* 'CAUS (STAT)' 4. *saa-* 'UVC'	1. Loss of affixes and replacement by lexical and syntactic means, e.g., *haaput meken* 'like eating' 2. Deaffixation, cf. *='en* 'UVP', *='an* 'UVL', *='i* 'IMP.AV/UVP' 3. *pa-ka-* 'CAUS (STAT)', *paka* 'make' 4. Replacement by *saanu* 'for, with'
5. Robust pronominal system	5. Loss and replacement of certain pronominal forms (a) Loss of nominative (clitic) set (with remnant forms, *=aku* '1SG.NOM' and *=siw* '2SG.NOM') (b) Loss of locative set (c) Increasing use of the neutral set in possessive phrases, as in *yaku=a* (d) Borrowing of *e* from TSM, as in *yaku=é*

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