

《語言暨語言學》專書系列之六十五

LANGUAGE AND LINGUISTICS MONOGRAPH SERIES 65

中央研究院語言學研究所
成所二十週年慶祝論文集

**Linguistic Diversity, but Unity in Research:
Celebrating the Twentieth Anniversary of the
Institute of Linguistics, Academia Sinica**

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Taipei, Taiwan

2024

LANGUAGE AND LINGUISTICS MONOGRAPH SERIES

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Are there prepositions in Tanan Rukai? Another look in a comparative perspective

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The goal of this paper is two-fold. On the synchronic level, it demonstrates that there are no prepositions in Tanan Rukai, as argued in P. Li (1973), and that no convincing arguments can be adduced to posit their existence in any of the five other Rukai dialects (i.e., Maga, Tona, Mantaaran, Budai, Labuan). Through a review of P. Li's (1973) work, I actually show that what he had previously treated as prepositions are either affixes that attach to (pro)nominal bases or verbs. As these morphemes are also found in all of the Rukai dialects, a reconstruction of the locative, directional, and instrumental verbal paradigm can be achieved on the diachronic level, as part of a larger comparative study of Rukai.

Keywords: Rukai, Formosan language, comparative study, prepositions, reconstruction, Proto-Rukai

1. Introduction

A preposition usually encodes notions of time or space and typically combines with a noun phrase to form a larger (prepositional) phrase which modifies a verb or functions as a predicate. Among the very few Formosan languages which exhibit prepositions, Amis and Paiwan retain the Proto-Austronesian locative preposition *i 'LOC' (Blust 2013: 400), as shown in (1) and (2).

(1) Amis

a. *maroq kako i Taypak.*

live 1SG.NOM PREP Taipei

'I live in Taipei.' (adapted from Wu 2006: 297)

b. *pa-qaca kako to codad i wawa.*

CAUS-give 1SG.NOM DAT.CN book PREP child

'I sold the book to the child.' (adapted from Wu 2006: 84)

c. *mi-ka-ranam kako i ci kaka-an.*

AV-KA-have.breakfast 1SG.NOM PREP PN older.sibling-DAT

'I am going to (my) brother's place to have breakfast.' (adapted from Wu 2006:166)

(2) Paiwan

a. *mangtjez i qakav.*

AV:arrive PREP Pingtung

‘They arrived in Pingtung.’ (Kuljaljaw variety)

b. *pi-vavav-u i tua cekui a-za sunatj.*

CAUS.LOC-above-IMP PREP OBL.CN desk NOM.CN-that book

‘Put that book on the desk.’ (Saichia variety, adapted from Chang 2006: 117)

c. *i-zuua~zuua ti Kalalu i ti-a Zepul.*

at-RED~there NOM.PN Kalalu PREP OBL.PN-PL Zepul

‘Kalalu is living at Zepul’s place.’ (Saichia variety, adapted from Chang 2006: 117)

As shown in (1) and (2), the preposition *i* can precede locative nouns (e.g., place names) and common nouns or proper nouns referring to a location. Note that in Amis, locative and common nouns are immediately preceded by the preposition without any marker (i.e., a case marker or a noun class marker) in between (1a–b); proper nouns, on the other hand, take a noun class marker which follows the preposition *i* (1c). In Paiwan, on the other hand, locative nouns are unmarked for case (2a), but common nouns and proper nouns are preceded by a case marker, which also marks noun class (2b–c) (see Huang et al. 1998).

The distinction between case markers and prepositions is very tenuous (Payne 1997: 86). In Amis and Paiwan, the preposition *i* – which introduces a noun or a noun phrase and encodes a location (1a–b), (2b–c) or a direction (1c), (2a) – is treated as such by default because of its co-occurrence with a case marker or a noun class marker. In Puyuma (Teng 2018; 2022), on the other hand, the reflex of the PAN preposition **i* is part of the case marking system; it is even homophonous with the nominative case marker *i*, as shown in (3).

(3) Katripul Puyuma

ulra i patrarian i nani.

be.at LOC outside NOM.PN my.mother

‘My mother is outside.’ (adapted from Teng 2018: 80)

P. Li (1973) argues that there are four prepositions in Tanan Rukai, which are “derived” (i.e., grammaticalized) from verbs. This claim needs to be re-evaluated from two different perspectives. The first is synchronic and the second diachronic. On the synchronic level, the fact that so-called prepositions are found in the Tanan dialect, but in no other Rukai dialect (and more generally in most Formosan languages), needs to be explained. If the status of prepositions is

valid in Tanan Rukai, we also need to examine how prepositions came into existence in this dialect from a diachronic perspective, in order to determine the history of the Rukai dialects. Conversely, if there are no prepositions in Tanan Rukai, we need to determine the status of the forms which encode a locative, directional, and instrumental meaning.

This paper is part of a larger research project (Zeitoun 2003, in preparation) representing a comparative study of the six Rukai dialects (Maga, Tona, Mantauran, Budai, Labuan, and Tanan), located in southern Taiwan and stretching from Kaohsiung City in Maolin District to Pingtung and Taitung Counties. It aims to examine P. Li's (1973) claim that four verbs have been grammaticalized as prepositions in Tanan Rukai (§2), and demonstrate that his hypothesis is actually not valid (§3). There are no prepositions in Tanan, and the forms he analyzed as prepositions are either verbs or affixes (§4) which are also found in the five other Rukai dialects (§5), and can therefore be reconstructed to Proto-Rukai (§6).

2. From verbs to “prepositions” in Tanan Rukai

P. Li (1973: 111ff) proposes to divide four prepositions *'a(kai)* ‘at’, *twalay* ‘from’, *'akela* ‘to’, and *ara* ‘with’ in two groups, his classification being based on the [-/+]_{LOCATIVE} feature of each form. With the exception of *ara* ‘with’ (4a), which marks an instrumental relation, the other prepositions encode spatial (or locative) relations. The preposition *'akai* ‘at’ is treated as non-directional (4b), *'akela* ‘to’ and *twalay* ‘from’ as directional (4c), and are further divided as indicating a goal or a source (4d).

(4) Tanan Rukai

- a. *kya 'a'acay kay comay ara kwang.*
 was.killed this bear with [PREP] gun¹
 ‘This bear was killed with a gun.’ (adapted from P. Li 1973: 124)

- b. *loa 'akai ino koadra lalak=li.*
 if at [PREP] where that child=my
 ‘It is not known where my child is.’ (adapted from P. Li 1973: 120)

¹ Whenever necessary and in order to avoid discrepancy in terminology, I have changed P. Li's (1973) abbreviations. Following the Romanized writing system promulgated by the Council of Indigenous Peoples and the Ministry of Education (2005), I have also changed his transcriptions as follows: the high central vowel *i* is transcribed as a schwa *e* /e/, the high vowel *u* as *o* /o/, the vowel *i* /i/ is written as a glide *y* /j/ after the vowel *a*, the retroflex voiced stop *D* as *dr* and the retroflex lateral *L* as *lr*. Whenever *i* and *o* occur before *a*, the sequence is glided as *ya* and *wa*, e.g., *kya 'a'acay* ‘was killed’ (< *ki-a-'a-'acay* [PASS-REAL-CAUS-die]), *watubi* ‘cry/cried’ (< *o-a-tobi* [ACT-REAL-cry]). I adopt this orthography in this paper, unless a certain dialect does not have any (phonemic) glide.

- c. 'akela ino kay daedae=so?
to [PREP] where this land=your
'How far is this land of yours?' (adapted from P. Li 1973: 122)
- d. kayvay drakeral moalodr twalay omaoma 'akela ladrek.
this river flow from [PREP] field up.to [PREP] sea
'As for this river, it flows from the field to the sea.' (adapted from P. Li 1973: 122)

P. Li (1973: 112) makes two important claims. First, he mentions that both prepositions and case markers ("determiners" in his terms) "signal case forms" but differ in that (i) prepositions only mark the locative and instrumental nouns (see Table 1 and examples (4a–d)), while case markers precede the subject (i.e., the nominative NP) and the object, as in (5). In other words, according to him, so-called prepositions and case markers occur in complementary distribution and never co-occur together and this is somehow different from what we find in other Formosan languages.

(5) Tanan Rukai

- wabaay nakoa sa omas 'a-si-lalak ko tina=li
gave me OBL person cause-raise-child NOM mother=my
(lit.) 'My mother gave me to someone to raise me.'
'My mother had a person raise me.' (adapted from P. Li 1973: 72)

Second, P. Li (1973: 111ff) argues that prepositions are presumably all lexically derived from the following verbs *arakay* 'use', *yakay* 'exist, be at',² *wa[ʼa]kela*³ 'arrive, reach' and *twalay* 'from', as shown in Table 1 (P. Li 1973: 111ff).

Table 1. Verbs and their prepositional counterparts in Tanan Rukai (Based on P. Li 1973: 111)

Lexically derived preposition	Gloss	Verb	Gloss
<i>ara</i>	'with'	<i>arakay</i>	'use'
<i>'a(kai)</i>	'at'	<i>yakay</i>	'be at, exist'
<i>'akela</i>	'to'	<i>(wa)kela</i>	'arrive'
		<i>wa'akela</i>	'cause to arrive'
<i>twalay</i>	'from'	<i>'atwalay</i>	'get from'

² The verb *yakay* can be decomposed as the locative prefix *i-* 'at' followed by the realis marker *a-*, both affixes attaching to *kay* 'this' (< *i-a-kay* [LOC-REAL-this] 'be at'; see Zeitoun et al. 1999). When marked as subjunctive (when it appears embedded after another verb) or as non-finite when it follows the conjunction *la* 'and', it occurs as *i-kay*, i.e., without the realis marker *a-*.

³ None of our consultants accept the form *wa'akela* (< *o-a-'akela*), and all agree on *wakela* (< *o-a-kela*) 'arrive, reach', as discussed in §3.3.

The use of these so-called prepositions given in (4a–d) can be compared with that of verbs they are said to be derived from in (6a–d).

(6) Tanan Rukai

- a. *arakay inia balbal o-athak kikay romay kay lrolay.*
 use OBL bamboo SBJV-break this bowl this child
 ‘This child broke this bowl, using a [piece of] bamboo.’ (adapted from P. Li 1973: 124)
- b. *watobi i-kay daan kay lrolay.*
 cried at-this house this child
 ‘This child cried in the house.’ (adapted from P. Li 1973: 120)
- c. *wa’akela=su’ akai ino?*
 arrived=2SG.NOM at [PREP] where
 ‘Where did you arrive?’ (adapted from P. Li 1973: 122)
- d. *’atwalay=ako inia lrolay sa lrima ka ’ayso.*
 get.from=1SG.NOM that child OBL five OBL money
 ‘I got five dollars from that child.’ (adapted from P. Li 1973: 122)

To show the relationship between verbs and grammaticalized prepositions, P. Li (1973: 121) indicates that they may occur in the same sentence (7a), the verb occurring before the preposition. However, they cannot be used interchangeably, as shown in (7b):

(7) Tanan Rukai (adapted from P. Li 1973: 121)

- a. *akay-nga ’akai ino koadra kyaani’alay sa sasevera?*
 be.at:REAL-COS at [PREP] where that was.blown OBL wind
 (lit.) ‘Where is that which has been blown by the wind?’
 ‘Where is (the thing) which was blown by the wind?’
- b. *koani ababay waswaswa’ ’akai/*ikay ino?*
 that woman be.sweeping at [PREP]/*be.at where
 ‘Where is that woman sweeping?’

P. Li (1973) correctly shows that there is a close resemblance between two sets of morphemes, cf. *yakay* ‘exist, be at’ vs. *’akai* ‘at’, *arakay* ‘use’ vs. *ara* ‘use’, *(wa)[’a]kela* ‘arrive, reach’ vs. *’akela* ‘to’, *twalay* ‘from’ vs. *’atwalay* ‘get from’. However, convincing as his analysis may be—it will be unfolded upon in greater detail in the section to follow—it is clear that a number of contradicting pieces of evidence invalidate his claim regarding the existence of prepositions in Tanan Rukai.

In the following section, I shall demonstrate that there are no prepositions in Tanan Rukai and further explain how the morphemes which P. Li (1973) identifies should be analyzed. All the examples given come from my own fieldnotes, unless otherwise indicated.

3. A reassessment of P. Li (1973)

Below, I shall show that there are two major problems with P. Li's (1973) analysis. The first has to do with the distribution of these so-called prepositions. The second concerns the form and internal composition of these morphemes, as well as their bound or free status. I shall thus demonstrate—were these morphemes analyzed correctly—that the tests that P. Li (1973: 145) proposes to distinguish so-called prepositions from verbs (P. Li 1973: 145) are not applicable.

In the following, I examine each of the morphemes *'a-ka-* 'at' (rather than ***'akai*, which is not correct), *ara-* 'with' (rather than ***ara*), *'akela* 'to', *twalay* 'from' in turn (see §3.1–§3.4, respectively). In §3.5, I discuss another morpheme, *'asiakay* 'do for', which belongs to the same paradigm. A short summary is given in §3.6.

3.1 *'a-ka-* vs. *yakay* 'at' (Li's *'a(kai)* vs. *yakay*)

P. Li (1973: 145) mentions correctly that verbs carry TAM information when they function as the matrix verb. In (8a), the data has been reanalyzed, and *a-* is interpreted as a realis marker rather than a past tense marker, but this does not undermine P. Li's (1973) analysis. When verbs occur in embedded position, they are in their bare forms, as in (8b) (see also Footnote 2 above).

(8) Tanan Rukai

- a. *i-a-kay* *inia daan tobi* *kay lrolay*.
 at-REAL-this that house SBJV:cry this child
 'This child cried in that house.'
- b. *o-a-tobi* *i-kay/*i-a-kay* *inia daan kay lrolay*.
 ACT-REAL-cry at-this/at-REAL-this that house this child
 'This child cried in the house.' (adapted from P. Li 1973: 120)

One obvious problem regarding *'a(kai)* 'at' is that it cannot replace *ikay* (*i-kay*) 'be at' before locative NPs though such a distribution would qualify this morpheme as a preposition. Compare the grammatical contrast of (9a–b):

(9) Tanan Rukai

- a. *watobi i-kay Ø daan kay lrolay.*
 cried at-this Ø house this child
 ‘The child cried in the house.’ (adapted from P. Li 1973: 120)
- b. **watobi 'akai Ø daan kay lrolay.*
 cried at Ø house this child

P. Li (1973: 126) mentions that prepositions are never followed by case markers but we notice that although *'a(kai)* is followed by *daan* ‘house’ without any case marker in (9b), this example is ungrammatical. The question that arises is, “Why?”

Next, P. Li’s (1973: 117) transcription of the form *'a(kai)* implies that *'a* is either a free morpheme or that it can co-occur with any noun. However, none of our consultants accepted *'a* with a noun, as shown by the ungrammaticality of **'a lrabin*/**'a-lrabin* ‘on the cheek’, and none accepted the form *'akai*, as demonstrated by the ungrammaticality of *'akai daan* in (9b).

Actually, there are a couple of reasons to argue that ***'a(kai)* ‘at’ has been misidentified and should be analyzed as the bimorphemic prefix *'a-ka-*, made up of the directional prefix *'a-* ‘DIR’ (< PAN/PR⁴ *pa- ‘DIR’) and the allative prefix *ka-* ‘ALL’ (Zeitoun & Chang 2017).

First, the distribution of *'a-ka-* ‘at’ is extremely restricted: it occurs mostly with a demonstrative pronoun, e.g., *inia* ‘that [+vis]’ or *idraa* ‘that [-vis]’, as in *'akainia* ‘here [+vis]’ (10a) and *'akaidraa* ‘there [-vis]’ (10a) or an interrogative marker *ino* ‘where’, as in *'akaino* (10b).

(10) Tanan Rukai

- a. *i-a-kay 'a-ka-inia tobi~tobi kay lrolay?*
 at-REAL-this DIR-ALL-there SBJV:RED~cry this child
 ‘The child is crying there.’
- b. *i-a-kay 'a-ka-ino tobi~tobi kay lrolay?*
 at-REAL-this DIR-ALL-where SBJV:RED~cry this child
 ‘Where is the child crying?’

Note that both demonstrative and interrogative pronouns all start with the vowel *i*, and this might explain P. Li’s (1973) confusion as for the morpheme **'akai*, instead of *'a-ka-*. Another possibility would be to analyze this morpheme as ***'a-ka-i*, but no geminate vowels are heard

⁴ The Proto-Rukai (PR) voiceless stop **p* is reflected as a glottal stop’ in Tanan Rukai.

and nothing (internal to Tanan Rukai or in a comparison with the other Rukai dialects) attests to such a form.

This restriction is further illustrated by the ungrammaticality of (11a–b) below, which confirms that *'a-ka-* cannot attach to just any locative noun, as opposed to (11c–d), where *latadre* ‘outside’ is introduced by the existential/locative verb *yakay* ‘exist, be at’ (< *i-a-kay* [LOC-REAL-this]).

(11) Tanan Rukai

- a. **'a-ka-latadre* *o-aga~aga* *ko* *tina=li*.
 DIR-ALL-outside SBJV-RED~cook NOM mother=1SG.GEN
- b. **o-a-aga~aga* *'a-ka-latadre* *ko* *tina=li*.
 ACT-RED~cook DIR-ALL-outside NOM mother=1SG.GEN
- c. *i-a-kay* *latadre* *o-aga~aga* *ko* *tina=li*.
 at-REAL-this outside SBJV-RED~cook NOM mother=1SG.GEN
 ‘Mother is outside cooking.’
- d. *o-a-aga~aga* *i-kay* *latadre* *ko* *tina=li*.
 ACT-RED~cook SBJV:at-this outside NOM mother=1SG.GEN
 ‘Mother is cooking outside.’

Second, the distribution of *'a-ka-* ‘at’ depicted above explains why, in (12), the existential verb *i-kay* ‘be at’ cannot replace *'a-ka-* ‘at’. While the bimorphemic prefix *'a-ka-* can (only) occur with *inia* ‘here’, *idraa* ‘there’, *ino* ‘where’ (see also (10)), the (bare) verb *i-kay* (or its alternant form *i-a-kay*) must introduce a noun encoding a spatial or locative meaning (see (9) and (11)).

(12) Tanan Rukai

- a. *la* *davac=nai* *'a-ka-idraa*.
 and leave=1PL.EXCL.NOM DIR-ALL-there
 ‘We left there.’ (adapted from P. Li 1975: 165)
- b. **la* *davac=nai* *i-kay idraa*.
 and leave=1PL.EXCL.NOM at-this there

P. Li’s (1973) analysis raises another problem. Generally speaking, a preposition introduces an NP and is expected to occur in predicate position. However, this assumption is not borne out in Tanan Rukai, as shown by the ungrammaticality of (13b) and (13c), which shows it cannot occur in initial position (13b), or be the host of a nominative pronoun (13c).

(13) Tanan Rukai

- a. *w-a-tobi~tobi* **'a-ka-ino** *kay lrolay?*
 ACT-REAL-RED~cry DIR-ALL-where this child
 'Where is the child crying?'
 b. ***'a-ka-ino** *tobi~tobi* *kay lrolay?*
 DIR-ALL-where SBJV:RED~cry this child
 c. ***'a-ka-ino=so** *tobi~tobi?*
 DIR-ALL-where=2SG.NOM SBJV:RED~cry
 Intended for: 'Where did you cry?'

Two different constructions are found: in the first, the clause is headed by the existential verb *yakay* 'exist, be at' (< *i-a-kay*), followed by the sequence *'a-ka-X* 'at X' (where X refers to *ino* 'where', *inia* 'here', *idraa* 'there'), as shown in (10). In the second, the main lexical verb occurs in initial position and is followed by the *'a-ka-X* 'at X', as in (14). Since *'a-ka-X* 'at X' never occurs in initial position (13b), never takes any pronominal clitic (13c), and modifies the predicate (14a–b), this morpheme can be analyzed as an adverb.

(14) Tanan Rukai

- a. *w-a-tobi~tobi* **'a-ka-ino** *kay lrolay?*
 ACT-REAL-RED~cry DIR-ALL-where this child
 'Where is the child crying?'
 b. *w-a-tobi~tobi* **'a-ka-inia** *kay lrolay.*
 ACT-REAL-RED~cry DIR-ALL-here this child
 'The child is crying there.'

Finally, P. Li (1973: 121ff) points out that in embedded position, verbs are marked as subjunctive and take the infix <o> (pronounced /w/ before /a/) in embedded position if the stem begins with a consonant followed by the low vowel /a/ but so-called prepositions do not. If *'a-ka-* is understood as a bimorphemic prefix, then it explains why it cannot further take the infix <o>.

(15) Tanan Rukai

- a. *koani marodrang arakay inia balbal* ***dwamek*** *inia taw'ong.*
 that old.(wo)man use that bamboo SBJV:beat that dog
 'As for that old man, he used that bamboo to beat that dog.' (adapted from P. Li 1973: 123)

- b. **koani marodrang arakay inia balbal damek inia taw'ong.*
 that old.(wo)man use that bamboo beat that dog

(16) Tanan Rukai

- a. *koani ababay waswaswa' 'a-ka-ino?*
 that woman be.sweeping DIR-ALL-where
 'Where is that woman sweeping?' (adapted from P. Li 1973: 121)
- b. **koani ababay waswaswa' '<o>a-ka-ino?*
 that woman be.sweeping <SBJV>DIR-ALL-where

In this section, I have shown that there are indeed two forms, *yakay* 'exist, be at' (< *i-a-kay*) and its base form *ikay* (< *i-kay*), which is an existential/locative verb and *'a ka-*, which is a bimorphemic prefix attaching to the demonstratives *inia* 'here', *idraa* 'there' and the interrogative pronoun *ino* 'where'; together these forms function as adverbs which differ from verbs in that they cannot appear in predicate position, cannot be hosts to second-position nominative clitics; on the other hand, they modify the verb they follow.

3.2 ara- vs. ara-kay 'use' (Li's ara vs. ara-kai)

The next form to be examined is *ara-* 'use', which is analyzed in P. Li (1973) as an instrumental preposition as opposed to the instrumental verb *ara-kay* 'use'. P. Li (1973: 126) claims that in Tanan Rukai a preposition is never followed by a case marker, as shown in (17). In (17a), *ara* is followed by *kwang* and is grammatical; it is ungrammatical when directly followed by *sa* 'OBL' (17b). By opposition, a verb can be followed by a determiner preceding the object, as in (17c). These examples thus seem to confirm P. Li's (1973) analysis.

(17) Tanan Rukai (adapted from P. Li 1973: 126)

- a. *kya'a'acay kay comay ara Ø kwang.*
 was.killed this bear with [PREP] Ø gun
 'This bear was killed with a gun.'
- b. **kya'a'acay kay comay ara sa kwang.*
 was.killed this bear with [PREP] OBL gun
- c. *kya'a'acay kay comay ara-kay sa kwang.*
 was.killed this bear use-this OBL gun
 'This bear was killed with a gun.'

However, if *ara* were a free morpheme, as suggested by P. Li (1973: 126), it would be able to attract nominative pronouns which are second position clitics in this language. This is not possible, however, as shown in (18) and this ungrammaticality implies that *ara-* is a bound (rather than a free) morpheme and more specifically a prefix, and thus cannot attract any pronoun.

(18) Tanan Rukai

**ara=ako* *balbal* *o-athake* *inia* *romay*.
 use=1SG.NOM bamboo SBJV-break that bowl
 ‘I used bamboo to break the bowl.’

Here again, it is also important to understand the internal composition of each morpheme/word. Just as in the verb *yakay* (< *i-a-kay*) ‘exist, be at’, in *arakay* ‘use’ (< *ara-kay*), *kay* is the base; it is an adnominal demonstrative meaning ‘this’. Whether *ara-* is followed by the demonstrative *kay* ‘this’ or whether it attaches to a noun, the derived form is a verb which can occur in initial position, as in (19a–b) or in clause medial-position, as in (19c–d); *ara-* can thus be treated as a verbalizer.⁵

(19) Tanan Rukai

- a. *ara-kay=ako* *balbal* *o-athake* *inia* *romay*.
 use-this=1SG.NOM bamboo SBJV-break that bowl
 ‘I used bamboo to break the bowl.’
- b. *ara-balbal=ako* *o-athake* *inia* *romay*.
 use-bamboo=1SG.NOM SBJV-break that bowl
 ‘I used bamboo to break the bowl.’
- c. *o-a-athak=ako* *inia* *romay* *ara-kay* (*sa*) *balbal*.
 ACT-REAL-break=1SG.NOM that bowl use-this (OBL) bamboo
 ‘I broke the bowl using bamboo.’ (Adapted from P. Li 1973: 124)
- d. *o-a-athak=ako* *inia* *romay* *ara-balbal*.
 ACT-REAL-break=1SG.NOM that bowl use-bamboo
 ‘I broke the bowl using bamboo.’

⁵ Whether or not the genericity or the definiteness of the object is induced by the alternation between *ara-kay* vs. *ara-N* needs to be further investigated and is ill-understood at this point (see Teng 2024).

3.3 'a-kela 'to' vs. wakela (< o-a-kela) 'arrive' (Li's 'akela 'to' vs. wa'akela 'arrive')

P. Li (1973: 122) does not say much about 'akela 'to' (20a), which he treats as a preposition as opposed to the verb *kela* 'arrive' (20b). He gives an interesting example, repeated in (20b) and reanalyzed in (20c), whereby *kela* is given as *wa-'akela* 'arrived'. As mentioned in Footnote 3, none of our informants agree with the form *wa'akela* 'arrived'.

(20) Tanan Rukai

- a. **'akela** *ino* *kay* *daedae=so?*
to [PREP] where this land=your
'How far is this land of yours?' (adapted from P. Li 1973: 122)
- b. **wa-'akela=so** **'akai ino?**
PAST-arrive=you at where
'Where did you go?' (adapted from P. Li 1973: 122) (Note: example rejected by informants)
- c. **o-a-kela=so** **'a-ka-ino?**
ACT-REAL-arrive=2SG.NOM DIR-ALL-where
'Where did you go?' (Author's reanalysis of (20b))

The morpheme *o-a-kela* 'arrive, reach' (21a) and its non-finite/subjunctive alternant forms *kela* (21b–c) only function as verbs encoding a spatial meaning.

(21) Tanan Rukai

- a. **o-a-kela-nga=ako** *taromak.*
ACT-REAL-arrive-COS=1SG.NOM Taromak
'I have already reached the (village of) Taromak.'
- b. **sa kela-nga** *ko* *tama=ini,* *ma-draw-nga* *kay lrolay.*
when NFIN:arrive-COS NOM father=3SG.GEN STAT-big-COS this child
'When his/her father arrived, the child was already big.'
- c. **twaladh=ako**⁶ *taihoko* **kela** *taromak.*
come.from=1SG.NOM Taipei SBJV:reach Taromak
'I came from Taipei to the (village of) Taromak.'

⁶ The glide *y* becomes *dh* in Tanan, Labuan and Budai before the vowel *a* when prefixation or cliticization takes place, e.g., *twalay* 'from' > *twaladhako* 'I come from'.

The derived form *'a-kela* ‘up to’ cannot replace the verb (*w-a-*)*kela* ‘arrive, reach’. Compare the grammaticality of (22a–b) and (22a’–b’).

(22) Tanan Rukai

- a. *w-a-kela-nga=(a)ku* *taromak*.
 ACT-REAL-reach-COS=1SG.NOM Taromak
 ‘I have already reached the (village of) Taromak.’
- a’. **'a-kela-nga=(a)ko* *taromak*.
 DIR-up.to-COS=1SG.NOM Taromak
- b. *twaladh=ako* *taihoko* *kela* *taromak*.
 come.from=1SG.NOM Taipei SBJV:reach Taromak
 ‘I came from Taipei to the (village of) Taromak.’
- b’. **twaladh=ako* *taihoko* *'akela* *taromak*.
 come.from=1SG.NOM Taipei up.to Taromak

Just like (*w-a-*)*kela* ‘arrive, reach’, *'a-kela* ‘up to’ is also a verb. The contrast between (23a–a’) and (23b–b’) shows that it can occur both in initial and in medial position, just like any other verb.

(23) Tanan Rukai

- a. *'a-kela-nga=nako* *thingale* *taromak* *kay* *kakodha*.
 DIR-up.to-COS=1SG.NOM SBJV:know Taromak this folktale
 ‘I understand Taromak folktales up to (this point).’
- a’. *o-a-thingale-nga=nako* *'a-kela* *taromak* *kay* *kakodha*.
 ACT-REAL-know-COS=1SG.NOM DIR-up.to Taromak this folktale
 ‘I understand Taromak folktales up to (this point).’
- b. *'a-kela* *kayasa, lo* *kidremedrem=ako* *ki*
 DIR-up.to now if think=1SG.NOM OBL
na-ta-ku-laub-an=nai *'atenga*
 late-LOCNMLZ-NAGT.PASS-burn-LOCNMLZ=1PL.EXCL.NOM really
la *ya=ako* *kiraragay* *ki* *twaomas*.
 then so=1SG.NOM happy OBL God
 ‘Until now, as I think about those burned (places) of ours, we should really be grateful to God.’ (Adapted from Li 1975: 27, Text 2)

- b'. *kalalekete=so kialre 'a-kela idraa?*
 can=2SG.NOM attend DIR-up.to that
 'Can you attend at that time?'
 (lit.) 'Can you attend up to that time?'

The semantics of *(w-a-)kela* 'arrive, reach' and *'a-kela* 'up to' differs; thus, *(w-a-)kela* 'arrive, reach' cannot always replace *'a-kela* 'up to', as shown by the ungrammaticality of (24a'–b'). With *'a-kela*, what is emphasized is the progress that is made up to the point that needs to be reached, a meaning that seems to be encapsulated in the prefix *'a-* 'DIR'.

(24) Tanan Rukai

- a. *'a-kela-nga=nako inia 'o-silo.*
 DIR-up.to-COS=1SG.NOM that CAUS.MVT-bead
 'My bead-embroidering work stops there.'
- a'. **o-a-kela-nga=nako inia 'o-silo.*
 ACT-REAL-reach-COS=1SG.NOM that CAUS.MVT-bead
- b. *'a-kela-nga 'a-ka-inia.*
 DIR-up.to-COS DIR-ALL-that
 'At that time, it will have reached (that point).'
- b'. **o-a-kela-nga 'a-ka-inia.*
 ACT-REAL-reach-COS DIR-ALL-that

Things are a bit more complicated because of the occurrence of two other homophonous forms. One of these forms, which is also invariable, consists of a bimorphemic prefix *'a-kela-* 'up to' (< *'a-* 'DIR', *kela-* 'arrive, reach'), and encodes only a spatial meaning. Just like the bimorphemic prefix *'a-ka-*, *'a-kela-* occurs specifically with the interrogative pronoun *ino* as well the demonstratives *inia* 'here' and *idraa* 'there', as shown in (25a–b).⁷

⁷ Note in passing that there is no prefix corresponding to the verb *twalay* 'come from'. This is demonstrated by the fact that (i) it cannot attract *ino* 'where?' or any demonstrative, unlike the bimorphemic prefixes *'a-ka-* 'at' or *'a-kela-* 'up to', but (ii) it attracts pronominal forms. Compare the grammaticality of (ia–d).

- (i) Tanan Rukai
- a. **twalay-(i)no koadra?*
 come.from-where that
 Intended for: 'Where does he/she come from?'
- b. *twalay ('a-ka-)ino koadra?*
 come.from (DIR-ALL-)where that
 'Where does he/she come from?'

(25) Tanan Rukai

- a. *'a-kela-ino* *koadra* *daedae=so?*
 DIR-reach-where that land=2SG.GEN
 'How far is your land?' (Adapted from P. Li 1973: 122)
- b. *'a-kela-idraa* *koadra* *daedae=li.*
 DIR-up.to-there that land=1SG.GEN
 'My land is that far.'

As a means of comparison, the sequence *'a-kela-ino* 'up to what point, how far?' corresponds to *'a-ka-ino* 'where?', as shown in (26).

(26) Tanan Rukai

- amoa* *'a-ka-ino* *koadra* *marodrang?*
 go DIR-ALL-where that old.(wo)man
 'Where did the old person go?'

One major distinction between the verbal (*o-a-*)*kela* and the prefixal forms of *'a-kela* 'up to' is that the latter never attracts pronouns (27a). (27b) shows that if the prefix *'a-kela-* 'up to' is replaced by the corresponding verb *'a-kela*, the latter can attract a pronoun and *ino* occurs as a free morpheme after the verbal predicate.

(27) Tanan Rukai

- a. **'a-kela-ino=so* *koadra* *daedae=so?*
 DIR-reach-where=2SG.NOM that land=2SG.GEN
- b. *'a-kela(-nga)=so* *ino* *'o-silo?*
 DIR-reach(-COS)=2SG.NOM where CAUS.MVT-bead
 'Where does your bead-embroidering work stop?'

The other homophonous form is *'a-kela*, which is actually the causative form of the verb (*w-a-*)*kela* 'arrive, reach'; the prefix *'a-* should be analyzed as causative. The fact that *'a-* actually is a reflex of PAN **pa-* 'CAUS' explains why *wakela* 'arrive' is correct, but **wa'akela* (< *o-a-'a-*

-
- c. **twalay-ino=so* *koadra?*
 come.from-where=2SG.NOM that
 Intended for: 'Where does he/she come from?'
- d. *twalay=so* (*'a-ka-*)*ino?*
 come.from=2SG.NOM (DIR-ALL-)where
 'Where do you come from?'

kela) is not, since in most Formosan languages (except Bunun, see L. Li 2018), the causative marker *pa-* (Tanan Rukai *'a-*) attaches to a non-finite root, viz. *kela* ‘arrive, reach’, as in *'a-kela*.

(28) Tanan Rukai

ay-'a-kel=ako taromak ki lalake=li
 IRR-CAUS-reach=1SG.NOM Taromak OBL child=1SG.GEN
 ‘I shall have/get/make my child(ren) come to Taromak.’

To sum up the discussion of this subsection, I have shown that there are three related (free) forms in Tanan Rukai: *(o-a-)kela* is a verb meaning ‘reach, arrive’; *'a-kela* ‘up to’ is also a verb (made up of a base, *kela*, to which is attached a prefix *'a-* ‘DIR’). It should not be mixed up with *'a-kela*, which is the causativized form of *(o-a-)kela*. A fourth form is a bimorphemic prefix which only occurs with the interrogative word *ino*, and demonstratives, e.g., *idraa* ‘there’.

3.4 *twalay* vs. *'atwalay*

P. Li (1973) does not discuss the forms *twalay* ‘from’ as opposed to *twalay* ‘come from’. What is interesting to note is that the morpheme *twalay* ‘come from’ is an invariable verb that encodes both spatial and temporal relations, as shown in (29a–b).

(29) Tanan Rukai

- a. *twaladh=ako taihoko.*
 come.from=1SG.NOM Taipei
 ‘I come from Taipei.’
- b. *twalay=[a]ko ko icaili 'o-silo.*
 come.from=1SG.NOM that last.year CAUS.MVT-bead
 ‘From last year, I have started to bead-embroider.’

The complex form *'a-twalay* ‘get from’ is the causative verb form of *twalay* ‘come from’. It is not a prefix since it can attract pronominal forms, as in (30).

(30) Tanan Rukai

'a-twaladh=ako 'a-ka-inia m-alra.
 CAUS-come.from=1SG.NOM DIR-ALL-that SBJV-take
 ‘I took (it) from him/her.’

It cannot attract any demonstrative pronoun (31a), and must co-occur with the sequence *'a-ka-X* that indicates the source (31b–c).

(31) Tanan Rukai

- a. **amalr=aku* *'a-twalay-(i)nia* *ki* *dhipolo* *'a-ka-inia*.
 take=1SG.NOM CAUS-come.from-that OBL Dhipolo DIR-ALL-that
 'I took it from Dhipolo.'
- b. *amalr=ako* *'a-twalay* *ki* *dhipolo* *'a-ka-inia*.
 take=1SG.NOM CAUS-come.from OBL Dhipolo DIR-ALL-that
 'I took it from Dhipolo.'
- c. **amalr=ako* *'a-twalay* *ki* *dhipolo* \emptyset .
 take=1SG.NOM CAUS-come.from OBL Dhipolo \emptyset
 'I took it from Dhipolo.'

3.5 The verb 'do for'

The verb *'asi-a-kay* 'do for', with its base the adnominal pronoun *kay* 'this' (32) is not discussed in P. Li (1973) and is introduced in this section for the sake of comparison with the other Rukai dialects in §4.

(32) Tanan Rukai

- a. *'asiakay=aku* *inia* *o-aga*.
 do.for:REAL=1SG.NOM that SBJV-cook
 'I cook for him/her.'
- b. *o-a-aga* *'asikay/*'asiakay* *inia*.
 ACT-REAL-cook do.for:SBJV/do.for:REAL that
 'I cook for him/her.'

3.6 Interim summary

In this section, I have given a reassessment of morphemes that were treated as prepositions in Tanan Rukai by P. Li (1973), who provides four criteria to distinguish verbs from so-called prepositions: (1) occurrence of a determiner, (2) absence of an object NP, (3) TAM marking, (4) embedded morphological marking through the infixation of <o>. I have shown, however, that there are a number of problems with his analysis because the internal composition of these morphemes is not correctly analyzed and their free or bound status is not recognized. The tests

P. Li (1973) propose are not incorrect by themselves, but they are not appropriate in the present context.

I have argued that these morphemes either function as verbs, adverb or are prefixes (and more specifically verbalizers) which attach to a (pro)nominal form. I have explained in detail the word formation of each of these verbs and/or the meaning of the affixes in question. The results of these findings are summarized in Table 2:

Table 2. Verbs, adverb and affixes in Tanan Rukai: A reassessment of P. Li (1973)

Locative, directional, instrumental verbs		Gloss	Adverb	Gloss	Related affixes	Word formation
Finite forms	Non-finite/subjunctive forms					
<i>i-a-kay</i>	<i>i-kay</i>	'be at, exist'	—	—	—	<i>i-</i> 'at', <i>a-</i> 'REAL' <i>kay</i> 'this'
—	—	—	<i>'a-ka-ino</i> <i>'a-ka-inia</i> <i>'a-ka-idraa</i>	where here there	—	<i>'a-ka-</i> 'DIR-ALL'
<i>ara-kay</i>	—	'use'	—	—	<i>ara-</i> 'use'	<i>kay</i> 'this'
<i>o-a-kela</i>	<i>kela</i>	—	—	—	—	<i>o-</i> 'ACT', <i>a-</i> 'REAL'
<i>'a-kela₁</i>	—	'reach, up to'	—	—	<i>'a-kela-</i> 'up to'	<i>'a-</i> 'DIR'
<i>'a-kela₂</i>	—	'make...reach'	—	—	—	<i>'a-</i> 'CAUS'
<i>twalay</i>	—	'come from'	—	—	—	—
<i>'a-twalay</i>	—	'get from'	—	—	—	<i>'a-</i> 'CAUS'
<i>'asi-a-kay</i>	<i>'asikay</i>	—	—	—	—	<i>kay</i> 'this'

In the next section, I briefly examine the Tanan counterparts of 'at', 'to', 'from', 'for' etc. examined above in the other five Rukai dialects. Because of limitations of space, illustrative examples are taken from the most representative dialects, Mantauran, Tona and Budai.

4. The morphemes 'at', 'to', 'from', 'for' in the other five Rukai dialects

I list in Table 3 all the equivalents of the locative, directional, instrumental verbs that were discussed in Tanan (see the preceding section), in Mantauran, Maga, Tona, Budai, and Labuan. We find similar forms (some having undergone sound changes) that will be discussed in more detail in §5. The affixes found in Tanan also occur in the other Rukai dialects, including *i-* 'LOC', *a-* 'REAL', *pa-* 'CAUS', *o-* 'ACT', *ara-/aha-* 'use', and the base in all the dialects is mostly *kay* 'this'.

Table 3. Locative, directional, instrumental verbs in the Rukai dialects

Gloss	Tanan	Labuan	Budai	Mantauran	Maga	Tona
‘be at’	<i>i-a-kay</i>	<i>i-a-kay</i>	<i>i-a-kay</i>	<i>om-i-ki</i>	<i>i-kée</i>	<i>'i-a-kay</i>
‘(come) from’	<i>twalay</i>	<i>twalay</i>	<i>twalay</i>	<i>'a-li-ki</i>	<i>sa-l-ké</i>	<i>si-li-kay</i>
‘(get) from’	<i>pa-twalay</i>	<i>pa-twalay</i>	<i>pa-twalay</i>	<i>pa-'a-li-ki</i>	<i>pa-sal-ké</i>	<i>pa-sili-kay</i>
‘arrive’	<i>o-a-kela</i>	<i>o-a-kela</i>	<i>o-a-kela</i>	<i>m-o-kela</i>	<i>u-kɿla</i>	<i>o-a-kela</i>
‘use’	<i>ara-kay</i>	<i>aha-kay</i>	<i>ara-kay</i>	<i>to-'ara-ki</i>	<i>s-ar-ké</i>	<i>si-a-kay</i>
‘do for’	<i>'asi-a-kay</i>	<i>pasi-a-kay</i>	<i>pasi-a-kay</i>	<i>'i-ra-ki</i>	<i>ker-ké</i>	<i>ki-a-kay</i>

All these morphemes function as verbs. The arguments that can be advanced to validate this claim are as follows:

1. They occur in clause-initial or -medial position, as shown in (33).

(33) Mantauran Rukai

- a. *lo ma-lrakase=mao* *m-o-valrio,* *ma-'adhaili,*
 if STAT.SBJV-lazy/dislike=IMPRS.GEN SBJV-to-village STAT-far
om-i-ki=mao *ooma i'olai.*
 ACT-at-this=IMPRS.NOM field stay.overnight
 ‘If we did not feel like returning to the village (because) it was far away, we (would) stay overnight.’ (Zeitoun 2007: 85)
- a'. *maava'i dhona'i a-sava~savare=mao* *m-i-ki* *latadhe.*
 come that PL-RED~young.man=IMPRS.GEN SBJV-at-this outside
 ‘Young men would come to (the girl’s house) and wait outside.’ (Zeitoun 2007: 86)

Tona Rukai

- b. *'i-a-kay* *na 'osama si la 'ikay ko valak=ini*
 at-REAL-this OBL king and then be.at NOM child=3SG.GEN
'a-baobao-nga *si...*
 become-young.woman-COS and
 ‘There was a king who had a grown-up daughter.’
- b'. *ko titina kodray 'ocib=idra* *boathi* *m-wi*
 when mother that SBJV:split.stones=3SG.GEN sweet.potato SBJV-go
ta-dradrav-ane *mota'amao=ni* *'i-kay*
 LOC.NMLZ-chase.bird-LOC.NMLZ SBJV:to:up=3SG.GEN at-this

ta-dradrav-ane *kwane.*

LOC.NMLZ-chase-LOC.NMLZ SBJV:eat

‘Then the mother took the sweet potatoes to the place where birds are chased and stayed there to eat.’

Budai Rukai

c. *i-a-kay* *ku* *tama* *la* *tu-lalake* *ku* *tatulru* *ku* *muakabalubalua.*

at-REAL-this NOM father then give-birth NOM three LIG young.woman

‘There was a father who had three grown-up daughters.’

c’. *(lr)i-a-pece* *ka* *lrulay* *i-kay* *ki* *ngiuku.*

IRR-sleep NOM child at-this OBL cradle

‘The child is sleeping in (his/her) cradle.’

2. Most can carry TAM markers in initial position, as in (34).

(34) Tona Rukai

a. *syalika=iso* *’aokay?*

REAL:from=2SG.GEN come

‘Where do you come from?’

b. *amoa=iso* *pasilikay* *kisedame* *na* *paiso?*

go=2SG.GEN from borrow OBL money

‘Whom did you borrow money from?’

3. They attract clitic pronouns when they occur in initial position (but not when they occur in medial position), as in (35):

(35) Mantauran Rukai

a. *lo* *maongo-nga,* *am(o)-okela-nga=mita* *dhona* *valrio.*

if STAT.SBJV:night-COS IRR-reach-COS=1PL.INCL.NOM that village

‘At night, we will reach that village.’ (Zeiton 2007: 86)

a’. *...mani* *o-dhalra-nga=mao* *m-oa* *m-okela* *o’i* *valrevalre’ae.*

...then to-up-COS=IMPRS.NOM SBJV-go SBJV-reach that road

‘...then one (would) go up (again) to the road.’ (Zeiton 2007: 86)

Budai Rukai

b. *w-a-kela ka takanaw nakuane.*

ACT-REAL-arrive NOM Takanaw 1SG.OBL

‘Takanaw came to me.’

b’. *sa-kai=naku kela-ana udale.*

when-NEG=1SG.GEN reach-still rain

‘Before I arrived, it was (already) raining.’

With the exception of Maga, in which most verbs are invariable in affirmative clauses, some of these verbs exhibit certain alternations, commonly found in other verbs, as shown in Table 4.

Table 4. Verbal alternations

Gloss	Labuan	Budai	Mantauran	Maga	Tona
‘be at’	<i>i-a-kay</i>	<i>i-a-kay</i>	<i>om-iki</i>	<i>ikee</i>	<i>i-a-kay</i>
	<i>i-kay</i>	—*	<i>m-iki</i>		<i>i-kay</i>
		<i>i-kay</i>	<i>iki</i>		
‘(come) from’	<i>twalay</i>	<i>twalay</i>	<i>’a-li-ki</i>	<i>sa-l-ke</i>	<i>si-a-li-kay</i>
					<i>si-li-kay</i>
‘(get) from’	<i>pa-twalay</i>	<i>pa-twalay</i>	<i>pa-’a-li-ki</i>	<i>pa-sa-l-ke</i>	<i>pa-si-li-kay</i>
‘arrive’	<i>o-a-kela</i>	<i>o-a-kela</i>	<i>m-okela</i>	<i>u-kɿla</i>	<i>o-a-kela</i>
	<i>kela</i>	—	<i>m-okela</i>	<i>kɿla</i>	<i>kela</i>
		<i>kela</i>	<i>okela</i>		
‘use’	<i>aha-kay</i>	<i>ara-kay</i>	<i>to-’ara-ki</i>	<i>s-arke</i>	<i>si-a-kay</i>
‘do for’	<i>pasi-a-kay</i>	<i>pasi-a-kay</i>	<i>’i-ra-ki</i>	<i>ker-ke</i>	<i>ki-a-kay</i>
	<i>pasi-kay</i>	<i>pasi-kay</i>			

- a. Budai Rukai does not exhibit any subjunctive form. In Labuan, Maga, and Tona, there might be a neutralization between the subjunctive and the non-finite forms of the verb.

More specifically, in Rukai, verbs undergo different morpho-phonological alternations depending on whether they are dynamic or stative and whether they occur as finite, non-finite or subjunctive. Finite dynamic verbs are usually marked by *o-* ‘ACT’, which is usually followed by the realis prefix *a-*, as in Tona/Budai/Labuan *o-a-kela* ‘arrive, reach’ (35a). In Mantauran, *om-iki* ‘exist, be at’ exhibits the same alternations as *om-alra* ‘take’ (36a–b) and (36c–d) (see also (35a–a’)), cf. *om--m--Ø-*.

(36) Mantauran Rukai (Zeitoun 2007: 87)

- a. ...*o-lriho* 'o=*ka=nai* *om-iki* *valrinae* *dha'ane*.
 ...ACT-know-NEG=1PL.EXCL.GEN DYN-exist Valrinae house
 '...we did not know that there were houses in Valrinae.'
- b. *mani* *Ø-iki=lrao* *dha'ane*...
 then Ø-be.at=1SG.NOM house
 'then I was in the house...'
- c. *olo* 'olrovo 'o=*mao* *dhona'i* *vecenge* *la* *pahai*, *om-alra=mao*
 if SBJV:pound=IMPRS.GEN that millet and rice DYN-take=IMPRS.NOM
 'avelre *topo'o*.
 big.rounded.bamboo.dish SBJV:winnow
 'When we pounded millet and rice, we (would) take a big rounded bamboo dish to winnow (the grains).'
- d. *mani* *Ø-alra=lrao* *tai*...
 then Ø-take=1SG.NOM taro
 'then I took the taro...'

Non-finite dynamic verbs are zero-marked, with no occurrence of *o-* 'ACT' and/or *a-* 'REAL', e.g., Budai/Labuan *i-kay* 'be at', *kela* 'arrive, reach' (35b) and (37). Subjunctive dynamic verbs are generally unmarked, unless the first vowel of the root is /a/, in which case they take the prefix *o-* or the infix <o> as in Tona/Labuan *wakela* 'arrive (SBJV)'.

(37) Tona Rukai

- a. '*i-a-kay* *na* 'osama *si* *la* 'ikay *ko* *valak=ini*
 at-REAL-this NOM king and then be.at NOM child=3SG.GEN
 'a-baobao-nga *si*...
 become-young.woman-COS and
 'There was a king who had a grown-up daughter.'
- b. *'*i-a-kay* *na* 'osama *si* *la* 'i-a-kay *ko* *valak=ini*
 at-REAL-this NOM king and then at-REAL-this NOM child=3SG.GEN
 'a-baobao-nga *si*...
 become-young.woman-COS and

5. Reconstruction

Table 5 shows the tentative reconstruction of the locative, directional, and instrumental verbs in Proto-Rukai, based on a comparison of the six Rukai dialects. I make two major assumptions. First, I show in Table 5 that locative, directional and instrumental verbs in the Rukai dialects are made up of the same base, PR *kai 'this'. Second, being derived from the demonstrative *kai,

all these forms are verbalized through the occurrence of a particular affix, reconstructed as follows: PR *ara- ‘use’ and PR *i- ‘LOC’. There are a number of affixes for which I cannot pin down the meaning at this time, c’est-à-dire PR *sa- and PR *li, etc. Other affixes that are reconstructible include PAN/PR *pa- ‘CAUS’, PR *a- ‘REAL’, PR *o- ‘ACT’.

Table 5. Locative, directional and instrumental verbs in the Rukai dialects

Gloss	Tanan	Labuan	Budai	Mantauran	Maga	Tona	Proto-Rukai
‘be at’	<i>i-a-kay</i>	<i>i-a-kay</i>	<i>i-a-kay</i>	<i>om-i-ki</i>	<i>i-kée</i>	<i>i-a-kay</i>	*i-a-kai
‘(come) from’	<i>twalay</i>	<i>twalay</i>	<i>twalay</i>	<i>’a-li-ki</i>	<i>sa-l-ké</i>	<i>si-a-li-kay</i>	*sa-li-kai
‘(get) from’	<i>’a-twalay</i>	<i>pa-twalay</i>	<i>pa-twalay</i>	<i>pa-’a-li-ki</i>	<i>pa-sa-l-ké</i>	<i>pa-si-li-kay</i>	*pa-sa-li-kai
‘use’	<i>ara-kay</i>	<i>aha-kay</i>	<i>ara-kay</i>	<i>to-’ara-ki</i>	<i>s-ar-ké</i>	<i>si-a-kay</i>	*ara-kai
‘do for’	<i>’a-si-a-kay</i>	<i>pa-si-a-kay</i>	<i>pa-si-a-kay</i>	<i>’i-ra-ki</i>	<i>ker-ké</i>	<i>ki-a-kay</i>	*si-ara-kai

Below, I first briefly discuss sound changes before moving to the reconstructed forms.

Mantauran (Mt) and Maga (Mg) have undergone the highest number of sound changes:

1. PR *i-a- and *ai > Mt *i*, cf. *om-i-ki* (< PR *i-a-kai) and Mg *é*, cf. *ikée* (< PR *i a kai).
2. PR *s > Mt *’/ʔ/*, cf. *’a-li-ki* ‘come from’ (< PR *sa-li-kai).
3. In Tanan (Tn), the reflex of PR *p is *’/ʔ/*, cf. *’a-twalay* ‘(get) from’ (vs. Budai/Labuan *pa-twalay*).
4. Tona (To) has lost PR *r, cf. To *syakay* ‘use’ (< **si-ara-kay), and in Labuan (Lb), PR *r has become *h*, cf. Lb *ahakay* ‘use’ (< PR *ara-kay).

The existential/locative verb (cf. PR *i-a-kai) is the easiest to reconstruct, once sound changes taken into account. The verbs *twalay* ‘(come) from’ and *pa-twalay* ‘(get) from’, found in Budai, Labuan, and Tanan, are treated as innovations because of the absence of the demonstrative *kai* found in all the other verb forms.

In Mantauran, Maga and Tona, we witness the addition of the prefix *to-* ‘make, produce’ (cf. Mt *to-’araki*) and *s(i)-* ‘meaning unknown’ (cf. To *syakay* (< **si-ara-kai) and Mg *sarké* (< **s(i)-ar(a)kai).⁸ I presume that Mantauran *’iraki* is a reflex of **si ara-kai.

At the present, though, I still cannot clearly explain the meaning or function of PR *si-, Mg/To *ki-* and Bd/Lb/Tn *pa-* in the verbs Bd/Lb *pa-si-akay*, Mg *ker-ké*, To *ki-a-kay*.

⁸ In the negative, the ending *kai* ‘this’ is found, e.g., *i-sarkai* ‘do/did not use’ and *i-kerkai* ‘do/did not do for’.

6. Conclusion

In this paper, I have shown that there actually are no prepositions in Tanan Rukai, as argued by P. Li (1973). On the other hand, there is a full series of verbs (locative, directional and instrumental) which are made up with the same base, *kay* ‘this’ (reconstructed as PR *kai). Interestingly enough, these verbs are made up with prefixes which can be identified and have their own usage. Tanan is peculiar in having the bimorphemic *’a-ka-* attaching only to the demonstrative *inia* ‘here’ and *idraa* ‘there’ and the interrogative pronoun *ino* ‘where’ and having developed as an adverb, a function not found in other Rukai dialects. I have tentatively provided a reconstruction of the paradigm of the locative, directional, and instrumental verbs in Proto-Rukai, based on a comparison of the six Rukai dialects, this being part of a larger comparative study of this language (Zeitoun in preparation).

Acknowledgements

This paper was presented at the “30e Journées de Linguistique d’Asie Orientale” held in 29 June–1 July, 2017 in Paris (France) and I thank the audience for all the feedback. I would also like to thank the colleagues that participated in the MOST projects entitled “Word classes, morphology, and applications to language teaching” in the Formosan languages between January 2017 and December 2018 for the fruitful discussions. I express my heartfelt gratitude to the two readers of this article for their valuable comments and suggestions. I am also grateful for the generous support received through grants from Academia Sinica (Investigator Award 105TP046-4), the National Science and Technology Council (formerly Ministry of Science and Technology MOST 106-2420-H-001-009-MY2) and the Institute of Linguistics at Academia Sinica (LING-112-006-02).

Abbreviations and conventions

ACT	active voice
ALL	allative
AV	actor voice
CAUS	causative
CN	common noun
COS	change of state
DIR	directional
DAT	dative
DYN	dynamic
EXCL	exclusive

GEN	genitive
IMP	imperative
IMPRS	impersonal pronoun
INCL	inclusive
IRR	irrealis
LIG	ligature
LOC	locative
MVT	movement
NEG	negation, negative
NFIN	non-finite form
NMLZ	nominalizer/nominalization
NOM	nominative
OBL	oblique
PL	plural
PN	personal noun
PREP	preposition
REAL	realis
RED	realis
SBJV	subjunctive
SG	singular
STAT	stative
1	first person
2	second person
3	third person
.	1) portmanteau morpheme (in grammatical gloss); 2) multiple gloss (in content word, e.g., young.woman)
:	(divisible) morpheme
-	prefix or suffix
◁▷	infix
=	clitic
~	reduplicated morpheme
*	1) reconstructed morpheme; 2) ungrammatical example

Abbreviations for languages include the following

Lb	Labuan
Mg	Maga

Mt	Mantauran
PAN	Proto-Austronesian
PR	Proto-Rukai
Tn	Tanan
To	Tona

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