Rukai

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53.1   Introduction

The present chapter consists of a brief grammatical description of Rukai, outlining major characteristics of this language, which comprises six divergent dialects and, whenever possible, pointing out dialectal disparities. Rukai exhibits traits that make it extremely peculiar among the Formosan languages. Lexically, it reflects a set of cognates found nowhere else, e.g., Proto-Rukai

(PR) *acilay 'water' vs. PAN *daNum, PR *da'ane 'house' vs. PAN *Rumaq. Morphosyntactically, it is an accusative, rather than a (split) ergative, language with an active/passive distinction, instead of the widely found AV–UV dichotomy. Other peculiar characteristics that have not been reported in other Formosan languages include affixal negation in Maga, Tona, and Mantauran; verb-object agreement in Mantauran; and the occurrence of impersonal pronouns in all Rukai dialects except Tanan.

53.1.1   *Geographical Location and Population*

Rukai has six dialects, which are, to some extent, mutually (un)intelligible,[1] each linguistic variety corresponding to the name of a village/speech community stretching across southern Taiwan: Tanan (Tn) is spoken in the east in Taitung County; Budai[2] (Bd) and Labuan (Lb) are found in the south in Pingtung County; and Maga (Mg), Mantauran (Mt), and Tona (To) are located farther north in Kaohsiung City and form what used to be referred to as the "Lower Three Villages". Over the past 50 years or so, most Rukai villages have experienced a rural exodus; small parts of the population have also migrated to other places and formed new communities in areas formerly occupied by other populations, viz. Tewen and Sanhe (originally Paiwan settlements in Pingtung county), and Fengshan in Kaohsiung City, with mainly Southern Min speakers. According to the census conducted by the Council of Indigenous Peoples, the total Rukai population amounts to 12,000, and language proficiency is declining very rapidly.

The Rukai are surrounded by several other Formosan languages. The "Lower Three Villages" are geographically contiguous to villages where Saaroa, Kanakanavu, Isbukun Bunun, and, to a lesser extent, Tsou are spoken. As mentioned above, the Budai and Labuan inhabit areas very close to, or are even intermixed

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1 Though the degrees of mutual intelligibility may have changed over the years due to the loss of dialectal fluency, the situation concerning the (in)intelligibility among the Rukai dialects is a complex issue. Tanan and Labuan speakers understand Budai, but while Budai understand Labuan, they may not be able to fully comprehend Tanan. Tona speakers may be able to understand Budai and Maga speakers Tona, but the reverse may not be true. Mantauran speakers might be able to understand Tona, Labuan, and Tanan, but the speakers of these dialects usually do not understand Mantauran.

2 Budai is the sole dialect that spread over a whole area in Wutai Township with subvarieties spoken in several villages, some of which (e.g., Ali and Haocha) were swept away by Typhoon Morakot in 2009. The residents of these partially or totally destroyed villages now live together in Rinari, in Pingtung County, a large village that is now home to both the Rukai and the Paiwan, having been built near the plains after the destruction of their original villages.

with, Paiwan settlements. Tanan is adjacent to Puyuma and Amis villages. Language contact can be detected at all levels of the grammar. On the phonological level, Tsou, Saaroa, Kanakanavu, and Rukai are the only languages with words ending in an open syllable[3] and exhibiting echo vowels. On the lexical level, similarities across these languages are commonly found, despite sometimes being difficult to recognize at first. Compare, for instance, Tsou *c'orha*, Kanakanavu *cakɨranɨ*,[4] Saaroa *sakɨralhɨ*, Budai Rukai *drakerale* 'river', Proto-Rukai (PR) *drakeraNe 'river' (Tsuchida 1976, Li 1977a).[5]

On the morphosyntactic level, the prefix *ki-* 'to get', which attaches to nouns (viz. *ki-*N) and has a wide distribution across the Formosan languages justifying its reconstruction for PAN (Zeitoun & Teng 2009), can also be found on verbs (viz. *ki-*V) encoding the passive, but only in a relatively few languages. The morphosyntactic behavior of *ki-*V is, to some extent, similar in Rukai, Northern Paiwan, and Puyuma, and chances of borrowing among these languages cannot be excluded (see also Teng 2020).

53.1.2   *External and Internal Relationships*

Ferrell (1969) and Shelley (1979) have questioned the validity of Rukai as a single language group and viewed Maga and Tona, on the one hand, and Mantauran, on the other, as distinct languages. However, phonological, lexical, and morphosyntactic evidence demonstrates the validity of Rukai as a single group (Zeitoun 2003, forthcoming). The relationships between Rukai and other Formosan languages remain moot. Rukai has been viewed as (1) a subgrouping with Tsouic (viz. Tsou, Kanakanavu, and Saaroa) and forming a higher Rukai-Tsouic group (Tsuchida 1976); (2) being closer to Paiwan (Ferrell 1969, Ho 1983); (3) forming a linguistic group distinct from both Tsou[ic] and Paiwan (Starosta 1994, 1995, Blust 1999, Ross 2009, Aldridge 2016); (4) forming a group referred to as the Walu-Siwaish group with a cluster of languages/language subgroups, including Tsouic, Paiwan, Puyuma, Amis, and Bunun (Sagart 2004).

Rukai comprises two main subgroups: Maga and Tona, on the one hand, and Tanan, Labuan, Mantauran, and Budai, on the other (Zeitoun 2003, in forth-

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3 Because of recent sound changes, though, a nasal may occur in word-final position in Kanakanavu and Tanan Rukai.

4 Tsuchida's orthography (1976) has been altered to conform to the spelling conventions used throughout this handbook.

5 Relevant sound correspondences between Budai, Tsou, Kanakanavu and Saaroa include the following: Budai Rukai *dr* /ɖ/, Tsou and Kanakanavu *c* /ts/, Saaroa *s* /s/ and Budai Rukai *l* /l/, Tsou *h* /h/, Kanakanavu *n* /n/ and Saaroa *lh* /ɬ/. Tsou has undergone the most drastic

coming). The position of Mantauran has long been controversial (Li 1997a, Starosta 1994, 1995, Tu 1994), because the structure of this language has been obscured by drastic phonological and syntactic changes, but more recent studies tend to confirm the aforementioned claim.

53.1.3   *Documentation*

Rukai is a fairly well-documented language. The earliest written documents on Rukai date back to Ogawa & Asai (1935, pp. 364–393), who provide a brief grammatical description and short texts. Subsequent studies fall into three main categories: some offer lexical comparative data with phonological and/or subgrouping implications (Tsuchida 1976, Li 1977a, 1996); a few delve into dialectal comparisons (Zeitoun 2003, 2015, forthcoming); and most provide phonological or morphosyntactic descriptions on a specific dialect (on Maga, see Li 1975, Saillard 1997, Hsin 2000, 2003, 2004, Chao 2014; on Tona, see Li 1997, M. Wang 2003, 2005, P. Wang 2005, C. Sung 2014, Zeitoun 2017a; on Mantauran, see Zeitoun 1997a, 1997b, 2000a, 2000b, 2007a, 2018, Yen & Billings 2012, C. Wang 2018; on Budai, see Kuo 1979, Cheng-fu Chen 1999a, 1999b, 2002, 2005, 2008, Chen & Sung 2005, Zeitoun 2000b, Li 2001, Chun-mei Chen 2006, Yin-ling Chen 2008, Lin 2009, Tang 2009, Liu 2011, L. Sung 2011, 2015, Shih 2012). Special mention should be made of Li (1973) and Zeitoun (2007b), as they provide thorough grammatical descriptions of Tanan and Mantauran Rukai, respectively.

53.2   Phonology and Orthography

53.2.1   *Phonemic Inventory and Orthographic System*

Viewed in its entirety as given in Tables 53.1 and 53.3, the phonemic inventory of Rukai includes 22 consonants /p t ʈ k ʔ b d ɖ g θ s h v ð z ts m n ŋ l ɭ r/, 2 glides /w, j/, and 7 vowels /a i e u o ɨ ə/, with drastic variation among the Rukai dialects. The phonemic inventory of each Rukai dialect is further illustrated in Tables 53.2 and 53.4. The orthographic system used in this chapter, represented in italics in the text or whenever necessary for distinction from IPA symbols, follows the orthographic conventions promulgated by the Council of Indigenous Peoples and the Ministry of Education (2005).

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changes, with *a* /a/ having become o /o/ and *k* /k/ a glottal stop *'* /ʔ/. Tsuchida (1976, p. 272) posits the following hypothetical lexical forms: Proto-Tsou *čakeraNe > Pre-Tsou **ca'ɨrah-ã > **ca'arahã (< M) > Tsou *c'orha* 'river'.

TABLE 53.1 Rukai consonantal inventory and orthography

		Labial	Alveolar	Palatal	Retroflex	Velar	Glottal
Stop	VL	①*p* /p/	*t* /t/		②*tr* /ʈ/	*k* /k/	③*'* /ʔ/
	VD	④*b* /b/	④*d* /d/			④*g* /g/	
Fricative	VL		*s* /s/, ⑤*th* /θ/				⑦*h* /h/
	VD	*v* /v/	⑥*z* /z/, ⑤*dh* /ð/		④*dr* /ɖ/		
Affricate				*c* /ts/			
Nasal		*m* /m/	*n* /n/			*ng* /ŋ/	
Trill			⑧*r* /r/				
Lateral			*l* /l/		⑧*lr* /ɭ/		
Glide		⑨*w* /w/		⑨*y* /j/			

Each of the Rukai dialects exhibits sound changes. Mantauran has undergone the most drastic sound changes in consonants, and Maga in vowels. The specific status of certain phonemes in the Rukai dialects is addressed in the following notes.

① The voiceless stop *p* /p/ has become a glottal stop *'* /ʔ/ in Tanan—compare Tn *'akane* 'feed' and Lb/Bd/To/Mt *pakane* 'feed'—and is found mainly in loanwords in this dialect.

② The voiceless retroflex *tr* is only found in Tanan and Labuan, e.g., Tn/Lb *watravake* 'make a hole', *mwatratrongtrong* 'bump here and there', *katre-katre* 'trousers'. Though it has developed into a contrastive phoneme in these two dialects (e.g., Tn *mato'ahe* 'damaged' vs. *matroha* 'overripe'), it has its origin in Puyuma (see also Li 1973);

③ Besides Tanan, only Mantauran and Tona feature a glottal stop. In these two dialects, the glottal stop is considered to be a reflex of PAN *R; note that *R has become zero in all other Rukai dialects. Compare To *da'ane*, Mt *dha'ane* and Tn/Bd/Lb *daane*, Mg *daniɨ* 'house'. There are two other origins for the glottal stop in Mantauran: the first represents the change of PR *s, consistently reflected as a glottal stop, as in PR *θipi > Mt *'ipi* /ʔipi/ 'to dream'; the second consists of the unconditioned and sporadic change of PR *k to Mt ʔ in function words, e.g., PR *ki- > Mt *'i-* 'PASS'.

④ In Mantauran, all the voiced stops have spirantized, cf. PR *b > Mt *v*, as in PR *belebele 'banana' > Mt *velevele*, PR *d/*dr > Mt *dh*, as in PR *da'ane 'house' > Mt *dha'ane*, PR *dramare 'moon' > Mt *dhamare*, PR *g > Mt *h*, as in PR *lrenege 'stone' > Mt *lrenehe*. In this dialect, the voiced stops *b*, *d/dr*, *g* are thus only found in loanwords, interjections, and onomatopoeia.

⑤ Mantauran is the only dialect in which *th* /θ/ has never been reported, since, as mentioned above (see note ③), PR *θ has become Mt *s*. It is not found in loanwords either. The voiced interdental fricative *dh* /ð/ is only found in Tanan, Labuan, Budai, and Mantauran, e.g., Tn/Lb/Bd *badha* 'enemy', Mt *dhidhape* 'work'. In Maga, it occurs in loanwords, as in *vneedhe* /vnəəðə/ 'plum', *kvadhni* /kvaðnɨ/ 'a type of bamboo'.

⑥ The phoneme *z* is found (though rarely) in Maga, e.g., *kzulu* 'thousand', but it exhibits the same characteristics as other consonants (e.g., in appearing in consonant clusters; cf. Li 1977a, 1997, Hsin 2000); in all other dialects, *z* is only found in loanwords.

⑦ The glottal fricative *h* is found as a distinctive phoneme in Labuan, where it is a reflex of PR *r, and in Mantauran, where it represents a reflex of PR *g. In all other dialects, *h* is only found in loanwords, e.g., Tn *hikoki* 'airplane'.

⑧ The retroflex *lr* /ɭ/ and the trill *r* /r/ have been completely lost in Tona and partly lost in Maga (*r* is still found but not *lr*). Compare PR *rigi 'horse' > Mg *rgii*, To *igi*, PR *ɭima 'five' > Mg *rima*, To *ima*. In Mantauran, the trill *r* is now being pronounced as *h* by a majority of speakers; cf. Mt *savare* > *savahe* 'young man'; in other words, in Mantauran, the reflexes of PR *g and *r are now merging as *h*.

⑨ The glides *y* and *w* are found as distinct phonemes in all Rukai dialects except Mantauran and Maga, in which (phonetic) gliding surfaces in fast speech. The contrast between *y* /j/ and *i* /i/ can be found in the following pair of examples: Lb/Bd *yakay* [já.kaj] 'there is/are' vs. *yakai*! [ja.ká.i] '(it's) here!', To *'yakay* [ʔjá.kaj] 'there is/are' vs. *'yakai*! [ʔja.ká.i] '(it's) here!'.

TABLE 53.2 Rukai vocalic inventory and orthography

	Front	Central	Back
High	*i* /i/	⑨*ɨ* /ɨ/	⑨, ⑩*u* /u/
Mid	⑩*é* /e/	*e* /ə/	⑩*o* /o/
Low		*a* /a/	

⑨ With the exception of Maga, all Rukai dialects exhibit only four vowels, which are PAN reflexes. While most speakers pronounce the back vowel as *o* [o], Budai speakers have a strong tendency to pronounce the back vowel as *u* [u]. This variation is reflected in their respective orthographic systems. However, for comparative purposes, we adopt the vowel *o* for Budai Rukai instead of the phoneme /u/, unless referring to the phoneme itself rather than the orthographic symbol.

⑩ Maga has developed two mid front and back vowels, *é* /e/ and *o* /o/, which contrast with the high front and back vowels *i* and *u* as a result of monophthongization, e.g., PR *oalangai 'buy' > Mg *olngée*. The dialect also exhibits a contrast between the high and mid central vowels *ɨ* and *e*, cf. Mg *blibɨ* 'banana' vs. *bleble* 'bamboo'.

TABLE 53.3 Consonantal inventory and orthography in each Rukai dialect

Dialects	Number of phonemes	Consonants in IPA and orthographic symbols
Tanan	21	ʔ b t ʈ d ɖ k g v s θ ð ts m n ŋ l ɭ r w j *' b t tr d dr k g v s th dh c m n ng l lr r w y*
Labuan	21	p b t ʈ d ɖ k g h v s θ ð ts m n ŋ l ɭ w j *p b t tr d dr k g h v s th dh c m n ng l lr w y*
Budai	19	b t d ɖ k g v s θ ð ts m n ŋ l ɭ r w j *b t d dr k g v s th dh c m n ng l lr r w y*
Maga	18	p b t d ɖ k g v s z θ ð ts m n ŋ l r *p b t d dr k g v s z th dh c m n ng l r*
Tona	18	p b t d ɖ k g ʔ v s θ ts m n ŋ l w j *p b t d dr k g ' v s th c m n ng l w y*
Mantauran	15	p t k ʔ v s h ð ts m n ŋ l ɭ r *p t k ' v s h dh c m n ng l lr r*

TABLE 53.4 Vocalic inventory and orthography in each Rukai dialect

Dialects	Number of phonemes	Vocalic in IPA and orthographic symbols
Tanan	4	a i ə o
		a i e o
Labuan	4	a i ə o
		a i e o
Budai	4	a i ə u
		a i e u
Mantauran	4	a i ə o
		a i e o
Maga	7	a i e ə ɨ u o
		a i é e ɨ u o
Tona	4	a i ə o
		a i e o

53.2.2 *Distribution*

Generally speaking, the only major restriction in the distribution of consonants is that they appear only in onset position, i.e., in word-initial and word-medial positions (see Table 53.5), as all words end in an open syllable (Li 1973, Tsuchida 1976, Hsin 2000, Chun-mei Chen 2006). The last vowel of the word may be an echo vowel. For instance, PAN *ma-buSuk 'be drunk' is reflected with a final /o/ or /u/ in all Rukai dialects, which "echoes" the preceding vowel, cf. Tn/Lb/To /mabosoko/, Bd/Mg /mabusuku/, Mt /mavoʔoko/ 'to be drunk'. It might also be a reflex of an etymological word-final vowel, as in Tn/Lb/To /ɖosa/, Bd/Mg /ɖusa/ and Mt /maðoʔa/ 'two' < PAN *duSa, or a vowel occurring at the end of a word as the result of the loss of a final consonant, e.g., all dialects /nana/ 'pus' < PAN *naNaq. The sole Rukai dialect that allows consonant clusters, including (non-)homorganic and geminate consonants, is Maga, e.g., /tkasluɖu/ 'shrimp', /lcəngə/ 'vegetable', /tomma/ 'dry field', /utta/ 'vomit' (Li 1975, Hsin 2000). Note that in this dialect, two-member consonant clusters have arisen because of the deletion of (one out of two) unstressed vowels from right to left. Consonant clusters occur in word-initial (e.g., Maga *bvaa* 'wine') and word-medial positions (e.g., Maga *blibli* 'banana'), with homorganic consonants specifically restricted to word-medial position, e.g., Maga *tkanna* 'place of eating'. The distribution of consonants and vowels in the Rukai dialects are given in Tables 53.5 and 53.6, respectively, with near-cognate forms (which differ with respect to one phoneme) given in parentheses for the sake of comparison.

TABLE 53.5 Distribution of consonants in Rukai

	Tn	Lb	Bd	To	Mg	Mt	Gloss
p	'ito	pito	pito	pito	pitu	pito	'seven'
t	tobi	tobi	tubi	tobi	tbii	tovi	'cry'
tr	travake	travake	—	—	—	—	'make a hole'
k	kane	kane	kane	kane	kani	kane	'eat'
'	—	—	—	'angato	—	'angato	'tree'
	(angato)	(angato)	(angato)		(angato)		
b	bava	bava	bava	bava	bvaa	—	'wine'
						(vavaa)	
d	daan(e)	daane	daane	da'ane	dani	—	'house'
						(dha'ane)	
g	gingigingi	gingigingi	gingigingi	gingigingi	gingigingi	hingihingi	'longan'
s	si'i	sipi	sipi	sipi	sipi	—	'to dream'
						('ipi)	
						sokovo	'bow'
th	thadii	thadii	thadii	thdée	thadi'i	—	'deer (f)'
						(sadhi'i)	
h	—	dramahe	—	—	—	—	'moon'
						holrolo	'mountain'
v	valisi	valisi	valisi	valisi	vlési	(ali'i)	'tooth'
						vilivili	'pull'
z	—	—	—	—	mkatonozozo	—	'type of mush-room'
dh	badha	badha	badha	(braa)	(baa)	(valra)	'enemy'
						dhidhape	'work'
dr	drakerale	drakehale	drakerale	drakeale	dkerle	—	'river'
						(dhakerale)	
c	caili	caili	caili	cavili	cvélé	caili	'year'
m	malra	malra	malra	maa	mraa	malra	'take'
n	nana	nana	nana	nana	nana	nana	'pus'
ng	ngalray	ngalray	ngalray	ngaay	ngrée	ngalrai	'sputum'
r	marimoro	—	marimoro	—	marimoro	marimoro	'forget'
		(mahimoro)		(maimoo)			
l	laceng(e)	lacenge	lacenge	lacenge	lcenge	latenge	'vegetable'
lr	lridame	lridame	lridame	—	—	lridhame	'tongue'
				(idame)	(rdame)		
w	kwange	kwange	kwange	kwange	(kuange)	(koange)	'gun'
y	yakay	yakay	yakay	'yakay	–	–	'exist,
					(ikée)	(omiki)	be at'

Vowels can appear alone or in clusters. When they appear in clusters, they are composed of a sequence of two (or rarely, three) vowels, which constitute geminates or clusters of two different vowels, as shown in Table 53.6.

TABLE 53.6   Distribution of vowels in Rukai

	Tn	Lb	Bd	To	Mg	Mt	Gloss
i	ibalriw	ibalriw	ibalriw	ibaivi	ibrévé	ivalrio	'rest'
u	—	—	—	—	uvée	—	'rattan'
o	ovai	ovai	ovai	ovay	—	oai	'call s.o.'
					okoko	—	
é	—	—	—	—	épkipki	—	'airplane'
e	balebale	balebale	balebale	balebale	balebale	valevale	'bamboo'
ɨ	(belebele)	(belebele)	(belebele)	(belebele)	blibli	(belebele)	'banana'
a	a'ase	apase	apase	apase	apasɨ	apa'e	'crab'

53.2.3 *Syllable Structure, Stress, and Intonation*

In the six Rukai dialects, the basic syllable structure can be represented by (C)V. The onset is optional, and there is no coda (with the exception of the glides *w* and *y* in Tanan, Labuan, Budai, and Tona). The minimal syllable consists of just a vowel, and maximal syllable structures are the following:

– CVV in all Rukai dialects, e.g., *mia* 'so';
– CGV and CVG in all the dialects except Maga and Mantauran, e.g., Budai, Tona *kwange* 'gun', *acilay* 'water';
– CCV in word-initial and word-medial positions only in Maga, e.g., *cngulu* 'join', *sbikbiki* 'fan'.

Monosyllables are rare and are usually limited to function words, e.g., Tn/Lb/Bd/Mn *lo* and Mg/To *no* 'if'. Lexical words are multisyllabic, i.e., they are usually disyllabic, trisyllabic, or quadrisyllabic, and some even consist of five or more syllables.

Stress is non-phonemic. Stress in Tanan and Labuan falls on the last syllable, e.g., Tn/Lb *walangáy* 'buy', *wakané* 'eat'. It falls on the penultimate syllable in Budai, Maga, and Tona, e.g., Bd/To *walángay* 'buy', *wakáne* 'eat', Mg *ulngée* 'buy', *ukáni* 'eat', and on the first syllable on Mantauran, e.g., *ólangai* 'buy', *ókane* 'eat' (see Table 53.7). It moves one syllable backward (on the penult in Tanan and Labuan and on the pre-penultimate syllable in Budai and Tona) whenever the PR consonant *R is reflected as a glottal or zero, e.g., Tn/Lb *daáne*, Bd *dáane* and To *dá'ane* (< PR *daRane) 'house' (Blust 1997). A secondary stress in multisyllabic words falls on the penultimate syllable, e.g., Tn *wabìlibíli*, Bd *wabilibíli* 'pull', Mt *támatàma* 'middle-aged man'.

TABLE 53.7 Stress in the Rukai dialects

Tn	Lb	Bd	To	Mg	Mt	Gloss
'itó	*pitó*	*píto*	*píto*	*pítu*	*píto*	'seven'
watobí	*watobí*	*watóbi*	*watóbi*	*utbíi*	*ótovi*	'cry'
wakané	*wakané*	*wakáne*	*wakáne*	*ukánɨ*	*ókane*	'eat'
amalrá	*amalrá*	*waamálra*	*amáa*	*amráa*	*ómalra*	'take'
lacéng(e)	*lacénge*	*lácenge*	*lácenge*	*lcénge*	*látenge*	'vegetable'
drakerále	*drakehále*	*drakérale*	*drakéale*	*dkérle*	*dhákerale*	'river'
daán(e)	*daáne*	*dáane*	*dá'ane*	*dánɨ*	*dhá'ane*	'house'

53.2.4 *Phonological Rules and Morphophonemic Alternations*

Phonological rules and morphophonemic alternations are shown below. Some are restricted to only one dialect, while others are found in all Rukai dialects.

- **Palatalization:** In all Rukai dialects, the fricative /s/ and the affricate /ts/ both get palatalized before *i*, e.g., Tn *wasi'i* [waʃiʔi], Lb/Bd/To *wasipi* [waʃipi], Mg *usipi* [uʃɪpi] 'dream', Mt *masi'i* [maʃiʔi] 'small', Tn/Lb *wakacia* [wakatʃia], Mt *okacia* [okatʃia], Bd *wakaciane* [wakatʃianə], Mg *ukcia* [uktʃia] 'cut (with scissors)'.
- **Gliding:** Gliding operates automatically next to the back vowel *a* in all dialects except Maga and Mantauran; cf. Tn/Lb *modaana*!, Bd *mudaana*!, To *moda'ana*! 'come in!' vs. Tn/Lb/Bd *mwadaane*, To *mwada'ane* 'come into', Tn *kile'enga*!, Lb/Bd/To *kilepenga*! 'hide!' vs. Tn *kyale'enge*, Lb/Bd/To *kyalepenge* 'hide'. Note that there is readjustment of the syllable count, and thus whether it is *mo-* or *mwa-*, it always counts as only one syllable.
- **Vowel deletion:** Vowel deletion results from affixation onto the base but is not found consistently across the Rukai dialects. In a verb like *kane* 'eat', for instance, the schwa is retained in Tanan, Labuan, and Budai, but is deleted in Tona, Maga, and Mantauran. Compare Tn/Lb *kwanea*!, Bd *kanea*! and To *kwana*!, Mg *kuona*!, Mt *kona*! 'Eat!'. In a verb like Tn/Lb/Bd/Mg *ongolo*, To/Mt *'ongolo* 'drink', the final (echo) vowel is deleted in all dialects after the suffixation of the imperative *-a*; cf. Tn/Lb/Bd/Mg *ongola*! and To/Mt *'ongola*! 'Drink!'.

- **Deletion of the syllable *ne* in the affix *-ane* in word-final position**[6]: In Tanan and Labuan, *ne* in the affix *-ane* is usually dropped in word-final position; it is not if the word is cliticized; compare Tn/Lb *nikanea* (< *ni-kane-a(ne)* [PFV-eat-PAT.NMLZ]) 'what was eaten' and *nikaneanenga* (< *ni-kane-ane=nga* [PFV-eat-PAT.NMLZ=COS]) 'what was eaten'.
- **Metathesis:** Metathesis is sporadic but interestingly is found in Tanan in the affix *'ai-* 'like to …-ing' < PR *api-* 'like …-ing'; compare Tn *'ai-a-kane*, where the glottal stop, which is a reflex of PR *p, appears before rather than after the vowel /a/, and Lb/Bd ***api-a-kane*** [like-REAL-eat] 'like eating'
- **Haplology:** Haplology, which consists of the deletion of an identical syllable, is found in Tona and in Mantauran, and results either from cliticization, as in Tona (e.g., *titin-i=niane* 'his/her mother' may surface as *titi=niane* 'his/her mother', with the deletion of *na* in *titina* 'mother' (Li 1997, p. 122)); or affixation, as in Mantauran (e.g., *maatali-ma-valro-lo* '80-story (house)' rather than **maatali-...-lo-lo* (< *maatali-...-lo* '(number of) floors', *ma-...le* 'tens') (Zeitoun 2007b, p. 31)).
- **Nasal insertion:** The insertion of the nasal *n* is found when the first-person pronoun attaches to the base in Tanan, Labuan, and Budai, though not systematically, compare Tn/Lb/Bd *o-a-kane=ako* [wakanəako] 'I eat/I ate' (and not **o-a-kane=n-ako* [wakanənako]) and Tn/Lb/Bd *o-a-kane=nga=n-ako* [wakanəŋanako] 'I have already eaten' (and not **o-a-kane=ng=ako* [wakanəŋako]).
- **Vowel insertion:** In all dialects except Budai, verbs with the vowel *a* (as an onset or in the first syllable) are infixed with an epenthetic *o-/⟨o⟩*, which is glided, in different paradigms (e.g., subjunctive, imperative) (see §53.5.5), e.g., Tn/Lb/To *o-amec-a!* [waməca] 'Bring (it) (IMP)!' (< *o-a-amece* [waməcə] 'bring'), Tn/Lb *k⟨o⟩ane-a!* [kwanəa], To *k⟨o⟩an-a!* [kwana] 'Eat! (IMP)' (< *o-a-kane* [wakanə] 'eat'); in Mantauran and Maga, however, the vocalic sequence *oa* coalesces into *o* (and/or *u* in Maga) as in Mt *omec-a!* 'Bring (it) (IMP)!' (< *o-mece* 'bring'), *kon-a!* 'Eat (IMP)!' (< *o-kane* 'eat').
- **Anticipatory (leftward) copying:** In Tanan, Labuan, Budai, and Mantauran, anticipatory (leftward) copying consists of the replacement of the vowel *o* by *i* in a *iCo* sequence and takes place when this sequence undergoes reduplication, thus yielding (C)*iCi*~(C)*iCo*, e.g., Tn/Lb/Bd *kyapaiso* 'get/withdraw money' vs. Tn/Lb/Bd *kyapa~isi~iso* 'earn a salary', Mt *'ipaiso* 'get/withdraw

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6   There are numerous phonological rules and morphophonemic alternations in Maga Rukai (see Li 1975, 1997b, 1997 and Hsin 2000 for details). An interesting point to be mentioned here is that the last syllable *ni* (which is part of the root) in Maga may be deleted after affixation or cliticization, as in *dani* 'house' ~ *da=li* 'my house'.

money' vs. *'ipa~isi~iso* 'earn a salary' (see Zeitoun 2007b, p. 29 for details on Mantauran Rukai).

– **Morphophonemic alternations:** In Tanan, Labuan, and Budai, when a suffix containing *-a* attaches to a base with a final *y*, it alternates with the fricative *dh*, e.g., *wabaay* 'give' vs. *wabaadh=ako* [ACT:REAL:give=1SG.NOM] 'I give/I gave'. In Mantauran, the final vowel *i* alternates with the retroflex *lr*, e.g., *olangai* 'buy' vs. *longalr-a*! 'Buy!'. In Maga, the vowel is not *i* but rather *é* (as a result of monophthongization) and alternates with *r*, as in *ulgnée* 'swim' vs. *lungr-aa*! 'Swim!'. In all Rukai dialects except Mantauran, if the coda is the glide *w* (or the vowel *o* in Maga) and occurs in a sequence after *a*, then it alternates with *v*, e.g., Tn/Lb/Bd *mwabanaw* 'bathe' vs. *mubanav-a*! 'Bathe!', Mg *Toto* 'Toto' vs. *totov-a* 'Toto (OBL)', To *Takanaw* 'Takanaw' vs. *takanav-a* 'Takanaw (OBL)'. In Mantauran, in the same environment, *o* alternates with the retroflex *lr*, e.g., Mt *maavanao* 'bathe' vs. *maavanalr-a*! 'Bathe!' (Li 1977b).

53.3   Morphology

Rukai can be treated as a synthetic agglutinative language, i.e., words tend to be composed of a series of morphemes (e.g., a base and one or more affixes and/or reduplicated elements) that can be easily identified, e.g., Tn/Lb/Bd/To/Mt *ma-limeme*, Mg *ma-limimi* 'sweet' (< *ma-* 'STAT'), Tn/Lb/Bd *la-ma-tina*, Mg *l-ma-tina*, To/Mt *la-ma'a-tina* 'mother and daughter' (< *l(a)-* 'PL', Tn/Lb/Bd/Mg *ma-*, To/Mt *ma'a-* 'RECP'). Mantauran and Maga having undergone drastic phonological changes also exhibit fusional traits; compare, for instance, Tn/Lb/Bd/To *o-a-kane* 'eat' (< *o-* 'ACT, DYN', *a-* 'REAL') vs. Mg *u-kani* and Mt *o-kane* 'eat', where the prefixes *u-* and *o-* 'ACT, DYN' have fused with the prefix *a-* 'REAL' as portmanteau morphemes 'ACT.DYN.REAL'.

53.3.1   *Morphological Units*
Rukai morphological units include free and bound morphemes, which differ in terms of phonotactic and morphosyntactic properties. Free morphemes divide into content words and grammatical (or function) words. Content words are, at least, disyllabic roots (e.g., *kane* 'eat'), bear stress (see Table 53.7), and may become larger stems by undergoing morphological processes such as affixation (e.g., Tn/Lb/Bd/To *o-a-kane* 'eat') and/or reduplication (e.g., Tn/Lb/Bd/To *o-a-kane~kane* 'keep on eating'). Function words are mostly monosyllabic (Tn/Lb/Bd/Mt *lo* 'if') or disyllabic (Mt *mani* 'then'), do not usually bear stress, and are extremely restricted in terms of the morphological processes that they can undergo. Bound morphemes refer to (lexical) bound roots—which include kin-

ship terms (ascendants), e.g., |*tina*| 'mother'[7] as in Tn/Bd *la-ma-tina* 'mother and daughter'; stative verbs, e.g., |*poli*|, as in To/Mt *ma-poli* 'white'; certain numeral forms, e.g., |*posa*| 'two', as in Lb/Bd/To *ma-posa-le*, |*po'a*| 'two', as in Mt *ma-po'a-le* (< *ma-…-l(e)* 'tens')—clitics (constituted for the most part by (im)personal pronouns), and affixes. The distinction between clitics and affixes is opaque, but some affixes can be reduplicated, while clitics (and other free grammatical words) never can; cf. Lb/Bd *to-a-daane* 'build a house' > *angi-a-ta~to-daane* 'build a house by oneself', Mt *to-dha'ane* 'build a house' > *'ini-ta~to-dha'ane* 'build a house by oneself', To *ti-a-ta'oanane* 'build a hut' > *'angi-ta~ti-ta'oanane* 'build a hut by oneself'.

53.3.2 *Morphological Processes*

Rukai exhibits two productive morphological processes, affixation and reduplication, which may occur independently, e.g., Tn/Lb/Bd *i-balriw*, Mt *i-valrio* 'rest' (lit. 'be in the village'), Tn/Lb/Bd *balri~balriw*, Mt *valrio~valrio* 'villages', or combine together, as in Tn/Lb *ta-i-balri~balri-a*, Bd *ta-i-balri~balri-ane*, Mt *ta-i-valri~valri-ae* 'time to rest' (< Tn/Lb/Bd *ta-…a(ne)*, Mt *ta-…-ae* 'LOC.NMLZ/ TEMP.NMLZ').

Affixation applies to different types of bases, viz. nouns, verbs, numerals, and pronouns, with at most four affixes occurring on a (single) word base, e.g., Bd Rukai [*sa*-[*ngi-ta*$_{RED}$-[*tu*-[*a*-[*kane*$_{ROOT}$-*an*]$_①$]$_②$]$_③$-*ane*]$_④$ [[INST.NMLZ [REFL-C*a*$_{RED}$-[make-[PAT.NMLZ[eat]$_{ROOT}$-PAT.NMLZ]$_①$]$_②$]$_③$INST.NMLZ]$_④$] 'use food that one makes/has made by oneself' (Yao-ming Tang, pers. com.). Affixes include "class-retaining" and "class-changing" affixes, which differ by whether they change the lexical category of the base to which they attach. The former includes nominal (e.g., *l(a)*- 'PL') and verbal affixes (e.g., *-a* 'IMP'), and the latter includes nominalizers (e.g., Tn/Lb/Mg *ta-…-a*, Bd/To *ta-…-ane*, Mt *ta-…-ae* 'LOC.NMLZ/TEMP.NMLZ', as in Bd/To **ta-kane-ane**, Tn/Lb **ta-kane-a**, Mg **t-kann-a**, Mt **ta-kan-ae** 'place of eating') and verbalizers (e.g., Tn/Lb/Bd/Mt *to*-, To *ti*-, Mg *té*- 'do', as in Tn/Lb *to-a-daan*, Bd *to-a-daane*, Mt *to-dha'ane*, To *ti-a-da'ane*, Mg *té-dani*).

"Prefix harmony"—the occurrence of (near) identical affixes on serialized verbs and reported in Bunun (Nojima 1996), Thao (Blust 2003), and Siraya (Tsuchida 2000, Adelaar 2004)—is found only very rarely in Rukai (see Zeitoun 2007b).

There are four types of affixes, as shown in (1): prefixes, suffixes, circumfixes, and infixes; the first three types are very productive, but prefixes signifi-

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7 In contrast to many Formosan languages, in Rukai, |*tina*| or |*ina*| is a bound root that cannot occur independently; compare Tn **tina* and *tina=li* 'my mother', Mt **ina* and *ina=li* 'my mother'.

cantly outnumber the others. Note that prefixes (unlike other types of affixes) include both grammatical, e.g., *ma-* 'STAT', as in Tn *ma-'oli*, Lb/Bd/To/Mt *ma-poli*, Mg *ma-puli* 'white', and lexical prefixes, e.g., Lb/Bd *api-*, Mt/To *'api-*, Tn *'ai-* 'like …-ing', as in Lb/Lb *api-a-ongolo*, Mt *'api-'ongolo*, To *'api-a-'ongolo*, Tn *'ai-a-ongolo* 'like drinking'. The affixes can combine to form complex affixes, made up for instance of a prefix and a suffix, e.g., Tn/Lb/Bd/To/Mt *ma-…-le*, Mg *m(a)-…-li* 'tens' (< *ma-* 'tens', *-le* 'RECUR'), as in Tn/Lb/Bd/Mt *ma-tolro-lo*, To *ma-too-lo* 'thirty'. The number of infixes varies by dialect. There are two infixes in Tanan and Labuan, ⟨*o*⟩ 'SUBJ' and ⟨*in*⟩ 'PFV; PFV.PAT.NMLZ'. Budai exhibits productively ⟨*in*⟩ but not ⟨*o*⟩, Tona ⟨*o*⟩ but not ⟨*in*⟩. The infix ⟨*in*⟩ is actually fossilized in Tona, as in *cinabo* 'glutinous cake' (< *wacabo* 'wrap'), and in Mantauran, as in *cinekelae* 'villager(s)' (< **cekele* 'village', not found in Mantauran, but reconstructible at the PR level).

Among affixes, nominalizers (used to derive argument nominals) are rather productive cross-dialectally, with the exception of the agentive (and/or subjective) nominals: they include patientive, instrumental, locative, and temporal nominals. With all these different types of derived nominal, a distinction can be drawn between dynamic and stative verbs (or other derived verbs, such as causative verbs that are prefixed by *pa-*). Patient nominalization is marked throughout the Rukai dialects by the formative Tn/Lb/Bd/To *a-…-a(ne)*, Mg, (*ani*), Mt (*a-*)…*-ae*. Budai, Labuan, and Tanan are different from Mantauran, Maga, and Tona in that they exhibit a perfective distinction (realized through the affixation of ⟨*in*⟩/*ni-*), e.g., Tn *ni-kane-a* 'food' (lit. 'that has been eaten') vs. *a-kane-a* 'food' (lit. 'that is/will be eaten'). Instrumental nominalization is morphologically encoded by Tn/Lb/Bd/To *sa-…-a(ne)*, Mg *sa-…a(ni)*, Mt *'a-*, e.g., Lb *sa-loalop-a*, Bd *sa-alop-ane*, Mg *sa-lup-ani*, To *sa-alop-ane*, Mt *'a-alopo* 'arrow'. Locative nominalization is encoded by the circumfixation to the base of *ta-…-a(ne)*, e.g., Tn *ta-langadh-a*, Lb *ta-langa~langadh-a*, Bd *ta-langadh-ane*, Mt *ta-langalr-ane*, Mg *ta-langar-a*, To *ta-langay-ane* 'store'. Temporal nouns conveying the meaning of 'season' are formed by the circumfixation of *kala-…-a(ne)* to the verb base. This formative is more productively found on nouns than verbs; cf. Bd/To *kala-alop-ane*, Lb *kala-alop-a*, Tn *kala-(a)lo'-a*, Mt *kala-alop-ae*, Mg *kla-lup-a* 'hunting season'.

Rukai also exhibits numerous verbalizing affixes, the most common of which include Tn/Lb/Bd/Mg *i-*, Mt/To *'i-* 'at', Tn/Lb/Bd/To *ki-*, Mg *ké-*, Mt *'i-* 'get, harvest', e.g., Tn/Lb/Bd *ki-a-angato*, To *ki-a-'angato*, Mg *ké-ngato*, Mt *'i-'angato* 'chop, harvest (fire)wood', Tn/Lb/Bd/To/Mt/Mg *m-o-* 'go', Bd/Lb/Mg/To/Mt *po-*, Tn *'o-* 'bring back (MVT.CAUS)', Tn/Lb/Bd/Mt *to-*, To *ti-*, Mg *té-* 'make, produce, give birth'.

Reduplication occurs more productively with verbs than nouns. When occurring with dynamic verbs, reduplication usually conveys a progressive,

repetitive, or habitual meaning. With stative verbs, it encodes intensification. Reduplication of nouns expresses increase (including plurality) or diminution (including fakeness). The most productive reduplicative type across the Rukai dialects (except Maga, which crucially differs in syllable structure) is CVCV-reduplication, e.g., Tn/Lb/Bd/To *o-a-**kane**~kane*, Mt *o-**kane**~kane* 'keep on eating'. Other more sporadic reduplicative patterns include CV- (which may occur with other affixes, as in Mantauran), e.g., Tn/Lb/Bd *ka~kaange* 'small fish' (< *kaange* 'fish'), To *di~dida'ane* 'valley' (< *dida'ane* 'ground, soil'), Mt *apa'a-lri~lrima* 'five for each' (< |*lrima*| 'five'); CGV- (with the exception of Maga and Mantauran), e.g., Tn/Lb/Bd/To *kwa~kwange* '(fake) toy gun'; CCV- in Maga, e.g., *o-pta~ptasɨ* 'keep on embroidering' (< *o-ptasɨ* 'embroider'); and CV.V- in Tanan, Labuan, Budai, and Mantauran, e.g., Tn/Lb/Bd *o-a-**kae**~kae~kaane*, Mt *o-**kae**~kae~kaane* 'keep on eating'. C*a*-reduplication, reported to be extremely productive in Formosan languages (Blust 1998), is always triggered by affixation in Rukai, e.g., Tn/Lb *ma-**ca**~ceele*, Bd *ma-**dra**~dreele*, To/Mt *ma-**ca**~cengele*, Mg *ma-**ca**~cngili* 'see each other'.

Compounding has so far only been reported in Mantauran (Zeitoun 2007b, Wang 2018), e.g., *ovale kipingi* 'pull-over' (< *ovale* 'hair', *kipingi* 'clothes'), *kipingi vanidho* 'uniform' (< *vanidho* 'student'), *dha'olo kavale* 'rubber boots' (< *dha'olo* 'rain', *kavale* 'boot'), but calque from Mandarin Chinese cannot be excluded. To date, incorporation has not been detected in Rukai.

53.4   Word Classes

Rukai distinguishes the following word classes: nouns, verbs, pronouns, case markers, demonstratives, adverbs, negators (in Tn/Lb/Bd), clausal and interclausal elements,[8] exclamations, and interjections. Missing classes include auxiliaries, adjectives, and prepositions (see Zeitoun 2007b, 2016, 2017b, forthcoming). Li (1973) demonstrates quite convincingly that prepositions in Tanan Rukai have grammaticalized from verbs, but Zeitoun (2017b, forthcoming) has shown that these so-called prepositions are actually prefixes and that there are actually no prepositions in Tanan.

Nouns can be further divided into three main categories: (i) common nouns, (ii) locative (including locatives, directionals, and orientations) and temporal nouns, and (iii) personal nouns (including kinships (ascendants only) and

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8   The terms "clausal and interclausal elements" are used here to refer to linking elements, including the topic marker *ka* (Mt *'a*), and coordinating and subordinating conjunctions.

given names). Verbs can be divided into dynamic and stative verbs. Dynamic verbs are mostly marked by *o-* in Tanan, Labuan, Budai, and Tona 'ACT.DYN', followed by *a-* 'REAL', as in *o-a-* [wa]; *u-/o-* in Maga and *o-* in Mantauran. Most stative verbs are marked by *ma-*, while a few are unmarked (see Zeitoun 2007a, forthcoming).

53.5   Syntax

53.5.1   *Word Order and Case-Marking System*

Rukai is a verb-initial language with full noun phrases (NPs) occurring rather freely after the verb and first-and second-person pronouns taking precedence over NPs, as in (1a). If the subject (S) is manifested by a pronoun, it always occurs before the object (O), as shown by the grammatical contrast of (1b–b'), (1c–c'), (1d–d'), no matter the degree of boundedness of the pronoun(s) to the verb across dialects.

(1)   Budai
    a.   *o-a-lromay*   **mitaane**   *ki*   *Takanaw.*
       ACT-REAL-beat 1PL.INCL.OBL OBL Takanaw
       'Takanaw hit us.'

    a'.* *o-a-lromay*   *ki*   *Takanaw* **mitaane.**
       ACT-REAL-beat OBL Takanaw 1PL.INCL.OBL

    Tona
    b.   *o-a-sititi*   **kake**   *mosoane.*
       ACT-REAL-beat 1SG.NOM 2SG.OBL
       'I hit you.'

    b'.* *o-a-sititi*   *mosoane* **kake.**
       ACT-REAL-beat 2SG.OBL 1SG.NOM

    Budai
    c.   *o-a-lromadh=***ako***   *mosoane.*
       ACT-REAL-beat=1SG.NOM 2SG.OBL
       'I hit you.'

    c'.* *o-a-lromay*   *mosoane=***ako.***
       ACT-REAL-beat 2SG.OBL=1SG.NOM

Mantauran

d.   *o-tipitipi=**lra**=imia'e.*
     ACT.REAL-beat=1SG.NOM=2SG.OBL
     'I hit you.'

d'.* *o-tipitipi=imia'e=**lrao**.*
     ACT.REAL-beat=2SG.OBL=1SG.NOM

A grammaticalized demonstrative used as a third-person pronoun (see § 53.5.3) has a similar distribution to that of full lexical NPs (though with some restrictions in some dialects). Temporal adjuncts (T) usually appear in clause-final or clause-initial position. Word order can thus be defined as (T)-V-$S_{NP/PRO}$-$O_{NP/PRO}$-(T) or (T)-V-$O_{NP/*PRO}$-$S_{NP/*PRO}$-(T). In Tanan, Labuan, and Budai (but not in Tona, Maga, and Mantauran; see § 53.5.2), the (predicative) negator heads the clause and attracts the (nominative) pronoun, as in (2):

(2)   Budai
      ***kai**=nako*[9]   *o-a-lromay*   *mosoane.*
      NEG=1SG.NOM   ACT-REAL-beat 2SG.OBL
      'I do/did not beat you.'

Subject NPs and clauses (see Zeitoun 2007a) can be topicalized—they appear leftward and are usually followed by a topic marker, which delimits the topic from the rest of the sentence. The NP in topic position is cross-referenced by a pronoun on the verb, as shown in (3). An object NP cannot be topicalized unless it is definite (for details, see Zeitoun 2007b, 2018).

(3)   Budai
      a.   ***konako**_i o-a-lromadh=**ako**_i   mosoane.*
           1SG.TOP ACT-REAL-beat=1SG.NOM 2SG.OBL
           (Lit.) 'As for me, I hit you.'

      b.* ***konako**_i o-a-lromay   mosoane.*
           1SG.TOP ACT-REAL-beat 2SG.OBL

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9   When occurring after a vowel (in the verb base, negator, or clitic), the consonant *n* is added in Budai, Labuan, and Tanan, as in *=n-ako* '1SG.NOM' (see also § 53.2.4 on nasal insertion).

Rukai is accusatively aligned and exhibits an active/passive voice distinction (§53.5.5). The actor (or the experiencer) is the preferred nominal argument (i.e., the nominative NP) in active clauses, while the patient is the NP selected as subject in passive clauses. The distinction between subject and non-subject in Rukai is overtly marked on pronouns (cf. NOM vs. OBL) but is more difficult to assess with full NPs because of (i) case syncretism, e.g., *na* can be used to encode nominative and oblique common nouns in Tona and Maga, and (ii) case erosion, i.e., case markers are no longer obligatory in Tanan, Labuan, and Budai; in Mantauran, with the exception of full NPs referring to human participants occurring in object position, all other full lexical NPs (with the exclusion of temporal and locative nouns treated as adjuncts) in subject or object position are unmarked for case (§53.5.2).

53.5.2   *Clause Types*

Two types of sentences can be distinguished, nominal and verbal, with no specific distinction in terms of nominal vs. verbal negation. In both types of sentences, nouns and verbs constitute the head of these clauses, since there is no copula nor any auxiliary verbs in Rukai. Nominal (predicate) clauses, on the one hand, include classificational,[10] identificational, pseudo-cleft, and nominal(ized) interrogative clauses.

Verbal clauses, on the other hand, include declarative, imperative, existential/possessive/locative, and, in Tanan, Labuan, and Budai verbal interrogative clauses (interrogative clauses are always nominalized in Maga, Mantauran, and Tona).

Four types of negation can be distinguished in Rukai: (i) predicative negation, (ii) imperative negation, (iii) modal negation, and (iv) existential/possessive negation, which are briefly introduced in turn below.

The (predicative) negator is *ka* in Tanan (4a),[11] *kai* in Budai, and *kadru(a)* 'do not, did not' in Labuan. It occurs in clause-initial position, attracts pronouns, and is followed by a finite verb form, i.e., a verb fully marked for voice and mood, as in Budai (4b). It is important to note that in Maga, Tona, and Mantauran, the

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10   In Mantauran, the nominal predicate agrees in plurality with the subject in classificational clauses; compare *'avai=lrao/*=nai*. [woman=1SG.NOM/*=1PL.EXCL.NOM] 'I am a woman' vs. *a'ivivai=nai/*=lrao*. [PL:RED:woman=1PL.EXCL.NOM/=1SG.NOM] 'We are women'.

11   With a first-person singular pronoun, the negative sequence changes to *nako* [NEG:1SG. NOM], as in (i).

   (i)   Tanan
          nako   *o-a-kane*   *inia kaang(e)*.
          NEG:1SG.NOM ACT-REAL-eat that fish
          'I did not eat that fish.'

negators have become affixes. In Maga and Tona, the predicative negator is a prefix, *i-*, which attaches to a nonfinite verbal stem (i.e., a bare root), e.g., To *o-a-kane* 'eat/ate' ~ *i-kane* 'do/did not eat' (4c). In Mantauran, the negative suffix *-ka* attaches to finite verbal stems and is obligatorily followed by a genitive pronoun and a particle *ka* (analyzed as a co-negator), which occurs either before the verb if it is intransitive or after it if transitive (4d).[12]

(4) a. Tanan
      ***ka*=so**   *o-a-thingale*   *malra*   *dringlrese*
      NEG=2SG.NOM ACT-REAL-understand DYN.SUBJ:take clear
      idraa vaga.
      that word
      'You did not properly understand (the meaning of) these words.'

     b. Budai
      ***kai*=nako**   *o-a-kane*   *koini kaange.*
      NEG=1SG.NOM ACT-REAL-eat that fish
      'I did not eat that fish.'

     c. Tona
      ***i*-kane**   *kake*   *na   ka'ange.*
      NEG-DYN.NFIN:eat 1SG.NOM OBL fish
      'I did not eat fish.'

     d. Mantauran
      *o-kane-**ka**=li*   *ka   to'onai.*
      ACT.REAL-eat-NEG=1SG.GEN NEG anything
      'I did not eat anything.'

Imperative negation is expressed through a variety of forms, which will be discussed in §53.5.5. Modal negation is rendered by the suffix *-ia* in Maga and Tona, as in (5a). In Mantauran, the prefix *ki-* attaches to a nonfinite verb stem, as in (5b).

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12   Li (1973) mentions that in Tanan, the negator *kai* fuses to the nominative pronouns, yielding *ka-so-i* 'NEG-2SG.NOM', *ka-nomi-i* 'NEG-2PL.NOM', *ka-ta-i* 'NEG-1PL.INCL.NOM', and *ka-nai-i* 'NEG-1PL.EXCL.NOM', but these forms are not found in modern Tanan (i.e., in data collected on and off between 2015 and 2020).

(5) a. Tona
      kan-ia   *kake*   *na*   *ka'ange.*
      DYN.NFIN:eat-NEG 1SG.NOM OBL fish
      'I will not eat fish.'

    b. Mantauran
      ki*-*kane=lrao   *dhona* *ka'ange.*
      NEG-DYN.NFIN:eat=1SG.NOM that   fish
      'I will not eat that fish.'

Affirmative existential, possessive, and locative clauses are all headed by the same verb, which can be glossed as 'exist, be at'; cf. Tanan (6a), Labuan, Budai *yakay*, To *'yakay* (< *i-*/*'i-* 'at', *a-* 'REAL', *kai*/*kay* 'this'), Mt *om-iki* (6b), Mg *ikée* (6c).[13] The existential/possessive negator is expressed by the verb *kadro(a)* in Tanan (6a'), Labuan, Budai, and Tona; *o-kaodho* in Mantauran (6b'); and *tedra* in Maga (6c'), which can be glossed as 'not exist' and occurs in clause-initial position. In locative clauses, the (existential/possessive/locative) verb, cf. Tanan (7a), Labuan, Budai *yakay*, To *'yakay*, Mt *om-iki* (7b), Mg *ikée* (7c), is negated by the predicative negators discussed above.

(6) Tanan
    a. ***i-a-kay***   *ka*   *omas* *latadre* *la*   *gonggong*
       LOC-REAL-this NOM person outside CONJ DYN.NFIN.knock
       inia   *saolatadra.*
       that.OBL door
       'Someone is outside knocking on the door.'

    a'. ***kadroa*** *ka*   *omas* *daane* *la*   *gonggong*   *ko*
       not.exist NOM person house CONJ DYN.NFIN.knock NOM
       Takanaw saolatadra.
       Takanaw door
       'There is/was nobody in the house, but Takanaw keeps/kept on knocking on the door.'

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13   The verb *iki* 'exist, be at' in Mantauran and *ikée* in Maga all reflect PR **ikai* (< *i-* 'at', *kai* 'this'). In Mantauran, *ai* has become *i* and in Maga, it is reflected as *é*.

Mantauran

b. ***om-iki***   *dhona tamama* *idhopele 'aivivai*
DYN.FIN-LOC:this that middle-aged.man all PL:woman
lalake=dha *ma-tolro.*
child=3SG.GEN STAT-three
'There was a middle-aged man who had three daughters.'

b'. ***okaodho*** *ka* *dha'ane ocao* *la* *Taotao 'a* *o-kolokongo*
not.exist NEG house person DISJ Taotao TOP ACT.REAL-knock
'iase.
DYN.SUBJ:call
'There is/was nobody in the house, but Taotao keeps/kept on knocking
on the door.'

Maga

c. ***ikée***   *na* *mamaa tradro=nga abaya*
LOC:REAL.this NOM father big=COS woman
vla~vlak=dra   *truu.*
RED~child=3SG.GEN three
'There was a father who had three grown daughters.'

c'. ***tedra*** *thadani makasi u-gungung* *silba Kanao.*
not.exist in.house but ACT.REAL-knock door Kanao
'There is/was nobody in the house, but Kanao keeps/kept on knocking
on the door.'

(7) a. Tanan
   i-a-kay   *latadre ko* *taw'ong si* *la* ***kai***
   LOC-REAL-this outside NOM dog CONJ CONJ NEG
   talronolronolo ki *daane.*
   NFIN:guard OBL house
   'The dog is outside but is not guarding the house.'

 b. Maga
   i-kaii *tomma na* *dradrongu kuoni* *na* *blibli.*
   NEG-exist field NOM monkey eat:SUBJ OBL banana
   'The monkey is not in the field eating a banana.'

c. Mantauran

ka   ***om-iki-ka-i***   *latadhe* *takanao*
NEG DYN.FIN-exist/be.at-NEG-3SG.GEN outside Takanao
kone   *velevele.*
DYN.SUBJ:eat banana
'Takanao is not eating a banana outside.' (Zeitoun 2007b, p. 350)

53.5.3 *Structure of the Noun Phrase*

In Rukai, simple NPs are composed of a bare noun, a pronoun, or a noun that functions as the head of the NP preceded by an adnominal demonstrative, e.g., Budai *koini belebele*, Mantauran *dhona'i velevele* 'that banana'.

Noun phrases might be preceded by a case marker, which typically fulfills two functions, the first syntactic (indicating the syntactic role of the NP that they precede), and the second semantic (encoding different distinctions, e.g., noun class, such as personal vs. common nouns and animacy/humanness, plurality, and referentiality).

With the exception of Mantauran, which has no case markers per se, the Rukai dialects exhibit two sets of case markers,[14] which distinguish the subject (marked as NOM) from the non-subject (marked as OBL) with the encoding of proper vs. common nouns in Maga and Tona and the marking of referentiality and animacy/humanness in Tanan, Labuan, and Budai.

TABLE 53.8   Rukai case markers

Dialect	Semantic distinctions	NOM	OBL
Mantauran	common nouns	—	—
	proper nouns	—	=*ine*[15]
Maga/Tona	common nouns	*na*	*na*
	proper nouns	*ki*	=*ane*
Tanan	-referential	*ka*	—
	+referential	*ko*	*ko*
	+animate/+human[16]	—	*ki*

14   The very status of prenominal markers as "case markers" has been questioned in previous studies in Tona and Budai; see M. Wang (2003, 2005) and Shih (2012), respectively.

15   The occurrence of =*ine* 'OBL' on nouns in Mantauran is rather restricted and is invariable, as shown in (12).

16   In Tanan, *ki* may co-occur with any common noun relating to a person, e.g., *daane* 'house', *taw'ong* 'dog'.

TABLE 53.8 Rukai case markers (*cont.*)

Dialect	Semantic distinctions	NOM	OBL
	-animate/-human	—	*sa*
Labuan	-animate/-human	*ko*	*ko*
	+animate/human	—	*ki*
Budai	-referential	*ka*	—
	+referential	*ko*	—
	-animate/-human	—	*ko*
	+animate/human	—	*ki*

Importantly, (i) *ki* functions as a nominative case marker in Maga and Tona, but as an oblique-case marker in Budai, Labuan, and Tanan; and (ii) oblique-case-marked personal nouns are marked by the suffix *=a(na)/=anɨ* in Maga, *=ane* in Tona, *=ine* in Mantauran.

Illustrative examples are given below:

(8)   Tona
    a. *o-a-sititi   nakoa   **ki**   Takanaw.*
       ACT-REAL-beat 1SG.OBL NOM Takanaw
       'Takanaw beat me.'

    b. *o-a-kane=nga   nia=so   **na**   belebele?*
       ACT-REAL-eat=COS QST=2SG.GEN OBL banana
       'Did you eat the banana?'

    c. *no=paigo'o mi=kake   Takanav-**ane** no-maobo   thiaobo.*
       IRR=jump IRR=1SG.NOM Takanaw-OBL IRR-evening dance
       'I will dance with Takanaw this evening.'

(9)   Tanan
    a. *o-a-dameke   nakoa   **ko/*ka** Takanaw.*
       ACT-REAL-beat 1SG.OBL NOM   Takanaw
       'Takanaw beat me.'

    b. *'asiakay **ki**   Dhi'olo ko   Takanaw senay.*
       for:REAL OBL Dhi'olo NOM Takanaw sing
       'Takanaw is singing a song for Dhi'olo.'

(10) Budai

    a. *o-a-lromay   nakoane **ka**   Takanaw.*
       ACT-REAL-beat 1SG.OBL NOM Takanaw
       'Takanaw beat me.'

    b. *o-a-kane=nga=su   **ko**/***ka** belebele=su?*
       ACT-REAL-eat=COS=2SG.NOM OBL   banana=2SG.GEN
       'Did you eat your banana?'

    c. *pasiakay ka   Takanaw **ki**   Dhipolo senay.*
       for:REAL NOM Takanaw OBL Dhipolo sing
       'Takanaw is singing a song for Dhipolo.'

In Mantauran, the clitic *=ine* is invariable on nouns, and thus it makes no distinction in terms of visibility (11a). Oblique pronouns occur more frequently on the verb to co-refer to the oblique argument, and an agreement in visibility and plurality takes place between the verb and the NP marked as oblique (cf. *=ine* '3SG.OBL.VIS', *=idhe* '3SG.OBL.INVIS', *=iline* '3PL.OBL.VIS', *=ilidhe* '3PL.OBL. INVIS'), as in (11b–b') and (11c–c') (see Zeitoun 2007b).

(11) Mantauran

    a. *o-cengele=lrao   **Taotao**=ine/*=idhe*
       ACT.REAL-see=1SG.NOM Taotao=3SG.OBL/*=3SG.OBL.INVIS
       'I saw Taotao.' (implied: Taotao can be seen at speech time)

    b. *o-cengele=lra=[**ine**]ᵢ   [**Taotao**]ᵢ.*
       ACT.REAL-see=1SG.NOM=3SG.OBL Taotao
       'I saw Taotao.' (implied: Taotao can be seen at speech time)

    b'. *o-cengele=lra=[**idhe**]ᵢ   [**Taotao**]ᵢ.*
       ACT.REAL-see=1SG.NOM=3SG.OBL Taotao
       'I saw Taotao.' (implied: Taotao cannot be seen at speech time)

    c. *o-cengele=lra=[**iline**]ᵢ   [**Taotao la   Dhipolo**]ᵢ.*
       ACT.REAL-see=1SG.NOM=3PL.OBL Taotao   CONJ Dhipolo
       'I saw Taotao and Dhipolo.' (implied: Taotao and Dhipolo can be seen at speech time)

   c'. *o-cengele=lra=[**ilidhe**]ᵢ*   [***Taotao** la*   *Dhipolo*]ᵢ.
      ACT.REAL-see=1SG.NOM=3PL.OBL Taotao CONJ Dhipolo
      'I saw Taotao and Dhipolo.' (implied: Taotao and Dhipolo cannot be
      seen at speech time)

More complex NPs include nominal and verbal elements that modify the head noun or coordinated NPs. Nominal complements usually follow the head noun (in comparison, word order is free in Mantauran). If the modifier refers to a possessor, it is preceded by *ki* in Tanan, Labuan, Budai, and Tona; *ki* is optional in Maga and not found in Mantauran. What crucially differs is the marking of the possessed noun: it is unmarked in Tanan, Labuan, and Budai, but marked by the genitive in Mantauran, Maga, and Tona, or the oblique in the latter two dialects, if the possessed noun is a kinship term. In other words, Tanan, Labuan, and Budai exhibit dependent marking (12a), viz. $N_{HEAD/PSE}$ ki $N_{MOD/PSR}$, Mantauran head marking (12b), viz. $N_{HEAD/PSE}$=PRO_{GEN} $N_{MOD/PSR}$, and Maga/Tona double marking (12c), viz. $N_{HEAD/PSE}$ =PRO_{GEN} $N_{MOD/PSR}$ (where PRO = pronoun).

(12) a. Tanan/Labuan/Budai
        *daane **ki**   Takanaw*
        house OBL Takanaw
        'Takanaw's house'

      b. Mantauran
        *dha'ane=**ni**   Taotao*
        house=3SG.GEN Taotao
        'Taotao's house'

      c. Tona
        *da'an=**ini**   ki   Takanaw*
        house=3SG.GEN OBL Takanaw
        'Takanaw's house'

Verbal complements usually precede the head noun. With the exception of Mantauran (which exhibits the structure V_{NMLZ} N_{HEAD}), the ligature *ka* may occur between the modifier and the head (as in V *ka* N_{HEAD}). There is, for instance, no distinction whatsoever between nominalization and relativization. Compare Tn/Lb *maboti **ka** ngiao*, To *maboti'i **ka** ngiao* and Mt *takavoti'i ∅ ngiao* 'a blind cat'. In all Rukai dialects except Mantauran, nouns are coordinated by *si* 'and' (cf. Mt *la*). In Tanan, Labuan, and Budai, a nominative or oblique case marker (CM) precedes the NP, thus yielding the structure

CM$_{NOM}$/$_{OBL}$ NP$_1$ *si* NP$_2$ (13a). In Maga and Tona, when two common nouns are coordinated, the same structure is found in the nominative and in the oblique, viz. CM$_{NOM}$/$_{OBL}$ NP$_1$ *si* NP$_2$. But if two personal nouns flagged as oblique are coordinated, then both NPs must be suffixed with the oblique suffix; cf. Mg =*a(na)*/=*ani*, To =*ane*, as in CM$_{OBL}$ NP$_{PERS-1}$=OBL *si* NP$_{PERS-2}$=OBL; see (13b). In Mantauran, coordination is, to some extent, identical to that in Maga and Tona, viz. N$_1$ *la* N$_2$, the major difference lying in the impossibility of two coordinated oblique personal nouns to be simultaneously suffixed by =*ine* 'OBL'; the oblique form must appear on the verb and agrees in visibility and number with the NP with which it co-refers, thus V=*iline*$_i$/=*ilidhe*$_i$ [N$_1$ la N$_2$]$_{NPi}$ (13c).

(13) a. Budai
        o-a-dreel=ako   **ki**   [*Takanaw si   Lrangepaw.*]
        ACT-REAL-see=1SG.NOM OBL Takanaw   CONJ Lrangepaw
        'I saw Takanaw and Lrangepaw.'

    b. Tona
        o-a-cengele=nga   *kake*   [*Ipol=**ane** si   Takanav=**ane**.*]
        ACT-REAL-see=COS 1SG.NOM Ipolo=OBL CONJ Takanaw=OBL
        'I have seen Ipolo and Takanaw.'

    c. Mantauran
        *o-cengele-nga=lra=**ilidhe**$_i$*   [*Dhipolo la   Taotao.*]$_i$
        ACT.REAL-see-COS=1SG.NOM=3SG.OBL Dhipolo CONJ Taotao
        'I have seen Dhipolo and Taotao.' (implied: Dhipolo and Taotao are not here at the time of speech)

Demonstratives are marked for visibility and distance, e.g., Bd *kai, koi, kaivai* 'this [+VIS, +PROX]', *koini, kauvai* 'that [+VIS, -PROX]', *kodra, koidra* 'that [-VIS, +FAR]', Mt *'ina, 'ina'i* 'this [+VIS, + PROX]', *ana, ana'i* 'that [+VIS, -PROX]', *ona, ona'i* 'that [-VIS, -FAR]', *dhona, dhona'i* 'that [-VIS, +FAR]'. Demonstratives exhibit two major functions: (1) they can refer to a third-person participant (as free nominative or topic pronouns), as in (14a) (see Table 53.9 below), and (2) they can precede the head noun as modifiers (i.e., they function as modifiers), as in (14b).

(14) Mantauran
    a. *o-cengel=iae*   **ana.**
       ACT.REAL-see=1SG.OBL that
       'He/She sees/saw me.'

    a'. *o-cengel=iae*   **ana ocao.**
       ACT.REAL-see=1SG.OBL that person
       'That person sees/saw me.'

    Tanan
    b. *o-a-ceele=nga=nako*   **inia/idraa.**
       ACT-REAL-see=COS=1SG.NOM that.OBL
       'I saw him/her.'

    b'. *o-a-ceele=nga=nako*   **inia/idraa omas.**
       ACT-REAL-see=COS=1SG.NOM that.OBL   person
       'I saw that person.'

In contrast to adnominal demonstratives, demonstratives grammaticalized as free pronouns are marked for case in all Rukai dialects except in Mantauran through the prefixation of *ko, ka, ki, na*. They are overtly marked for plurality by the suffixation of *-lo* in Mantauran, e.g., *ana-lo* 'they' (< *ana* 'he/she'), and through the prefixation of *l(a)-* in Labuan and Tanan, e.g., *ko-l-ini* 'they' (< *koini* 'he/she'). Some of these demonstratives also serve to refer to both space and time, e.g., To *nakay* 'here, now', Mt *'ona* 'there, at that time', Tn *inia* 'there', *idraa* 'at that time'; see (15).

(15) Tanan
    a. *i-a-kai*   *'aka(i)-inu? y-a-kai*   *'aka(i)-inia!*
       LOC-REAL-this at-where   LOC-REAL-this at-here
       'Where is it? It is here!'

    b. *twalay* **idraa** *'akela kayasa*
       from   there until now
       'from that time until now'

53.5.4 *Pronominal System*

The Rukai dialects exhibit four sets of personal pronouns, topic (TOP), nominative (NOM), oblique (OBL), and genitive (GEN), as shown in Table 53.9.

TABLE 53.9 Rukai personal pronouns

Person/Number	Dialects	TOP		NOM		OBL	GEN
1SG	Tn/Lb	*konako*	*nao=*	—	*=(n)ako*	*nakoa*	*=li*
	Bd	*konako*	*nao=*	—	*=(n)ako*	*nakoane*	*=li*
	Mt	*ilrae*	*nao=*	—	*=lrao*	*=iae*	*=li*
	Mg	*ikiki*	*ku=*	*kiki*	*=ki*	*ngkua*	*=li*
	To	*akake*	*ko=*	*kake*	—	*(na)koa*	*=li*
2SG	Tn/Lb	*koso*	—	—	*=so*	*mosoa*	*=so*
	Bd	*koso*	—	—	*=so*	*mosoane*	*=so*
	Mt	*imia'e*	—	—	*=mo'o*	*imia'e*	*='o,*
							=ko
	Mg	*imusu*	*su=*	*musu*	—	*sua*	*=su*
	To	*akoso*	*si=*	*koso*	—	*mosoa*	*=(i)so*
3SG VIS	Tn/Lb	*koani*	—	*koani*	—	*inia*	*=ini*
INVIS		*koadra*		*koadra*		*idraa*	*=idra*
VIS	Bd	*koini*	—	*koini*	—	*iniane*	*=ini*
INVIS		*koidra*		*koidra*		—	—
VIS	Mt	*ana*	—	*ana*	—	*=ine*	*=(n)i*
INVIS		*dhona*		*dhona*		*=idhe*	*=dha*
VIS	Mg	*ikini*	*ni=*	—	—	*nia*	*=ni*
INVIS		*ikidri*				*dria*	*=dra*
VIS	To	*akini*	*ni=*	—	—	*niane*	*=(i)ni*
INVIS		*akidra*				*driane*	*=(i)dra*
1PL.INCL	Tn/Lb	*kota*	*ta=*	—	*=mita*	*mitaa*	*=(i)ta*
					=ta		
	Bd	*kota*	*ta=*	—	*=ta*	*mitaane*	*=ta*
	Mt	*imite*	*ta=*	—	*=mita*	*imite*	*=ta*
		ita			*=ta*		
	Mg	*imita*	*ta=*	*miti*	—	*mtia*	*=ta*
	To	*akiti*	*ta=*	*kita*	—	*mitia*	*=(i)ta*
1PL.EXCL	Tn/Lb	*konai*	*nai=*	—	*=nai*	*naia*	*=nai*
	Bd	*konai*	*nai=*	—	*=nai*	*naiane*	*=nai*
	Mt	*iname*	*nai=*	—	*=nai*	*iname*	*=nai*
	Mg	*imita*	*nami=*	*knami*	*=nami*	*nmaa*	*=(i)name*

TABLE 53.9 Rukai personal pronouns (*cont.*)

Person/Number	Dialects	TOP		NOM		OBL	GEN
	To	*akiti*	*name=*	*kiname*	—	*namia*	*=namɨ*
2PL	Tn/Lb	*konomi*	—	—	*=nomi*	*nomia*	*=nomi*
	Bd	*konomi*	—	—	*=nomi*	*nomiane*	*=nomi*
							=no
	Mt	*inome*	—	—	*=nomi*	*inome*	*=nomi*
	Mg	*imumu*	*mu=*	*mumu*	—	*mua*	*=mu*
	To	*akomo*	*mo=*	*komo*	—	*moane*	*=(i)mo*
3PL VIS	Tn/Lb	*kolini*	—	*kolini*	—	*inia,*	*=lini*
INVIS		*kolidra*		*kolidra*		*idraa*	*=lidra*
VIS	Bd	*koini*	—	*koini*	—	iniane	*=ini*
INVIS		*koidra*		*koidra*		—	—
VIS	Mt	*analo*	—	*analo*	—	*=iline*	*=lini*
INVIS		*dhonalo*		*dhonalo*		*=ilidhe*	*=lidha*
VIS	Mg	*ikini ikidri*	*ni=*	*kini*	—	*nia*	*=ni*
INVIS				*kidri*		*dria*	*=dra*
VIS	To	*akini*	*ni=*	*kini kidra*	—	*niane*	*=(i)ni*
INVIS		*akidra*				*driane*	*=(i)dra*

Morphologically, Rukai pronouns exhibit a distinction between (1) visible and invisible third-person participants (cf. *n-* vs. *dr-/dh-*) and (2) inclusive and exclusive (in the first person plural). Pronouns are marked for case; "long" pronominal forms (i.e., non-clitic forms) are prefixed by *ko-* in Tanan, Labuan, and Budai, and *ko-* and *ki-* in Maga and Tona. The oblique case is morphologically marked by the suffixation of *-a(ne)* in Tanan, Labuan, Budai, Maga, and Tona and by *i-...-e* in Mantauran. All dialects lack nominative enclitics in the third person (singular and plural), but this gap may be compensated for by the occurrence of demonstrative pronouns. Pronouns differ in their degree of boundedness: nominative forms are "free" in Maga and Tona, but cliticized to the verb in Mantauran, Budai, Labuan, and Tanan. Syntactically, Maga and Tona have developed a full set of nominative enclitics to express volitionality/modality. Tanan, Labuan, Budai, and Mantauran only feature such enclitics in the first person (singular/plural). Compare the following pairs of examples.

(16) Tanan
    a. ***nao=a'ec=ana.***
       1SG.NOM=sleep=still
       'I want to sleep a little.'

    a'. *ai-a'ec=**ako**.*
       IRR-sleep=1SG.NOM
       'I will sleep.'

    Mantauran
    b. ***nao='apece.***
       1SG.NOM=sleep
       'I want to sleep.'

    b'. *amo='apece=**lrao**.*
       IRR=sleep=1SG.NOM
       'I will sleep.'

    Tona
    c. ***ko=siake.***
       1SG.NOM=sleep.
       'I will sleep'

    c'. *no=siaeke mi=**kake**.*
       IRR=sleep IRR=1SG.NOM
       'I will sleep.'

Maga and Tona have developed a morphosyntactic contrast between alienable and inalienable possessive NPs, whereby kinship terms are marked by an oblique pronoun, instead of the commonly found genitive. Compare Mg *vlak=li*, To *valake=**li***, Bd/Mt *lalake=**li*** 'my child' and Mg *mami=**nmaa*** To *tatavi=**namia*** 'our father' (where by 'our' is a polite form of 'my'), Bd/Mt *ama=**li*** 'my father'.

    In Maga and Tona (and to a lesser extent, in Mantauran),[17] participants referring to the first person (singular/plural) can be marked by a nominative or an

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17   But as pointed out by Li (1996), with some stative verbs (e.g., happy, afraid), the argument marked as oblique is an O (not an S).
    (i) Mantauran
       a. *ma-raveravere=**lrao*** S/NOM.
          STAT-happy=1SG.NOM
          'I am happy.'

oblique pronoun—this latter case implying that the subject is non-volitional and affected—in co-occurrence with stative verbs (e.g., hot, sick, hungry, tired, dislike), as in (18) (see also Saillard 1995, p. A2–06). The other Rukai dialects do not allow an intransitive subject to be marked as O.

(17) Tona

    a. *ma-apa'a **kake**.*
        STAT-hot 1SG.NOM
        'I am hot.'

    a'. *ma-apa'a **nakoa**.*
        STAT-hot 1SG.OBL
        'I am (caused to be) hot.'

    Mantauran
    b. *ma-lrakase=**lrao**   solate.*
        STAT-hot=1SG.NOM DYN.SUBJ:write
        'I dislike studying.'

    b'. *ma-lrakase=**iae**   solate.*
        STAT-hot=1SG.OBL DYN.SUBJ:write
        'I dislike studying.'

Rukai is rather unique among the Formosan languages in that it has impersonal pronouns, which exhibit nominative, genitive, and oblique declension, e.g., Mt *=mao* 'NOM/GEN' and *=imae* 'OBL', as in (18a–b), Budai and Labuan *=mado* 'NOM', as in (18c), and Tona *kimade* 'NOM', *modoa* 'OBL', *=(i)made* 'GEN' (see Wang 2003, p. 118). Impersonal pronouns are not found in Tanan Rukai.

(18) Mantauran (Zeitoun 2007b)

    a. *olo poca'e=nai   'a   to'araki=**mao***
        if   DYN.SUBJ:embroider=1PL.EXCL.GEN TOP use=IMPRS.NOM
        dhona'i ta-ecelrange molrae.
        that   INAL-black   fabric
        'When we did embroidery, we (would) take (a piece) of black fabric.'
        (p. 70)

    b. *ma-raveraver=**iae** $_{O/OBL}$.*
        STAT-happy=1SG.OBL
        '(Someone) makes me happy.'

b. *lo maava'i=dh=**imae**   'i*
if DYN.SUBJ:embroider=3SG.GEN=IMPRS.OBL SM
*asavasavare=**mao**   ma-a'a...*
boyfriend=IMPRS.GEN STAT.SUBJ-court
'When one's boyfriend came (to one's house) to court …' (p. 74)

Budai
c. *mwadingadingay=**mado**!*
stay.fine=IMPRS.NOM
'Be fine!'/'Stay healthy!'

53.5.5 *Verbal Morphology*

As shown in Tables 53.10 and 53.11, Rukai verbs are divided into two main categories, dynamic (mostly marked by *o-a-* [wa] in the realis (< *o-/u-* 'ACT.DYN', followed by *a-* 'REAL') in Tanan, Labuan, Budai, and Tona, *u-* (and less commonly *o-*) in Maga, and *o-* in Mantauran; as mentioned in §53.3, the *a-* prefix does not occur in these last two dialects, as the diphthong *oa-/ua-* has monophthongized) and stative (mostly marked by *ma-* 'REAL', though also by ∅). Other types of verbs are mostly denonimal verbs, which behave like dynamic verbs (see §53.5.6). Dynamic and stative verbs exhibit three conjugation patterns: finite, nonfinite, and subjective. Finite verbs correspond to main verbs in the realis and are marked for (active) voice. Nonfinite verb forms are usually induced by the prefixation of a verb affix to the stem, e.g., To *pa-kane* [CAUS-eat] 'make … eat' (and not **pa-o-a-kane* [pawakane]), as opposed to *o-a-kane* [wakane] 'eat', but they can also result from the occurrence of a coordinator or a conjunction, as in To *wakane si 'ongolo* 'eat and drink' (and not **wakane si **wa'ongolo***). Imperative verbs, embedded verbs, and verbs occurring in conditional clauses are usually marked with the subjunctive, with two major exceptions. In Budai, dynamic *m*-marked verbs keep the *m-* when they are in the subjunctive; verbs starting with an initial vowel /a/ or a consonant followed by /a/, however, do not undergo the infixation of ⟨*o*⟩, as shown in (19). In Tanan, Labuan, and Budai, imperative and/or embedded stative verbs are not marked as subjunctive but rather as nonfinite, as shown in (20).

(19) Budai
a. *bwala   **mobanav-a**!*
come.IMP SUBJ.DYN:bathe-IMP
'Come bathe!'

a'.* *bwala   obanav-a!*
come.IMP NFIN.DYN:bathe-IMP

Tanan
b. *niama   mabanav-a!*
come.IMP SUBJ.DYN:bathe-IMP
'Come bathe!'

b'.* *niama   pabanav-a!*
come.IMP NFIN.DYN:bathe-IMP

Budai
c. *bwala   kane-a!*
come.IMP NFIN.DYN:eat-IMP
'Come eat!'

c'.* *bwala   kwane-a!*
come.IMP SUBJ.DYN:eat-IMP

Tanan
d. *niama   kwane-a!*
come.IMP SUBJ.DYN:eat-IMP
'Come eat!'

d'.* *niama   kane-a!*
come.IMP NFIN.DYN:eat-IMP

(20) Tanan
a. *ka-dalam-a   inia!*
STAT.NFIN-like/love-IMP that
'Like/Love him!'

a'.* *madalam-a   inia!*
STAT.SUBJ:like/love-IMP that

b. *mwa   ka-dalame   inia!*
SUBJ:go:IMP STAT.NFIN-like/love that
'Go like/love him!'

b'.* *mwa*   **ma-dalame**   *inia!*
SUBJ:GO:IMP STAT.SUBJ-like/love that

Table 53.10 offers an overview of the three conjugation patterns (in terms of verb types) of the majority of (dynamic vs. stative) verbs found in the Rukai dialects, and Table 53.11 provides further illustration by presenting cognate sets whenever available.

TABLE 53.10   Rukai verb classes and verbal conjugation

Verb class	Verb type	Form	Tn	Lb	Bd	Mt	Mg	To
DYN	o~u- C*V*CV	FIN	*o-a-*	*o-a-*	*o-a-*	*o-*	*u-/o-*	*o-a-*
		NFIN	∅[18]	∅	∅	∅	∅	∅
		SUBJ	∅	∅	∅	∅	∅	∅
	o~u-C*a*CV	FIN	*o-a-*	*o-a-*	*o-a-*	*o-*	*u-/o-*	*o-a-*
		NFIN	∅	∅	∅	∅	∅	∅
		SUBJ	Cw*a*CV	Cw*a*CV	∅	C*o*CV	C*o*(V)CV	Cw*a*CV
							C*u*(V)CV	
	am-/om-	FIN	*am-*	*am-*	*w-am-*	*om-*	*am-*	*am-*
		NFIN	∅	∅	∅	∅	∅	∅
		SUBJ	*m-*	*m-*	*m-*	*m-*	*m-*	*m-*
	∅~m-	FIN	*m-*	*m-*	*m-*	*m-*	*m-*	*m-*
		NFIN	∅	∅	∅	∅	∅	∅
		SUBJ	*m-*	*m-*	*m-*	*m-*	*m-*	*m-*
	p~m	FIN	*m*	*m*	*m*	*m*	*m*	*m*
		NFIN	*p*	*p*	*p*	*p*	*p*	*p*
		SUBJ	*m*	*m*	*m*	*m*	*m*	*m*
STAT	ka-~ma-	FIN	*ma-*	*ma-*	*ma-*	*ma-*	*ma-*	*ma-*
		NFIN	*ka-*	*ka-*	*ka-*	*ka-*	*ka-*	*ka-*
		SUBJ	—	—	—	*ma-*	*ma-*	*ma-*
	∅	FIN	∅	∅	∅	∅	∅	∅
		NFIN	∅	∅	∅	∅	∅	∅
		SUBJ	∅	∅	∅	∅	∅	∅

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18   Root or stem form.

TABLE 53.11 Exemplification of Rukai verb classes and verbal conjugation

Verb class	Verb type	Form	Tn	Lb	Bd	Mt	Mg	To	Gloss
DYN	w~o-u-CVCV	FIN	o-a-'ilri	o-a-pilri	o-a-pilri	o-pilri	u-pilri	o-a-pii	'choose'
		NFIN	'ilri	pilri	pilri	pilri	piri	pii	
		SUBJ	'ilri	pilri	pilri	pilri	piri	pii	
	w~o-u-CaCV	FIN	o-a-kane	o-a-kane	o-a-kane	o-kane	u-kani	o-a-kane	'eat'
		NFIN	kane	kane	kane	kane	kani	kane	
		SUBJ	kwane	kwane	kane	kone	kuoni	kwane	
	am-/om-	FIN	am-wa	am-wa	o-am-wa	om-oa	am-ua	am-wa	'go'
		NFIN	wa	wa	wa	oa	ua	wa	
		SUBJ	m-wa	m-wa	m-wa	m-oa	m-ua	m-wa	
	∅~m-	FIN	m-o-a-daan(e)	m-o-a-daane	m-o-a-daane	m-o-dha'ane	m-u-dani	m-o-a-da'ane	'enter house'
		NFIN	o-daan(e)	o-daane	o-daane	o-dha'ane	u-dani	o-da'ane	
		SUBJ	m-o-daan(e)	m-o-daane	m-o-daane	m-o-dha'ane	m-u-dani	m-o-da'ane	
	p~m	FIN	mabanaw	mabanaw	mwabanaw	maavanao	—	—	'bathe'
		NFIN	pabanaw	pabanaw	obanaw	paavanao	—	—	
		SUBJ	mabanaw	mabanaw	mobanaw	maavanao	—	—	
STAT	ka-~ma-	FIN	ma-ngeta	ma-ngeta	ma-ngeta	ma-ngeta	ma-nta	ma-ngeta	'raw'
		NFIN	ka-ngeta	ka-ngeta	ka-ngeta	ka-ngeta	ka-nta	ka-ngeta	
		SUBJ	—	—	—	ma-ngeta	ma-nta	ma-ngeta	
	∅	FIN	baowa	baowa	bavane	va'oae	bovaa	baowane	'new'
		NFIN	baowa	baowa	bavane	va'oae	bovaa	baowane	
		SUBJ	baowa	baowa	bavane	va'oae	bovaa	baowane	

The Rukai dialects are characterized by an active–passive voice distinction, although the passive voice is not used productively. Both dynamic and stative verbs can undergo passivization, but they need to subcategorize for two arguments, an agent and a patient. Verbs in the active voice are marked by the prefixes given above. The passive marker is *ki-* (followed by the realis marker a-, thus *ki-a-* [kya], as in (21)) in most dialects except in Mantauran, where it shows up as *ʼi-*, and in Maga, where it is realized as *ké-*.

(21) Tona

    a. ***o-a-kaace***   *ka*   *sulraw ki*   *taupungu.*
       ACT-REAL-bite NOM snake OBL dog
       'The snake bit a dog.'

    b. ***ki-a-kaace***   *ki*   *sulraw ka*   *taupungu.*
       PASS-REAL-bite OBL snake NOM dog
       'The dog was bitten by a snake.'

There is another (even less productive) type of passivization, which is referred to here as non-agentive passivization, because the agent cannot occur overtly (in opposition to the above-mentioned passive, labeled "agentive passive"). It has not been reported in Mantauran and Maga, and is encoded by *ko-* in Budai, Labuan, and Tanan (22a) and *ʼi-* in Tona (22b). Only dynamic verbs may undergo non-agentive passivization, but they must be telic verbs (in contrast to *o-/u-*marked verbs, which are usually atelic). Teng (2020) shows that *kur-* functions as a middle in Puyuma and that it might have been borrowed in Budai, Labuan, and Tanan. Though cognacity with Puyuma cannot be completely excluded, borrowing seems to provide an explanation as for (i) its sporadic usage in these three dialects and (ii) its non-occurrence in Mantauran, Tona, and Maga.

(22) Tanan/Labuan

    a. ***ki-a-laobo***   (*nakoa*)   *koani*   *daane=so.*
       PASS-REAL-burn (1SG.OBL) that.NOM house=2SG.GEN
       'Your house was burned (by me).'

    a'. ***ko-a-laobo***   (**nakoa*)   *koani*   *daane=so.*
       NAGT.PASS-REAL-burn (*1SG.OBL) that.NOM house=2SG.GEN
       'Your house was burned (*by me).'

Tona

b. ***ki-a-silape***   *koso*   *nakoa.*
PASS-REAL-look.for 1SG.NOM 1SG.OBL
'You were looked for by me.'

b'. ***'i-a-silape*=*nga***   (**nakoa)   *makasi i-okono*
NAGT.PASS-REAL-look.for=COS (*1SG.OBL) but   NEG-find
kake.
1SG.NOM
'It was looked for (*by me), but I did not find it.'

Affirmative imperative verbs in Rukai are marked with the suffix -*a*. While this suffix is common throughout Formosan languages in the southern area (e.g., Kanakanavu, Saaroa, Bunun), the Rukai dialects (with the exception of Budai; see (19)) differ from them in that (affirmative) imperative verb forms are "subjunctive" and not "nonfinite", i.e., they are bare forms. Negative imperatives are formed in different ways in the Rukai dialects, but verbs are always nonfinite. Mantauran negative imperative verbs are nominalized (cf. *a-…-ae*) and always followed by a genitive pronoun (usually =*'o* '2SG.GEN'), as in (23a). In Maga and Tona, verbs are preceded by *adré*/*adri*, as in (23b), in Tanan and Labuan, they are preceded by *kai*, as in (23c). In Budai, verbs are prefixed by *ara-*, and undergo CVCV-reduplication, as in (23d).

(23) a. Mantauran
      a-kan-ae='o!
      PAT.NMLZ-NFIN:eat-PAT.NMLZ=2SG.GEN
      'Don't eat!'

     b. Tona
        adri   *kane!*
        IMP.NEG NFIN:eat
        'Don't eat!'

     c. Tanan/Labuan
        kai   *kane!*
        IMP.NEG NFIN:eat
        'Don't eat!'

   d. Budai
    ara   *kane~kane!*
    IMP.NEG RED~NFIN:eat
    'Don't eat!'

Rukai exhibits a realis/irrealis dichotomy, whereby temporal/aspectual and modal distinctions can be marked morphologically (by affixation and reduplication) or lexically (by the occurrence of temporal adjuncts). There is no grammatical realization of tense, and aspectual distinctions are to some extent neutralized. In the realis, a verb marked by *o-a-/u-/o-* or *ky-a-/ké-/'i-* refers to an event that has happened or is happening (without the addition of any affix or clitic), as shown, for instance, in (23). The temporal frame of an utterance is given by additional affixes or clitics such as Lb/Bd/Mt/To *maka-*, Mg mka- 'finish', =(*a*)*nga* 'COS', Tn/Lb/Bd/Mt =(*a*)*na*, Mg/To =*la* 'still, yet'. Consider the Tona example in (24).

(24) Tona
   a. *a-ko*   **maka-kan**=*ili*   *do'o ka*
     TOP-when.REAL SUBJ:finish-DYN.NFIN:eat=1SG.GEN rice TOP
     abebee *kake.*
     leave   1SG.NOM
     'When I had finished eating, I went out.'

   b. *ma-odripi*=**la**   *ki*   *tatavi namia.*
     STAT-alive=still NOM father 1PL.EXCL.NOM
     'My father is still alive.'

A verb featuring CV.V-reduplication in Tn/LB/Bd/Mt conveys a habitual meaning, also expressed in all dialects by CVCV-reduplication (CCV- in Maga). CVCV-reduplication also encodes the progressive. In the irrealis, different affixes are used across the Rukai dialects to express projective/future and counterfactuality, cf. Tn/Lb *ai-*, Bd (*lr*)*i-*, Mg *nu-...maa*, To *no-...mi*, Mt amo- 'IRR', and Tn/Lb/Bd *nai-*, Mt/Mg/To ni- 'CNTFCT'. An example is given in (25).

(25) Tona
   a. *cengel-a!*   **no-'ievese**   **mi**-*koso!*
     SUBJ:see-IMP IRR-DYN.NFIN:fall IRR-2SG.NOM
     'Be careful! You are going to fall!'

b. *nilava=ni   'ikai   nakoa   na   paiso   koboane   ka*
   if=3SG.GEN LOC:this 1SG.OBL OBL money before   TOP
   ni-langai=nga   kake   na   da'ane.
   CNTFCT-DYN.NFIN:buy=COS 1SG.NOM OBL house
   'If I had money before, I would have bought a house.'

53.5.6 *Valency-Adjusting Operations*

Causative verbs are prefixed by *pa-*, which attaches to bare roots with dynamic verbs, e.g., Tn/Lb/Bd/Mt/To *pa-kane*, Mg *pa-kanɨ* 'make … eat, feed', and to *ka-*verb stems with stative verbs, e.g., Tn/Lb/Bd/Mt *pa-ka-limeme* 'sweeten'. Tona and Maga differ from the other Rukai dialects (and most other Formosan languages in general) by the replacement of *pa-ka-* by *p(a)-té-/pa-ti-* (< *pa-* 'CAUS', *té-/ti-* 'make') in causativized stative verbs (26a–c) (Zeitoun 2017b).[19]

(26) a. Tona
       pa-ti-bola'a   *sinaw nakoay kopingi!*
       CAUS-do-clean wash   that   clothes
       'Wash the clothes better!'

    b. Mantauran
       o-savesave-ka='o   ***pa-ka-dholrilange***   *dha'ane?*
       ACT.REAL-wash-NEG=2SG.GEN CAUS-STAT.NFIN-clean house
       'Did you clean your house well?' (Zeitoun 2007b, p. 77)

    c. Tanan
       o-a-sasinaw   ***'a-ka-bolaa***   *'inia   ki'ing.*
       ACT-REAL-wash CAUS-STAT.NFIN-clean that.OBL clothes
       'He/She washes clothes well.'

Reflexives are formed through the prefixation of different morphemes across the Rukai dialects; cf. Tn/Lb *ani-*, Mg *ang-*, Bd *ngi-*, To *'angi-*, Mt *'ini-*, which attach to stems undergoing C*a*-reduplication. In the realis, the prefix *a-* attaches to the reflexive (except in Maga and Mantauran, for reasons explained above), e.g., Tn/Lb ***ani-a-ca-ceele***, Mg ***ang-ca-cngilɨ***, Bd ***ngi-a-dra-dreele***, To ***'angi-a-ca-cengele***, Mt ***'ini-ca-cengele*** 'see oneself, look at oneself', as in (27).

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19   The only stative verb found that does not take the *pa-te-/pa-ti-* bimorphemic prefix when causativized is Mg *ma-rbribri*, To *ma-abeabee* 'happy'; cf. Mg *pa-ka-rbribri*, To *pa-ka-abeabee* 'make happy'.

(27) a. Tanan

malrigili **ani-ka~kamani** *mabanaw* *koani* *lrolay.*
STAT:clever REFL-RED~self DYN.SUBJ:bathe that.NOM child
'That child knows how to bathe himself.'

b. Tona

ni-doo *koso* **'angi-da~do'o!**
CNTFCT-DYN.NFIN:can 2SG.NOM REFL-RED~DYN.NFIN:cook
'You should be able to cook by yourself!'

c. Mantauran

o-dholro **'ini-pa~paavanao** *ana* *lroolai.*
ACT.REAL-can REFL-RED~DYN.NFIN:bathe that child
'That child knows how to bathe himself.'

Reciprocals are formed by the prefixation of *ma-Ca-* to dynamic verbs (the non-finite form is *pa-Ca-*), e.g., Tn/Lb *ma-ca~ceele/pa-ca-ceele*, Bd *ma-dra~dreele/ pa-dra~dreele*, Mt/To *ma-ca~cengele/pa-ca~cengele*,[20] Mg *ma-ca~cngili/pa-ca~cngili* 'see each other', and To/Mt *ma'a-* / Tn/Lb/Bd *maa-* / Mg *ma-* to stative verbs (the nonfinite form is *pa'a-/pa(a)-*), Tn/Lb/Bd *maa-ka-dalame/paa-ka-dalame*, To *ma'a-ka-dalame/pa'a-ka-dalame*, Mt *ma'a-ka-dhalame/pa'a-ka-dhalame*, Mg *ma-ka-dlami/pa-ka-dlami* 'like/love each other'. The prefixes *ma'a-/maa-/ma-* can also encode a reciprocal or converse (i.e., bilateral) relationship (Lichtenberk 1999), e.g., Bd *la-ma-kaingo* 'grandmother and grandchild' (< *kaingo* 'grandmother') (Shelley 1979, p. 395). Illustrative examples are given in (28).

(28) a. Tona

o-a-dresenge=*nga* *ki* *Takanaw* *Ipol-ane.*
ACT-REAL-meet=COS NOM Takanaw Ipolo-OBL
'Takanaw met Ipolo.'

a'. **ma-dra~dresenge** *kiname* *'ikay* *'alangao.*
RECP-RED~meet 1PL.EXCL.NOM be.at resting.area
'We met each other in the resting area.'

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20   A more productive reciprocal prefix is *ma(a)-*, e.g., Mt *maa-cengele* 'see each other'.

   b. Mantauran
      ***ma-dhalame**=lra=ine*   *ina=li.*
      STAT-like=1SG.NOM=3SG.OBL mother=1SG.GEN
      'I like/love my mother.'

   b'. ***ma'a-ka-dhalame*** *la-ma'a-tina.*
       RECP-STAT-like   PL-RECP-mother
       'Mother and daughter/son love each other.'

53.5.7 *Complex Sentences*

This subsection contains a brief overview of complex sentences in Rukai, including relative clauses, verb serialization, complementation, coordination, and subordinate clauses.

As shown in § 53.5.3, there is no distinction whatsoever between nominalization and relativization. The head of relative clauses is marked on the verb by different nominalizers, such as agent, patient, locative, and temporal, e.g., Tn *kadroa ka **a**-kane-**ane**=li* [NEG.EXST NOM PAT.NMLZ-eat-PAT.NMLZ=1SG.GEN] 'I had no food' (lit. 'There was no(thing) that I (could) eat.'), *koani ta-kane-ane-li* [that LOC.NMLZ-eat-LOC.NMLZ=1SG.GEN] 'This is the place where I eat/ate'.

In one of the most frequent complement-clause types, two verbs form a complex predicate in a serial verb construction, and the second, embedded to the first, is marked as subjunctive (29b–c), except in Budai (29a):

(29) a. Budai
        ki-a-adil=ako   *lango~langoy.*
        get-REAL-force=1SG.NOM RED~swim
        'I forced myself to swim.'

     b. Tanan/Labuan
        ki-a-adi~adi~adil=ako   *l⟨**o**⟩ango~langoy.*
        get-REAL-RED~RED~force=1SG.NOM ⟨SUBJ⟩RED~swim
        'I am forcing myself to swim.'

     c. Tona
        o-a-igo'o   *ki*   *Takanaw l⟨**o**⟩ango~langoy.*
        ACT-REAL-know NOM Takanaw ⟨SUBJ⟩RED~swim
        'Takanaw knows (how to swim).'

Complementation is encoded completely differently in Mantauran, Tona, and Maga, on the one hand, and Budai, Labuan, and Tanan, on the other. In brief,

in the former group of dialects, the matrix verb is followed by a complement clause with a finite verb, as in (30a). In the latter, the main verb is followed by a subordinate clause introduced by *sa* 'when'; depending on the type of matrix verb (knowledge or perception), the verb might be finite (30b), or nonfinite (30b').

(30) a. Mantauran
          o-lriho'o=lrao   Ø *o-tipitip=ine*   *'i   Taotao*
          ACT.REAL-know=1SG.NOM Ø ACT.REAL-beat=3SG.OBL SM Taotao
          Dhipolo.
          Dhipolo
          'I know that Taotao beat Dhipolo.'

      b. Tanan
          o-a-thingal=ako   *sa   o-a-dameke/*dameke   ki*
          ACT-REAL-know=1SG.NOM when ACT-REAL-beat/*NFIN:beat OBL
          Dhi'olo ko   Takanaw.
          Dhi'olo NOM Takanaw
          'I know that Taotao beat Dhi'olo.'

      b'. Tanan
          o-a-ceel=ako   *ki   Takanaw. sa*
          ACT-REAL-know=1SG.NOM OBL Takanaw when
          o-a-dameke/dameke   ki   Dhi'olo
          ACT-REAL-beat/NFIN:beat OBL Dhi'olo
          'I saw Taotao beat Dhi'olo.'

As shown in §53.5.5, a verb occurring after the coordinator *si* 'and' or after the conjunction *la* 'and, then, but' in Tanan, Labuan, Budai, Maga, and Tona; *la* 'and'; and *mani* 'then' in Mantauran is marked as nonfinite (for details, see Zeitoun 2000, 2007b, 2015, 2018). An example is given in (31):

(31) Tanan
     o-a-da'al=ako   *idraa   belebele si   la*
     DYN-REAL-step.on=1SG.NOM that.OBL banana CONJ CONJ
     mothigadh=ako la   ka-caeme   kai   da'ale=li   si
     fall=1SG.NOM   CONJ STAT.NFIN-be.ill this.NOM leg=1SG.GEN CONJ
     la   tobi=ako.
     CONJ NFIN:cry=1SG.NOM
     'I stepped on that banana, and fell down. My leg hurt, and I cried.'

There are different types of subordinate clauses, but only temporal clauses will be briefly discussed here. In (past and future/hypothetical) temporal clauses, the main difference between Mantauran, Tona, and Maga, on the one hand, and Budai and Labuan and Tanan, on the other, is the case marking of the subject: genitive in the former (thus temporal subordinate clauses can be analyzed as nominalized clauses), as in (32a) and nominative in the latter (the subordinate verb is usually in a finite form, and clause linkage is therefore looser), as in (32b).

(32) a. Maga
       i-no   *mka-kani=**li**=nga*   *ka   nu-gia*
       TOP-when.IRR SUBJ:finish-eat=1SG.GEN=COS TOP IRR-NFIN:leave
       maa kiki.
       IRR 1SG.NOM
       'When I finish eating, I will leave.'

      b. Labuan
       *no   maka-kane-nga=**nako**   ko   aga ka*
       when.IRR FIN:finish-eat-COS=1SG.NOM OBL rice TOP
       ai-davac=ako.
       IRR-NFIN:leave=1SG.NOM
       'When I finish eating, I will leave.'

53.6   Conclusion

This chapter has shown that phonologically, Maga and Mantauran have changed the most drastically. Morphologically, Mantauran presents similarities with Tanan, Labuan, and Budai that can only be attributed to their close relatedness to one another, e.g., they all exhibit a CVV-reduplication pattern (§ 53.3.2), which is not found in Maga and Tona (see Zeitoun forthcoming). On the one hand, the long period of contact between Tona, Maga, and Mantauran also explains why Mantauran displays similar constructions to those in Tona and Maga such as complementation and subordination (§ 53.5.7). On the other hand, Mantauran is quite different from all the other dialects in its nominal and clausal coordination (§ 53.5.3) (see Zeitoun 2015). Maga and Tona also presents characteristics that are unique to these two dialects, including the replacement of the PAN bimorphemic prefix *pa-ka- 'CAUS (for stative verbs)' by To *pa-ti-*/Mg *p(a)-té* (§ 53.5.6).

Acknowledgments

References

Adelaar, Sander (2004). The coming and going of "lexical prefixes" in Siraya. *Language and Linguistics* 5(2), 333–361.

Aldridge, Edith (2016). Ergativity from subjunctive in Austronesian languages. *Language and Linguistics* 17(1), 27–62.

Blust, Robert (1997). Rukai stress revisited. *Oceanic Linguistics* 6(2), 398–403.

Blust, Robert (1999). Subgrouping, circularity and extinction: Some issues in Austronesian comparative linguistics. In Elizabeth Zeitoun and Paul Jen-kuei Li (Eds.), *Selected papers from the Eighth International Conference on Austronesian Linguistics*, (pp. 31–94). Symposium Series of the Institute of Linguistics (Preparatory Office), Academia Sinica, No. 1. Taipei: Institute of Linguistics (Preparatory Office), Academia Sinica.

Blust, Robert (2003). *Thao dictionary*. Language and Linguistics Monograph Series A5. Taipei: Institute of Linguistics (Preparatory Office), Academia Sinica.

Chao, Peng-wei 趙苪瑋 (2014). Lukaiyu maolin fangyan de shizhi han dongmao 魯凱語茂林方言的時制和動貌 [Tense and aspect in Maga Rukai]. Shuoshi lunwen 碩士論文 [MA thesis]. Gaoxiong 高雄 [Kaohsiung]: Guoli gaoxiong shifan daxue 國立高雄師範大學 [National Kaohsiung Normal University].

Chen, Cheng-fu (1999a). Wh-words as interrogatives and indefinites in Rukai. MA thesis. Taipei: National Taiwan University.

Chen, Cheng-Fu (1999b). Wh-words as interrogatives in Rukai (Kucapungan). *National Taiwan University Working Papers in Linguistics* 2, 93–128.

Chen, Cheng-fu (2002). Nominalization of interrogative in Kucapungan Rukai. *Language and Linguistics* 3(2), 369–392.

Chen, Cheng-Fu (2005). Object voice and nominalization in Rukai. In Jeffrey Heinz and Dimitris Ntelitheos (Eds.), *Proceedings of the Twelfth Annual Conference on the Austronesian Formal Linguistics Association* (AFLA XII), *UCLA Working Papers in Linguistics* 12, 35–47.

Chen, Cheng-fu (2008). Aspect and tense in Rukai: Interpretation and interaction. PhD dissertation. Austin, TX: University of Texas.

Chen, Cheng-fu and Li-May Sung (2005). Interrogatives as polarity items in Kucapungan Rukai. *Concentric: Studies in Linguistics* 31(1), 95–117.

Chen, Chun-mei (2006). A comparative study on Formosan phonology: Paiwan and Budai Rukai. PhD dissertation. Austin, TX: University of Texas.

Chen, Yin-ling Christina (2008). On the rhythmic vowel deletion in Maga Rukai. *Concentric: Studies in Linguistics* 34(2), 47–84.

Comrie, Bernard and Sandra A. Thompson (1985). Lexical nominalization. In Timothy Shopen (Ed.), *Language typology and syntactic description*, vol. 3: *Grammatical categories and the lexicon*, (pp. 349–398). Cambridge and New York, NY: Cambridge University Press.

Ferrell, Raleigh (1969). *Taiwan Aboriginal groups: Problems in cultural and linguistic classification*. Institute of Ethnology, Academia Sinica Monograph No. 17. Taipei: Academia Sinica.

Ho, Dah-an 何大安 (1983). Lun lukaiyu de qinshu guanxi 論魯凱語的親屬關係 [On the position of Rukai in the Formosan languages]. *Zhongyang yanjiuyuan lishi yuyan yanjiusuo jikan* 中央研究院歷史語言研究所集刊 [*Bulletin of the Institute of History and Philology, Academia Sinica*] 51(1), 121–168.

Hsin, Tien-Hsin (2003). The mid vowels of Maga Rukai and their implications. *Journal of East Asian Linguistics* 12(1), 59–81.

Hsin, Tien-hsin (2004). Asymétrie des procédés d'affixation en maga rukai (Taïwan) [Asymmetrical patterns of affixes in Maga Rukai] *Faits de Langues: Les langues austronésiennes* 23–24, (pp. 155–164). [Translated from English by E. Zeitoun]

Hsin, Tina Tien-hsin (2000). Aspects of Maga Rukai phonology. PhD dissertation. Storrs, CT: University of Connecticut.

Kuo, John Ching-hua (1979). Rukai complementation. MA thesis. Taipei: Fu Jen Catholic University.

Li, Paul Jen-kuei (1973). *Rukai structure*. Institute of History and Philology Special Publication No. 64. Taipei: Institute of History and Philology, Academia Sinica.

Li, Paul Jen-kuei 李壬癸 (1975). Majia yinyun chubu baogao 馬加音韻初步報告 [Maga phonology: A preliminary report] *Taiwandaxue kaogu renlei xuekan* 臺灣大學考古人類學刊 [*Bulletin of the Department of Archaeology and Anthropology, National Taiwan University*] 37–38, 16–28.

Li, Paul Jen-kuei (1977a). The internal relationships of Rukai. *Bulletin of the Institute of History and Philology, Academia Sinica* 48(1), 1–92.

Li, Paul Jen-kuei (1977b). Morphophonemic alternations in Formosan languages. *Bulletin of the Institute of History and Philology, Academia Sinica* 48(3), 375–413.

Li, Paul Jen-kuei (1995). Rukai: Introduction and wordlist. In Darrell Tryon (Ed.), *Comparative Austronesian dictionary: An introduction to Austronesian studies*, (pp. 295–303). Berlin: Mouton De Gruyter.

Li, Paul Jen-kuei (1996). The pronominal systems in Rukai. In Bernd Nothofer (Ed.), *Classification, description: Festschrift in honor of Professor Isidore Dyen* (pp. 209–230). Hamburg: Abera Verlag.

Li, Paul Jen-kuei 李壬癸 (1997). Duona 多納 [Tona]. In Paul Jen-kuei Li (Ed.), 李壬癸 (編), *Gaoxiongxian nandao yuyan* 高雄縣南島語言 [*The Formosan languages of Kaohsiung County*], (pp. 119–158). Gaoxiongxian wenxian congshu xilie 7 高雄縣文獻叢書系列7 [Kaohsiung County Documents Series 7]. Fengshan 鳳山 [Fengshan]: Gaoxiongxian zhengfu 高雄縣政府 [Kaohsiung County Government].

Lichtenberk, Frantisek (1999). Reciprocals without reflexives. In Zygmunt Frajzyngier and Traci S. Curl (Eds.), *Reciprocals: Forms and functions*, (pp. 31–62). Amsterdam and Philadelphia, PA: John Benjamins Publishing Co.

Lin, Kuo-Chiao Jason (2009). Exploring Rukai applicatives. *UST Working Papers in Linguistics* 5, 73–88.

Liu, Chong-yu (2011). Echo vowels in Budai Rukai. MA thesis. Taipei: National Tsing Hua University.

Nojima, Motoyasu (1996). Lexical prefixes of Bunun verbs. *Journal of the Linguistic Society of Japan* 110, 1–27.

Ogawa, Naoyoshi and Erin Asai 小川尚義、淺井惠倫 (1935). *Gengo ni yoru Taiwan Takasago zoku densetsu shū* 原語による臺湾高砂族伝説集 [*The myths and traditions of the Formosan native tribes (texts and notes)*]. Taihoku 臺北 [Taipei]: Taihoku Teikoku Daigaku Gengo-gaku Kenkyū-shitsu 臺北帝國大學言語學研究室 [Institute of Linguistics, Taihoku Imperial University].

Ross, Malcolm (2009). Proto Austronesian verbal morphology: A reappraisal. In Alexander Adelaar and Andrew Pawley (Eds.), *Austronesian historical linguistics and culture history: A festschrift for Robert Blust*, (pp. 295–326). Pacific Linguistics 601. Canberra: The Australian National University.

Sagart, Laurent (2004). The higher phylogeny of Austronesian and the position of Tai-Kadai. *Oceanic Linguistics* 43(2), 411–444.

Saillard, Claire (1995). Is Maga accusative or ergative? Evidence from case marking. In Tsao Feng-fu and Mei-hui Tsai (Eds.), *Proceedings of the First International Symposium on Languages in Taiwan*, (pp. 59–72). Taipei: The Crane Publishing Co., Ltd.

Saillard, Claire (2011). Le rukai [Rukai]. In Emilio Bonvini, Joëlle Busuttil and Alain Peyraube (Eds.), *Dictionnaire des langues* [*Dictionary of languages*], (pp. 1161–1169). Paris: Presses Universitaires de France.

Shelley, George (1979). Wudai Dukai, the language, the context and its relationships. PhD dissertation. Hatford, CT: Hatford University.

Shih, Winslow Chia-lin (2012). Are there case markers in Budai Rukai? MA thesis. Taipei: National Taiwan University.

Starosta, Stanley (1994). Proto-Rukai-Tsouic: Subgroup or treetop? Paper presented at

the Seventh International Conference on Austronesian Linguistics, August 22–27. Leiden: Leiden University.

Starosta, Stanley (1995). A grammatical subgrouping of Formosan languages. In Paul Jen-kuei Li, Cheng-hwa Tsang, Ying-kuei Huang, Dah-an Ho and Chiu-yu Tseng (Eds.), *Austronesian studies relating to Taiwan*, (pp. 683–726). Symposium Series of the Institute of History and Philology, Academia Sinica No. 3. Taipei: Institute of History and Philology, Academia Sinica. Reprinted in Elizabeth Zeitoun (Ed.) (2009). *Formosan Linguistics: Stanley Starosta's contributions*, (pp. 737–769). Language and Linguistics Monograph Series C6-2. Taipei: Institute of Linguistics, Academia Sinica.

Sung, Chi-lin 宋麒麟 (2014). Duona lukaiyu beidongjiegou zhi tanjiu 多納魯凱語被動句結構之探究 [A study of Tona Rukai passive constructions]. Shuoshi lunwen 碩士論文 [MA thesis]. Gaoxiong 高雄 [Kaohsiung]: Guoli gaoxiong shifan daxue 國立高雄師範大學 [National Kaohsiung Normal University].

Sung, Li-May (2011). Clausal nominalization in Budai Rukai. In Foong Ha Yap, Karen Grunow-Hårsta and Janick Wrona (Eds.), *Nominalization in Asian languages: Diachronic and typological perspectives*, (pp. 523–559). Amsterdam and Philadelphia, PA: John Benjamins Publishing Co.

Sung, Li-May (2015). Why exclamatives in Budai Rukai. In Elizabeth Zeitoun, Stacy F. Teng and Joy J. Wu (Eds.), *New advances in Formosan linguistics*, (pp. 291–311). Asia-Pacific Linguistics Series 017 / Studies on Austronesian Languages 003. Canberra: ANU Press.

Tang, Yao-ming 唐耀明 (2009). Lukaiyu wutai fangyan foudingci yanjiu. 魯凱語霧台方言否定詞研究 [A study of negation in Budai Rukai]. Shuoshi lunwen 碩士論文 [MA thesis]. Gaoxiong 高雄 [Kaohsiung]: Guoli gaoxiong shifan daxue 國立高雄師範大學 [National Kaohsiung Normal University].

Teng, Stacy Fang-ching (2020). The three agent demoting affixes (*ki-, m-u-, kur*) in Katripul Puyuma: Their origins and possible development. *Concentric: Studies in Linguistics* 46(1), 21–65.

Tsuchida, Shigeru (1976). *Reconstruction of Proto-Tsouic phonology*. Study of Languages and Cultures of Asia and Africa Monograph Series No. 5. Tokyo: Tokyo Gaikokugo Daigaku.

Tsuchida, Shigeru (2000). Lexical prefixes and prefixes harmony in Siraya. In Videa DeGuzman and Byron W. Bender (Eds.), *Grammatical analysis: Morphology, syntax and semantics*, (pp. 90–109). Oceanic Linguistics Special Publication No. 29. Honolulu, HI: University of Hawai'i Press.

Tu, Wen-chiu (1994). A synchronic classification of Rukai dialects in Taiwan: A quantative study of mutual intelligibility. PhD dissertation. Urbana, IL: University of Illinois.

Wang, Chien-pang (2018). More on nominal compounds and nominal juxtapositions in Mantauran (Rukai). *Concentric: Studies in Linguistics* 44(1), 33–63.

Wang, Hsiu-mei (2003). Morphosyntactic manifestation of participants in Tona (Rukai). MA thesis. Taipei: National Taiwan Normal University.

Wang, Hsiu-mei May (2005). Case markers in Tona Rukai revisited: The distinction between *ko* and *na*. *Concentric: Studies in Linguistics* 31(2), 1–29.

Wang, Pei-shou Jeffery (2005). The interface between prosody and morphology: A case of Tona Rukai reduplication. MA thesis. Hsinchu: National Tsing Hua University.

Yen, Doris Ching-jung and Loren Billings (2012). Sequences of pronominal clitics in Mantauran Rukai: V-deletion and suppletion. In Lauren Eby Clemens, Gregory Scontras and Maria Polinsky (Eds.), *Proceedings of the Eighteenth Meeting of the Austronesian Formal Linguistics Association* (AFLA-18), March 4–6, 2011 (pp. 168–182). Cambridge, MA: Harvard University.

Zeitoun, Elizabeth (1995). Problèmes de linguistique dans les langues aborigènes de Taiwan. [Issues of Formosan linguistics]. PhD dissertation. Paris: Université René Diderot Paris 7.

Zeitoun, Elizabeth (1997a). Coding of grammatical relations in Mantauran. *Bulletin of the Institute of History and Philology, Academia Sinica* 68(1), 249–281.

Zeitoun, Elizabeth (1997b). The pronominal system of Mantauran (Rukai). *Oceanic Linguistics* 36(2), 114–148.

Zeitoun, Elizabeth (2000a). Dynamic vs. stative verbs in Mantauran (Rukai). *Oceanic Linguistics* 39(2), 415–427.

Zeitoun, Elizabeth 齊莉莎 (2000b). *Lukaiyu cankao yufa* 魯凱語參考語法 [*A reference grammar of Rukai*]. Taiwan nandao yuyan 8 臺灣南島語言 8 [Formosan Languages 8]. Taibei 臺北 [Taipei]: Yuanliu chubanshe 遠流出版社 [Yuan-Liou Publishing Co.].

Zeitoun, Elizabeth (2002). Nominalization in Mantauran (Rukai). *Language and Linguistics* 3(2), 241–282.

Zeitoun, Elizabeth (2003). Toward a reconstruction of Proto-Rukai morpho-syntax. Keynote address at AFLA x, March 28–30. Honolulu, HI: University of Hawai'i at Mānoa.

Zeitoun, Elizabeth (2007a). La réduplication en rukai mantauran [Reduplication in Mantauran Rukai]. In Alexis Michaud (Ed.), *Faits de Langues: La réduplication* 29, 37–47.

Zeitoun, Elizabeth (2007b). *A grammar of Mantauran Rukai.* Language and Linguistics Monograph Series A4–2. Taipei: Institute of Linguistics, Academia Sinica.

Zeitoun, Elizabeth (2015). Analogy and grammatical change: A case study of the verb of "saying" in Mantauran Rukai. In Elizabeth Zeitoun, Stacy F. Teng and Joy J. Wu (Eds.), *New advances in Formosan linguistics*, (pp. 431–450). Asia-Pacific Linguistics series 017 / Studies on Austronesian Languages 003. Canberra: ANU Press.

Zeitoun, Elizabeth (2017a). Rukai (Tona) language. In Rint Sybesma (Ed.), *Encyclopedia of Chinese Language and Linguistics*, vol. 3, (pp. 646–653). Leiden: Brill.

Zeitoun, Elizabeth (2017b). A comparative study of locative/directional and instrumen-

tal verbs vs. prepositions in Rukai. 30e Journées de Linguistique d'Asie Orientale, June 29-July 1, 2017. Paris: CRLAO, EHESS.

Zeitoun, Elizabeth 齊莉莎 (2018). *Lukaiyu yufa gailun.* 魯凱語語法概論 [*A sketch grammar of Rukai*]. Taiwan nandao yuyan congshu 8. 臺灣南島語言叢書 8 [Formosan Languages Series 8]. Xinbei 新北 [New Taipei]: Yuanzhuminzu weiyuanhui 原住族民委員會 [Council of Indigenous Peoples]. (2nd ed.)

Zeitoun, Elizabeth (forthcoming). *A comparative study of Rukai*. Ms.

Zeitoun, Elizabeth and Stacy F. Teng (2009). From *ki*-N 'get N' in Formosan languages to *ki*-V 'get' V-ed' (passive) in Rukai, Paiwan and Puyuma. In Bethwyn Evans (Ed.), *Discovering history through language: Papers in honour of Malcolm D. Ross*, (pp. 479–500). Pacific Linguistics 605. Canberra: The Australian National University.

Online Resources and Open Access Data

Council of Indigenous Peoples 原住民族委員會 (2020). Yuanzhumin renkoushu tongji ziliao 原住民人口數統計資料 [Census of Indigenous population]. Retrieved from https://www.cip.gov.tw/en/search-result/index.html?q=population.

Council of Indigenous Peoples 原住民族委員會 (2021). Yuanzhuminzu yuyan xianshang cidian 原住民族語言線上辭典 [Online dictionaries of indigenous languages]. Retrieved from https://e-dictionary.ilrdf.org.tw/.

Council of Indigenous Peoples and Ministry of Education 原住民族委員會和教育部 (2005). Yuanzhuminzu yuyan shuxie xitong 原住民族語言書寫系統 [Orthographic systems for indigenous languages]. Retrieved from ilrdc.tw/research/rwview/rwsystem.php.