Seediq reciprocals and their history*

Izumi Ochiai

Abstract: The Atayalic subgroup of the Austronesian language family includes two languages, Seediq and Atayal. This paper focuses on the Paran dialect of Seediq. The first part of this paper introduces the reciprocal constructions in Paran Seediq from a descriptive perspective. Paran Seediq has two pairs of reciprocal forms; one with the reduplication (i) *mVCV-/pVCV-* which has been reported in previous literature, and (ii) *mVsV-/pVsV-*, the meanings for which belong to a certain semantic class. The second part argues that the reciprocal prefix (ii) **mVsV-/*pVsV-* can be reconstructed in Proto-Atayalic on the basis of evidence from Taroko Seediq, the other Seediq dialect and from Atayal.

Key words: Formosan languages, Seediq, Atayal, reciprocal, historical linguistics

1 Introduction

Reciprocal constructions express a mutual action or situation between two or more participants. However, the semantics and (morpho-)syntax of reciprocal constructions differ from language to language. This section gives a brief overview of the reciprocal constructions discussed in two previous papers: Haspelmath (2007), which focused on a typological explanation of reciprocal constructions, and Lichtenberk (2000), which examined the reciprocal constructions in a particular language subgroup, the Oceanic subgroup of the Austronesian language family.

1.1 Reciprocal typology

Haspelmath (2007:4, 18-19) classified reciprocal constructions as multiclausal or monoclausal, with the latter being further divided into lexical reciprocals and grammatical reciprocals. Lexical reciprocals are non-derived lexemes denoting mutual configurations. Haspelmath noted that "all languages seem to have a substantial number of simple words (verbs, adjectives and nouns) that denote mutual configurations by themselves, without occurring in a special grammatical (morphological or syntactic construction)" and that lexical reciprocals comprise of small sets of semantic classes such as 1. social actions ("marry"); 2. competitions ("quarrel," "fight," "negotiate," "argue"); 3. joint actions ("communicate," "play chess," "consult"); 4. connections ("combine," "unite," "acquaint," "compare," "mix"); 5. division ("separate," "distinguish"); 6. relations of

(non-)identity ("same as," "different from," "resemble"); 7. spatial relations ("adjoin," "next to"), 8. relationship nouns ("friend," "colleague," "compatriot," "cousin").[1]

Grammatical reciprocals are divided into anaphoric reciprocals and verb-marked reciprocals. Anaphoric reciprocals introduces anaphoric expressions such as "each other" (1), which refer to the participants in the reciprocal situation.

(1) English (Haspelmath 2007:8)
   The friends trust **each other**.

Rather than using anaphoric expressions, verbs-marked as reciprocals use affixes or clitics to indicate reciprocity. For example, Japanese uses the suffix -*at* (2).

(2) Japanese (Alpatov and Nedjalkov 2007:1032)
   *Taroo to   Akiko wa   aisi-**at**-te-iru.*
   Taro   and Akiko TOP love-REC-CONT-NPAST
   "Taro and Akiko love each other."

Haspelmath (2007:14) also pointed out that verb-marked reciprocals in all languages have forms derived from transitive bases and that those derived from intransitive bases are rare. From this discussion, Haspelmath gave the following language universal: "If a language has verb-marked reciprocals based on intransitive verbs, it also has verb-marked reciprocals based on transitive verbs."

1.2   Reciprocal constructions in Oceanic languages

Lichtenberk (2000) detailed the classification of reciprocal constructions in Oceanic languages from the Austronesian language family and identified the following types: reciprocal situations, chaining situations, collective situations, situations where the participants are in a converse relationship to each other, distributed situations , repetitive functions, depatientive functions, noun-based derivations, and middle uses. Depatientive functions mainly concerned with syntax whereas noun-based derivations are mainly concerned with morphology, while others are mainly concerned with semantics. Lichtenberk's classifications are shown in Table 1 as follows.

---

[1] The list of semantic classes for lexical reciprocal is mentioned on page 4 and 19 (Haspelmath 2007). In these pages, different sematic classes and example verbs are presented. However, as some semantic classes overlapped and some words belonged to different classes, the author rearranged the list and the example verbs according to my understanding of the paper.

Table. 1: Reciprocals in Oceanic languages (Lichtenberk 2000)

Semantics	
Reciprocal situations	(3)
Chaining situations	(4)
Collective situations	(5)
Converse relations	(6)
Distributed situations	(7)
Repetitive functions	(8)
Middle uses	(9)
Syntax	
Depatientive functions	(10)
Morphology	
Noun-based derivations	(11), (12)

For each type, the examples cited in Lichtenberk (2000) are given below. For most semantic types, as the meaning of the reciprocal construction is straightforward, only examples are listed and no further explanation is given. Lichtenberk glosses the reciprocal marker as PR or the "plurality of relation"; however, this has been modified to REC in this paper. All examples shown here are verb-marking types.

(3) Reciprocal situations
　　　To'aba'ita (Lichtenberk 2000:35)
　　　Roo wane kero　　　kwai-kumu-i.
　　　two man 2DU:NONFUT REC-punch-REC
　　　"The two men are punching each other."

(4) Chaining situations
　　　To'aba'ita (Lichtenberk 2000:35)
　　　Wela kera　　　futa　　kwai-suli.
　　　child 3PL:NONFUT be.born REC-follow
　　　"The children (siblings) were born in quick succession (in successive years)."

(5) Collective situations
　　Hoava (Davis 1997:283)
　　　vari-paqahi-ni-a　gami　　　sa　　　gugusu.
　　　REC-leave-AP-3SG PRO:1PL.EXC ART:SG village
　　　"They left the village together."

In converse relations, both participants in the reciprocal construction are involved in an action where one is the agent and the other is a patient.

(6) Converse relation
　　Boumaa Fijian (Dixon 1988:177)
　　　Erau sa　vei-'oti ti'o　o　Sepo vata　　'ei Elia
　　　3DU ASP REC-cut CONT ART Sepo together with Elia
　　　"Sepo and Elia are involved in an activity of (hair) cutting."

In distributed situations, each event occurs in a different locality or has different directionality.

(7) Distributed situations
Fijian (Milner 1972:113)
. . . era sā mani vei-suka-yaki ki na nodra koro.
3PL ASP then REC-return/disperse-REC to ART their village
"(When the ceremonial exchange was over) they then dispersed (and returned) to their villages."

(8) Repetitive function
Mekeo (Jones 1993:494)
Go-bi-noi-abala.
2PL-REC-request-very
"You are always/constantly asking for something."

The next semantic type, "middle uses" refers to a reflexive use. In the example (9), the prefix glossed as MID is the reciprocal marker.

(9) Middle uses
Futunan (Moyse-Faurie 2007)
E kay fe-'umo pe kau moemiti fakatotonu pe le'ai.
NS 1SG MID-pinch or 1SG dream really or not
"I pinch myself to know if I am dreaming or not."

In a depatientive function, there is no overt direct object. However, the object is either implied or it typically denotes a general or non-specific object.

(10) Depatientive function
Lichtenberk (2000:42)
Roo wane kero kwai-laba-ta'i.
two man 3DU:NONFUT REC-affect.negatively-VT
"The two men harm (people), spoil, damage (things)"

In noun-based derivations, nouns denoting kin-terms or a few other relational nouns such as "friend" are affixed with reciprocal markers. Lichtenberk (2000:44) noted that "they refer to sets of two or more individuals that are in certain converse relations to each other as determined by the base noun." Some relations are symmetrical (e.g., "spouse" is the relationship of husband to wife and wife to husband) as in (11) and others are asymmetrical (e.g., the relationship between a parent and a child) as in (12).

(11) Noun based derivations (symmetrical)
Fijian (Schütz 1985:206)
Erāū vēī-wati-ni.
3DU REC-spouse-REC
"They are husband and wife."

(12) Noun-based derivations (asymmetrical)
    Fijian (Schütz 1985:206)
        erāū vēī-tama-ni.
        3DU REC-father-REC
        "They are father-and-child."

1.3 Seediq reciprocal overview

Typologically, Paran Seediq has only verb-marked reciprocal constructions. Seediq has no anaphoric reciprocals and the reciprocal constructions are verb-marked with a prefix. Lichtenberk's (2000) detailed classification of reciprocals in Oceanic languages is applicable to Paran Seediq (an Austronesian language from Taiwan). As these languages all belong to the Austronesian language family, they have some features in common. However, Oceanic languages tend to have more versatile usage of reciprocal constructions than Seediq. In terms of semantics, most Seediq reciprocals are simply the "reciprocal situations" as classified by Lichtenberk, with a few being "collective situation" types. Other types of the semantic category are not observed in Seediq reciprocal constructions; for example, the "depatientive function" in the syntactic category is not seen in Seediq reciprocal constructions, even though Seediq has "noun based derivations" or "kin-term based derivations."

The purpose of this paper is two-fold: descrpitive and historical. First it is proposed that there are two pairs of reciprocal prefixes in Seediq, (i) *mVCV-/pVCV-* and (ii) *mVsV-/pVsV-* for which the distinctive features are presented. (i) *mVCV-/pVCV-* has been reported to be a reciprocal marker in a previous studies (Asai 1953, Holmer 1996); however, (ii) *mVsV-/pVsV-* has not. This paper proposes that (i) *mVCV-/pVCV-* has corresponding transitive verbs, so it is a typical reciprocal marker; whereas (ii) *mVsV-/pVsV-* lacks transitive verbs, therefore it is a less typical reciprocal marker and tends to resemble lexical reciprocals in terms of the semantic classes involved. Another characteristic of (ii) *mVsV-/pVsV-* is that these pairs are used to express human relationships, which correspond to Lichtenberk's (2000) "noun-based derivations."

The second purpose of this paper is to reconstruct a newly recognized reciprocal marker *mVsV-/pVsV-* in the proto-language (Proto-Atayalic), first by comparing Paran Seediq with Taroko Seediq, then by comparing Seediq with its genealogically closest language, Atayal.

2 Seediq background

Seediq is one of those Austronesian languages spoken in Taiwan that are collectively called Formosan languages. Seediq belongs to the Atayalic subgroup, which is one of the first order branches of Proto-Austronesian (Blust 1999) and includes two languages, Atayal and Seediq, the latter of which can be further divided into two dialects, Paran and Taroko (Ogawa and Asai 1935). The Seediq tribe's population is about 30,000; however, the number of speakers has been steadily decreasing.

This paper mainly focuses on Paran Seediq. Paran Seediq data in this paper was collected by the author unless otherwise cited. Paran Seediq is also compared to Taroko Seediq to reconstruct the proto-Seediq forms. The Taroko Seediq data is from previous studies such as Pecoraro (1977) and Tsukida (2009). The proto-Seediq forms are then

compared with Atayal, the closest language to Seediq.

Before the discussion, a few phonological and grammatical remarks about Paran Seediq are provided as background information. Paran Seediq has five vowels/a, e, i, o, u/; one diphthong/ui̯/; two semivowels /j (written as y), w/; and 16 consonants /p, b, t, d, k, g, q, ts (written as c), s, x, h, l, r, m, n, ŋ/.[2] The syllable structure is either CV or CVC; however, CVC is only allowed in final syllables. Words typically have two syllables with a CV.CV(C) structure and a minimal word (root) has two syllables (Yang 1976).

There is vowel weakening in pre-stress syllables. Stress falls on the penultimate syllable, and the preceding syllables reduce to *u* in Paran Seediq. For example, *tátak* "cultivate (land)" becomes *tuták-i* "cultivate! (IMP)." Prefixes also undergo vowel weakening. Because they are attached to roots with two or more syllables, they are always before the accented syllable. For example, the Seediq stative marker is *mV-*. There is a root *tilux* "hot," which is not used independently but must be attached with a stative prefix and hence becomes *mu-tilux*.

A glottal stop surfaces phonetically before a vowel initial root if it is attached with a prefix. In addition, the glottal stop triggers regressive vowel assimilation: the vowel after the glottal stop, which is also a stressed vowel, is copied to the preceding vowel. For instance, if there is no such phonological rule, *icu* "fear" surfaces as *mu-icu* with the application of vowel weakening. However, the vowel initial root, *icu*, surfaces as *ʔicu* if prefixed, so it has to be *muʔicu*. But the glottal stop triggers regressive vowel assimilation, so the correct from is *mi-ʔicu* (See also (22)). This glottal stop, however, is frequently dropped in natural speech.

Another glottal consonant, *h*, triggers similar vowel assimilation. If an *h* stands at the onset of a penultimate vowel of more than two syllable words, the penultimate vowel and the antepenultimate vowel are the same. For example, *pehepah* "flower," has two *e*'s around the *h*. Nevertheless, this rule is not strictly applied. Sometimes a form that has vowel weakening is another possibility; for example, *qubeheni* "bird" has vowel assimilation but a form with vowel weakening, *qubuheni* has also been observed.

In the 1920s, word-final *l* and *r* still existed as recorded in Asai (1953). But these segments have now changed to an *n*. For example, *muqedil* "woman" in Asai's transcription is *muqedin* in modern Paran Seediq.[3]

Ochiai (2016) noted that Seediq verbs of high transitivity show an alternation between four types of voice; an actor voice and three others are undergoer voices: and verbs with this voice paradigm are treated as transitive. Conversely, verbs with low transitivity such as stative construction, non-volitional construction, and reciprocal construction are not categorized into this voice paradigm. Nonetheless, these constructions all belong to the same type as actor voice in terms of the case-marking of the arguments; therefore, these constructions are treated as a special kind of actor voice in this paper.

Seediq actor voice construction has predicate-initial and subject-final word order

---

[2] However, I use phonetic transcription for the glottal stop that appears before a vowel initial root when it is prefixed.

[3] Throughout this paper, transcriptions of words from previous studies have been slightly modified. When the original work is written in a language other than English, it has been translated into English by the present author.

(VS or VOA[4]). There are independent pronouns and corresponding bound pronouns. The bound pronouns appear in a second position as enclitics (indicated by "="). A typical actor voice marker is *<um>*. An actor voice construction with a non-pronoun actor is shown in (13a). An example with a pronoun actor is in (13b).

(13) a. *d<um>ayo   yaku   Mona.*
          help<AV.PRES> 1SG.PRON Mona
          "Mona helps me."
      b. *d<um>ayo   =ku   Mona.*
          help<AV.PRES> =1SG.NOM Mona
          "I help Mona."

There are four negators in Paran Seediq (Chen 1996). The relevant negators in this paper are *ini* (verbal negation), *uxe* (nominal negation, negation of volition), and *iya* (prohibitive), all of which stand in the clause initial position. The choice of the negators determines the parts of speech for the following word or phrase; for example, the negators *ini* and the prohibitive *iya* precede verbs. In addition, negators require a special inflection on the verb, which is referred to as connegative form, which is the same form as the imperative. For verbs with the infix *<um>*, the connegative is a zero form, meaning that the infix drops. The negative construction for (13a) is shown in (14); if a connegative form is not used, the sentence is unacceptable. For example, the *<um>* prefixed form cannot be used after *ini* (15).

(14) **ini** *dayo*   *yaku*   *Mona.*
      NEG help.AV.CONNEG 1SG.PRON Mona
      "Mona does not help me."

(15) *__ini__ *d<um>ayo*   *yaku*   *Mona.*
      NEG help<AV.PRES> 1SG.PRON Mona
      "Mona does not help me."

The negator *uxe* also precedes the verb but the meaning is not the same with *ini*. In this case, the verb negated by *uxe* inidcates the speaker has no intention of doing the action. The negator *uxe* is also different from *ini* and *iya* in that it does not precede a connegative form; if the negator in (14) is replaced by *uxe*, it is unacceptable as shown in (16).

(16) *__uxe__ *dayo*   *yaku*   *Mona.*
      NEG help.AV.CONNEG 1SG.PRON Mona
      "Mona does not me."

This requires the verb to be in an indicative form such as infixation by *<um>* as in (17).

(17) **uxe** *d<um>ayo*   *yaku*   *Mona.*
      NEG help<AV.PRES> 1SG.PRON Mona
      "Mona has no intention to help me."

---

[4] S indicates the subject of an intransitive verb and A indicates the subject of a transitive verb.

The negator *uxe* has another usage as a nominal negator. In this construction, *uxe* precedes a noun, noun phrase or gerund. In (18), the negator precedes the noun *bale* "truth." The sentence is incorrect if the other negator *ini* is used (19). Suppose the word class for *bale* is uncertain, the co-occurrence of the negators *uxe* or *ini* can determine the class. If *uxe* is used, it is a noun; if *ini* is used, it is a verb.

(18) **uxe** bale kiya.
    NEG truth that
    "That is not true."

(19) *__ini__ bale kiya.
    NEG truth that
    "That is not true."

3 Reciprocals with reduplication: *mVCV-/pVCV-*

3.1 Previous studies

Asai's (1953:21) data collected in 1927 found that reciprocity was expressed by *muɯ* followed by a reduplication of the first syllable of the root, including its consonant and vowel. Here, Asai's *ɯ* in the prefix appeared to be a weakened vowel that corresponds to *u* in modern Paran Seediq. In (20a), the initial syllable *do* of the root *doi* is reduplicated and in (20b), the initial syllable *qa* of the root *qapah* is reduplicated.

(20) Asai (1953:21)
    a. *doi* "grasp"
        muɯdo-*doi* "grasp each other's hands"
    b. *qapah* "adhere"
        muɯqa-*qapah* "adhere to each other"

However, modern Paran Seediq further reduces the vowels in the reduplicated syllable: the prefix is schematically presented as *mVCV-* in this paper in which the C indicates a reduplicated consonant and V indicates a weakened vowel. *mVCV-* has a pair *pVCV-*, which is used as an imperative or connegative (the form after a negator) and the prefix *mVCV-* is used elsewhere (Holmer 1996). The *mVCV-/pVCV-* pair is in (21) and these contrastive forms are respectively called "indicative" and "non-indicative" in this paper.[5]

(21) Holmer (1996:201)[6]
    cebu "shoot"
    a. **mucu**-*cebu* "shoot each other"
    b. **pucu**-*cebu* "shoot each other (IMP and CON)"

If a root begins with a vowel, the following consonant is reduplicated after *mV-* or *pV-*. In this case, the root begins with a latent glottal stop as vowel assimilation is

---

[5] The pairing of *m* and *p* forms is observed in the grammar of Austronesian languages (Blust 2013). In Paran Seediq, the m/p pairing is particular to reciprocal and some stative forms. The former is used for indicative markers, the latter for non-indicative markers.

[6] The forms have been slightly modified by the present author.

triggered. For instance, *aŋan* (*ʔaŋan*) becomes *muŋu-ʔaŋan*, then it becomes *muŋaʔaŋan* through vowel assimilation as in (22a). In (22b), the second segment *m* of the root *emux* is reduplicated (e.g., *emux* (*ʔemux*) > *mumu-ʔemux* > *mume-ʔemux*).

(22) Ochiai (2016:69)

     a. *aŋan* (*ʔaŋan*) "take"
       muŋa-ʔaŋan "take each other"
     b. *emux* (*ʔemux*) "embrace"
       mume-ʔemux "embrace each other"

3.2   Further description of *mVCV-/pVCV-*

The reciprocal prefix *mVCV-/pVCV-* is quite productive as it can attach to verbs when the action is understandable and has mutual meaning in Seediq culture. The verbs that can be attached with the reciprocal prefix *mVCV-/pVCV-* are shown in the middle column of Table 2. The table includes the forms in (20) and (21). Some forms are from Ochiai (2016:69).

Notably, these verbs with the reciprocal prefix *mVCV-/pVCV-* have corresponding actor voice forms with the infix <um>. In other words, they have transitive verb forms. The transitive verbs are shown in the right column in Table 2. The transitive counterparts here show the actor voice in the present tense form, which is attached with the infix <um>. The infix, however, undergoes some phonological changes: besides <um>, it appears as <m> before a vowel initial root, an <um> replaces *b* in a root that begins with *b*, or it is inapplicable to a historically reduplicated root. These phonological changes are mentioned in the footnote. A typical example of reciprocal construction is in (23), which is an indicative sentence. In this case, the prefix *mVCV-* is used: the prefix *pVCV-* is inappropriate in this sentence as in (24).[7]

---

[7] However, the author has observed that a consultant in the 50s (younger generation of native speakers) tends to use the *pVCV-* form for both indicative and non-indicative sentences.

Table. 2: Verbs with the reciprocal prefix *mVCV-/pVCV-*

Root	Reciprocal	Transitive
aŋan "take"	*muŋa-ʔaŋan*	*<m>aŋan*[8]
emux "embrace"	*mume-ʔemux*	*<m>emux*
bari "buy"	*mubu-bari*	*<m>ari*[9]
ciyuk "respond"	*mucu-ciyuk*	*c<um>iyuk*
dayo "help"	*mudu-dayo*	*d<um>ayo*
beebu "hit"	*mubu-beebu*	*beebu*[10]
doi "grasp"	*mudo-doi*	*d<um>oi*
gatuk "peck"	*mugu-gatuk*	*g<um>atuk*
hetun "obstruct"	*muhu-hetun*	*h<um>etun*
lawa "call"	*mulu-lawa*	*l<um>awa*
qapah "stick"	*muqu-qapah*	*q<um>apah*
qita "see"	*muqu-qita*	*q<um>ita*
seli "gather"	*musu-seli*	*s<um>eli*
talaŋ "compete"	*mutu-talaŋ*	*t<um>alaŋ*[11]
taus "beckon"	*mutu-taus*	*t<um>aus*
teluŋ "touch"	*mutu-teluŋ*	*t<um>eluŋ*
tuŋuh "kiss"	*mutu-tuŋuh*	*t<um>uguh*

(23) **mudu**-*dayo* deheya.
    REC-help   3PL.PRON
    "They help each other."

(24) ***pudu**-*dayo* deheya.
    REC-help   3PL.PRON
    "They help each other."

If a sentence is non-indicative, the prefix *pVCV-* is used. A non-indicative sentence in Paran Seediq includes imperative[12], prohibitive, and negative constructions. The neg-

---

[8] If a root is vowel initial, the infix *<um>* is attached before the root and the vowel *u* is deleted (as in *<m>aŋan* "take" and *<m>emux* "embrace"). The expected forms, such as *umaŋan* or *umemux*, are excluded due to phonotactics. As Yang (1976) explained, a vowel initial antepenultimate syllable, that is, V.CV.CV(C) is not allowed in Paran Seediq, so the antepenultimate vowel is deleted.

[9] Here, nasal substitution, is observed. For a root that has initial labial stops *p* and *b*, the labial stops are substituted with a nasal *m* when it is attached with the infix *<um>* (Ochiai 2016:126-127).

[10] The root is historically reduplicated form. Of the two *b*'s, the first is reduplicated (Ochiai 2016:110). A historically reduplicated root is inapplicable to affixation with the actor voice present marker *<um>*.

[11] This form is exceptional in that it is used as an intransitive verb regardless of the infix *<um>* which indicates high transitivity. The verb itself has meanings such as "try," "taste," "compete," and "run." However, if attached with an actor voice marker *<um>*, *t<um>alaŋ* solely means "run." If attached with an undergoer voice marker, it means "try."

[12] Undergoer voices have hortative as well as imperative forms.

ative construction for (23) is presented in (25); however, the sentence is unacceptable if *mVCV-* is used instead, as in (26).

(25) *ini* **pudu**-*dayo* deheya.
     NEG REC-help 3PL.PRON
     "They do not help each other."

(26) *ini **mudu**-*dayo* deheya.
     NEG REC-help 3PL.PRON
     "They do not help each other."

In (23) and (25), the participants of helping each other are either actors or patients. There is no object in the reciprocal construction and the subject needs to be plural. It can be a plural form of a pronoun such as *deheya* (3PL.PRON), personal names in a conjunction such as *Mona daha Obiŋ* (Mona CONJ Obiŋ) "Mona and Obiŋ," or a word that has plural connotations (e.g., *seediq* "a person" or "people").[13]

Sometimes two participants are solely actors who do something to an object. In this case, an object appears in a reciprocal construction. In (27), a participant is engaged in taking another participant's louse; here, the object *quhiŋ* "louse" appears. The two participants' actions are mutual as they affect each other's body parts.

(27) **muŋa**-*ʔangan quhiŋ*   *deheya*.
     REC-take   louse.on.head 3PL.PRON
     "They take the louse from each other's heads."

As example (27) is an indicative sentence, the prefix is *mVCV-*. The prefix *pVCV-* is used in a non-indicative sentence (28) with prohibitive construction.

(28) *iya*   **puŋa**-*aŋan quhiŋ*.
     PROH REC-take   louse.on.head
     "Do not take the louse from each other's heads."

The meaning of the reciprocal construction can be collective but it is rare; participants do not affect each other but are engaged in an action together with other participant(s), as shown in (29).

(29) **musu**-*seli* =*ta*   *uyuŋ*   *hacuso*.
     REC-gather =1INC backyard police.box
     "We (inclusive) gather at the backyard of the police box."[14]

As example (29) is an indicative sentence, the prefix is *mVCV-*. A non-indicative counterpart with imperative use is shown in (30) in which the prefix is *pVCV-*.

(30) **pusu**-*seli* =*ta*   *uyuŋ*   *hacuso*.
     REC-gather =1INC backyard police.box
     "Let's gather at the backyard of the police box."

---

[13] Paran Seediq has no marker that distinguishes plurality for common nouns; however, pronouns have a singular/plural distinction.

[14] *hacuso* is a loanword from Japanese, 派出所 (*hashutsusho*).

In the examples of reciprocal construction with collective meaning, (29) and (30), there is no object. If participants are collectively doing something to object or objects, the object can appear in the sentence, as in (31) wherein the object is *weewa* "a girl" or "girls."

(31) **muŋa**-ʔaŋan weewa deheya   waga.
    REC-take   girl   3PL.PRON that
    "They are competing for catching a girl/girls."

This section briefly described reciprocal constructions with the prefix *mVCV-/pVCV-*. The prefix *mVCV-* is used for indicative sentences and *pVCV-* is used for non-indicative sentences. The reciprocal forms of these prefixes have corresponding transitive forms and, depending on the nature of the verb or the action, these reciprocal constructions indicate mutual or collective situations.

From a historical point of viewpoint, Proto-Austronesian reciprocal prefixes were reconstructed by Zeitoun (2002)[15] with *pa-Ca-/*ma-Ca- in which C represented a reduplicated consonant.[16] The pair of reciprocal prefixes in Paran Seediq *mVCV-/pVCV-* is said to be a descendent from Proto-Austronesian; however, in Paran Seediq, the vowels are no longer *a* due to the vowel weakening effect.

4   Reciprocal without reduplication: *mVsV-/pVsV-*

This section proposes that *mVsV-/pVsV-* is another pair of reciprocal prefixes in Paran Seediq. A similar but different form, *sVmV-* was also reported to be a reciprocal marker in Asai (1953). The following subsection first explains why Asai's (1953) reciprocal marker is not used reciprocally.[17]

4.1   Asai's (1953) reciprocal marker *sɯmɯ-*

Asai (1953) stated that there was a reciprocal prefix *sɯmɯ-* and gave the 12 examples shown in Table 3. If the root is used as a noun, the root is marked with [n] by the present author.

---

[15] The author referred to the citation in Ross (2015:336).

[16] Paran Seediq *mVCV-/pVCV-* is also segmentable as *mV-CV-/pV-CV-*.

[17] The glosses in Asai (1953) have been cited here without modification.

Table. 3: Reciprocal forms in Asai (1953)

Root	Reciprocal
pakon	**sɯmɯ**-*paka*
"a thing cut"	"to cut with one another"
telun	**sɯmɯ**-*telun*
"to touch"	"to go to meet someone"
miicu	**sɯmɯ**-*icu*
"to fear"	"to threaten"
hiti	**sɯmɯ**-*hiti*
"behind"	"to leave"
mɯduraq	**sɯmɯ**-*duraq*
"to hunt"	"to run after game"
rai [n]	**sɯmɯ**-*rai*
"a match-maker; a relative"	"to act as a middle-man"
gaða [n]	**sɯmɯ**-*gaða*
"customary laws"	"to break the laws"
ŋaðan [n]	**sɯmɯ**-*ŋaðan*[18]
"name"	"to give a name to"
ratut [n]	**sɯmɯ**-*ratut*
"a farm"	"to observe the ritual for the good growing of the crops"
daŋi [n]	**sɯmɯ**-*daŋi*
"a friend"	"to make one's acquaintance"
kuxul [n]	**sɯmɯ**-*kuxul*
"a delight"	"to have delight in, to be fond of"
birac [n]	**sɯmɯ**-*birac*
"ear"	"to make a noise"

Based on the author's data, some of Asai's glosses require correction. For example, Asai's glosses included a reciprocal meaning only for *sɯmɯ-paka* "to cut with one another"; however, the corresponding form in modern Paran Seediq is *s<um>ipaq* "to murder, kill." This form lacks not only reciprocal meaning but also includes a the marker for high transitivity; the actor voice present tense <um>. By way of illustration, a transitive sentence with *s<um>ipaq* "to murder, kill" is in (32).

(32) *s<um>ipaq* =ta *babuy*.
    kill<AV.PRES> =1INC pig
    "Let's kill a pig."

Further, Asai used the root *pakon*, which corresponds to *paq-un* (kill-UVP.PRES) in modern Paran Seediq with the root of this verb being *sipaq*; however, this verb requires a reduplicative prefix to obtain the reciprocal form (e.g., *musu-sipaq*[19] "murder

---

[18] This form, *sumu-ŋayan* in modern Paran Seediq, means "insult."

[19] The prefix is *musu-* and the root initial consonant is *s* in this form. There are two possible origins of the prefix: one is the reciprocal with reduplication *mVCV-* and the other is *mVsV-*; however, the reduplicated form is chosen here as the reciprocal verb has the transitive form

each other").

The second item *suɯmuɯ-telun* "to go to meet someone" appears to have a reciprocal meaning. The corresponding modern Paran Seediq is *s<um>uteluŋ*, with this verb meaning that an actor goes to a certain place to meet someone and then take them to a village or a house. This verb form is used transitively as in (33).

(33) *s<um>uteruŋ*   =ku   *Lubi hako.*
     meet<AV.PRES> =1SG.NOM Lubi bridge
     "I will meet Lubi at the bridge (and bring her to the house)."

Asai also glosses the root *telun* with "touch"; however, the root and its gloss should be corrected to *teruŋ* "meet" as there is a minimal pair with a different consonant, *teluŋ* "touch."

Three forms (from the third to the fifth item in the table) are transitive verbs marked with the infix <um>. The corresponding forms in modern Paran Seediq are *s<um>i-ʔicu* "threaten," *s<um>u-hiti* "leave something behind," and *s<um>u-duriq* "drive (animals)" respectively. These transitive forms have the intransitive counterparts, *mi-ʔicu* "fear," *mu-hiti* "fall behind," and *qu-duriq* "escape," respectively. Example (34) shows the transitive usage of *sumuduiq* (also in Table 3) in which the subject is *huliŋ* "dog" and the patient is *boyak* "boar."

(34) *ga*   *s<um>uduriq*   *boyak huliŋ.*
     PROG chase<AV.PRES> boar   dog
     "Dogs are chasing a boar."

Next, seven forms are derived from a noun. In Paran Seediq, the prefix used for denominal derivation is *su-*. In several cases, only *su-* attaches to a nominal root but sometimes the infix <um> is further attached, becoming *s<um>u-*. Asai's gloss did not hint at the possible reciprocity in these denominal verbs and in modern Paran Seediq they are not used as reciprocal verbs.

To sum up, Asai's examples with *suɯmuɯ-* in (3) are either transitive verbs or denominal verbs.

4.2 Asai's (1953) form similar to a reciprocal marker

Asai reported the correct reciprocal prefix but gave it a different meaning. Asai (1953:36) observed that there was a prefix *muɯsuɯ-*, which, when added to nouns and active verbs, means "to attain to," "to change into," and gave the three examples shown in (35).

(35)   a. **musu**-*muqedil* "a married couple"
        (*muqedil* "a woman, a wife")
    b. **musu**-*dadal* "brothers or sisters having the same father but different mother; cousins of the same sex, (because they cannot marry one another, that is, they are in the relation of friends.)"
        (*dadal*[20] "a friend")

---

     as in *s<um>ipaq* "murder." The correspondence with the transitive verbs is characteristic of the reciprocal forms with *mVCV-/pVCV-*.

[20] This form in modern Paran Seediq is *dadan*, which it means "a relative."

    c. **musu**-*telun* "to meet"
      (*telun* "to touch")

Examples (35a-35b) have a meaning of reciprocal relationship. Example (35c) appear to refer to a mutual action, with the prefix *mVsV*- being a marker of reciprocity.

4.3 The reciprocal prefix *mVsV-/pVsV-*

Verbs with *mVsV-/pVsV*- denote a mutual situation as shown in Table 4, in which only the *mVsV*- form is shown. Most examples in Table 4 and Table 6 were taken from Ochiai (2016:67-68). Some of the verbs are derived from a nominal root, which is indicated by [n].

Similar to the distinction for *mVCV*- and *pVCV*- (Section 3), the prefix *mVsV*- is used in indicative sentences and the prefix *pVsV*- is used in non-indicative sentences. A pair of examples shows this pattern, where example (36a) is an indicative sentence and example (36b) is a non-indicative sentence (here, a negative construction).

Table. 4: *mVsV-/pVsV*- forms

Root	Reciprocal	Transitive
barux	**musu**-*barux* "exchange labor"	---
daliŋ	**musu**-*daliŋ* "be near each other"	---
dehu	**musu**-*dehu* "agree, be engaged"	---
edan	**muse**-*ʔedan* "stick to each other"	---
liwaŋ	**musu**-*liwaŋ* "be in an adulterous relationship"	---
teheya	**musu**-*teheya* "be far from each other"	---
teruŋ	**musu**-*teruŋ* "marry, meet"	(*s<um>uteruŋ* "meet")
tuʔuqu	**musu**-*tuʔuqu* "misunderstand each other"	---
waye	**musu**-*waye* "be separated, to say good-bye"	---
bais [n] "window"	**musu**-*bais* "be in the relationship with neighbors"	---
bale [n] "truth"	**musu**-*bale* "be on good terms with each other"	---
kuxun [n] "feeling"	**musu**-*kuxun* "love each other"	*s<um>ukuxun* "like, be fond of"
muqedin [n] "woman"	**musu**-*muqedin* "fight to gain a woman"	---
rai [n] "in-law"	**musu**-*rai* "be in the relationship by marriage"	*s<um>u-rai* "propose"
sipo [n] "across river"	**musu**-*sipo* "be on the two sides of a river"	---

(36) a. ***musu****-tuʔuqu deheya.*
     REC-mistake 3PL.PRON
     "They misunderstand each other."

    b. *ini* ***pusu****-tuʔuqu deheya.*
     NEG REC-mistake 3PL.PRON
     "They did not misunderstand each other."

Reciprocal verbs can be used adverbially, preceding a main vowel as in (37). The prefix used for this purpose is *mVsV-*.

(37) ***musu****-daliŋ me-ʔepah.*
    REC-near   AV.PRES-work
    "They work side by side in the field."[21]

The differerence between *mVsV-/pVsV-* and *mVCV-/pVCV-* is that most verbs derived using *mVsV-/pVsV-* do not have transitive forms, so for these roots, there is no form with the infix <um>. For example, the root *barux* does not have *b<um>arux* (or *<m>arux* if nasal substitution applies). For the root *bale*, there is no form such as *b<um>ale* (or *<m>ale* if nasal substitution applies). For the root *teluŋ*, there is the form *s<um>uteruŋ*, as mentioned in Section 4.1; the transitive form means "to meet someone at a place and bring that person to another place." The *mVsV-/pVsV-* form means that more than two people meet accidentally or by appointment. The *mVsV-/pVsV-* form also means "to marry," which appears to be an extension of the meaning "to meet." The forms *musu-teruŋ/pusu-teruŋ* and *s<um>teruŋ* refers to slightly different situations in terms of mutuality and transitivity (therefore, the transitive from in the parenthesis).

Other roots which has transitive forms are *s<um>u-kuxun* "to like" and *s<um>u-rai* "to propose." The reciprocal and transitive examples of the root *kuxun* are presented in (38).

(38) a. ***musu****-kusun Mona daha Obiŋ.*
     REC-like   Mona CONJ Obiŋ
     "Mona and Obiŋ like each other."

    b. *s<****um****>ukuxun =ku   Mona.*
     like<AV.PRES> =1SG.NOM Mona
     "I like Mona."

Therefore, there are two pairs of prefixes, the reciprocal with reduplication *mVCV-/pVCV-* (Section 3) and *mVsV-/pVsV-*, with the choice of the latter pair being lexically determined and nonproductive. The root in Table 4 is unable to take the reciprocal prefix with reduplication *mVCV-/pVCV-*. There are no forms such as *mu-bu-barux "to exchange labor" or *mu-du-daliŋ "to be near each other."

In addition, the roots in Table 4 have some restrictions. Roots other than those used as nouns cannot be used indepenently. For example, *barux* cannot appear by itself and its meaning is somewhat obscure; however, the form is complete when it is attached to a reciprocal prefix. Although *musubarux* "exchange labor" can be separated into two parts:

---

[21] If there is no pronoun in an utterance, the subject is understood to be third person, unless the topic is specified in the context.

the prefix *mVsV-* and the root *barux*: together, they form one meaning unit.[22]

The exceptions are *tuʔuqu* "to misunderstand each other" and *teheya* "to be far from each other," which can stand alone as verbs as in (39) and (40).

(39) *tu-uqu   hari   seediq gaga.*
NONV-mistake more.or.less that
"That person makes mistakes."

(40) *te-heya   riyuŋ Paran.*
NONV-far very   Paran
"Paran village is very far."

However, here, it is suggested that these two words are derived from smaller roots, *uqu* and *heya*, respectively as these are typical two-syllable roots and, hence, are more suitable in terms of syllable structure, with the remaining parts *tu* in *tuʔuqu* and *te* in *teheya* being non-volitional prefixes. Ochiai (2016) proposed that the Paran Seediq non-volitional prefix is *tu-*. Therefore, the root *uqu* is attached to this prefix and a glottal stop is inserted phonetically before the root initial vowel. The root *uqu* also appears without any prefix in interjections – *uqu =naq* (mistake =self) 'leave it, give it up, never mind,' and this root has another derivation *qunu-ʔuqu* "mistake (verb)."

When the root *heya* is prefixed with *tu-*, the vowel in the prefix becomes *e* due to regressive vowel assimilation triggered by the glottal consonant *h*. The root *heya* is possibly related to *heya* (3SG.PRON) "he, she, that person." If so, the root itself was originally a noun and not a non-nominal root. In short, most roots in Table 4 cannot be used independently except for special cases; therefore, they need the prefix *mVsV-/pVsV-*.

Further, the meaning derived using *mVsV-/pVsV-* appears to belong to a certain semantic class. Most examples in Table 4 share a similarity with lexical reciprocals (Section 1.1). Table 5 shows the semantic categories for the lexical reciprocals and the corresponding Paran Seediq forms with *mVsV-/pVsV-*.

---

[22] For *edan* and *teruŋ*, a prefix other than a reciporcal is also observed: *edan* has *kuse-ʔedan* "a lump [n]," *teruŋ* has *s<um>uteruŋ* "meet."

Table. 5: Lexical reciprocals and similarity in *mVsV-/pVsV-* forms

    1. Social actions
       musu-dehu "agree, be engaged"
       musu-teruŋ "marry, meet"
    2. Competitions
       musu-muqedin "fight to get a woman"
    3. Joint actions
       musu-bale "be on good terms to each other"
    4. Connection
       muse-ʔedan "stick to each other"
    5. Division
       musu-waye "be separated"
    6. Relations of (non-)identity
       ---
    7. Spatial relations
       musu-bais "be in a relationship with neighbors"
       musu-daliŋ "be near each other"
       musu-sipo "be on the two sides of a river"
       musu-teheya "be far from each other"
    8. Relationship nouns
       Section 4.4

Nonetheless, these examples are not lexical reciprocals, as in a lexical reciprocal, a word does not undergo derivation by definition. The examples in Table 4 are derived using the reciprocal prefix *mVsV-/pVsV-*. These forms are lexically determined and small in number compared to another pair of reciprocal prefixes, *mVCV-/pVCV-*.

4.4 The reciprocal prefix *mVsV-/pVsV-*: Derivations with kin-terms

Some of the reciprocal verbs with *mVsV-/pVsV-* are derived from nouns as in Table 4. There are more examples of noun-derived reciprocals with *mVsV-/pVsV-*, which form a special semantic class, kin-terms, which are similar to Lichtenberk's (2000) "noun-based derivations" in Oceanic languages (Section 1.2). In addition to kin-terms, relational nouns such as "friend" and "enemy" belong to this class. Table 6 gives a range of examples. These are similar to "relationship nouns" of lexical reciprocals (Table 5). The *mVsV-/pVsV-* forms could be seen as a special kind of lexical reciprocal even though they are attached with a prefix.

Table. 6: Kin-term derived *mVsV-/pVsV-* forms

Root	Reciprocal
ane [n]	**musa**-*ane*
"a man's sister's husband"	"be *ane*s to each other"
or a man's wife's brother"	
dadan [n]	**musu**-*dadan*
"relative"	"be relatives to each other"
hulumadan [n]	**musu**-*hulumadan*
"sibling of the opposite sex"	"be siblings of the opposite sex to each other"
mawan [n]	**musu**-*mawan*
"man's wife's sister's husband"	"be in *mawan*-relation"
daŋi [n]	**musu**-*daŋi*
"friend"	"be friends to each other,"
	"to hold each other's shoulder"
pais [n]	**musu**-*pais*
"enemy"	"be enemies with each other"
laqi [n]	**musu**-*laqi*
"child"	'be in a parent/child relationship'
suwai [n]	**mutu**-*suwai*[23]
"younger sibling"	"be in a relationship with siblings"
qedin [n]	**musu**-*qedin*
"wife"	'be in a husband/wife relationship'

The reciprocal forms derived from these kin-terms indicate a relationship between two people. The kin-terms are divided into two categories: bidirectional relationships and unidirectional relationships. In bidirectional relationships, the kin-term denotes the relationship of one party to the other and the same kin-term also denotes the opposite direction. These bidirectional kin-terms are *ane* "a man's sister's husband or a man's wife's brother," *dadan* "relative," *hulumadan* "sibling of the opposite sex," *mawan* "man's wife's sister's husband," *daŋi* "friend," and *pais* "enemy."

For example, if a man has a sister, he calls his sister's husband *ane* and the sister's husband calls his wife's brother *ane*. If the man wants to express that "He is my *ane*," the sentence (41) is used.

(41) *ane*   =*mu*   *heya.*
    male.relative =1SG.GEN 3SG.PRON
    "He is my (male person) sister's husband" or "He is my (male person) wife's brother."

The example (41) does not have a reciprocal construction. In this structure, the subject is the singular *heya* (3SG.PRON); however, a reciprocal construction needs a plural subject. In a non-reciprocal construction such as (41), the relational noun *ane* is not attached with reciprocal prefix; else, it would be ungrammatical (42).

---

[23] This form seems to have undergone a sporadic change of the segment *s* into *t*.

(42) *__musa__-ʔane　　　=mu　　　heya.
　　　REC-male.relative =1SG.GEN 3SG.PRON
　　　"He is my (male person) sister's husband" or "He is my (male person) wife's brother."

If the subject includes both sides, a prefixed form must be used. The structure (43) is used to express "we are *ane*'s."

(43) __musa__-ʔane yami　　　daha.
　　　REC-ane　　1EXC.PRON two
　　　"We two are *ane*s."

If a kin-term is used without the prefix in (43), the sentence is unacceptable.

(44) *ane yami　　　daha.
　　　ane　1EXC.PRON two
　　　"We two are *ane*s."

The other type of kin-terms is unidirectional. The kin-term used for reciprocal derivation is the word one side calls the other side; however, the same word cannot be used inversely; for example, *laqi* "child" is a word parents call their children not vice versa. Other unidirectional kin-terms are *suwai* "younger sibling" and *qedin* "wife." For relationships such as parent and child, elder sibling and younger sibling, and husband and wife, Paran Seediq chooses the female side, or the younger side for the relational derivation.

The reciprocal constructions for a unidirectional kin-term is in (45). Here, as the sentence is indicative, the prefix *mVsV-* is used as the prefix *pVsV-* is inappropriate as in (46).

(45) __musu__-qedin yami　　　daha.
　　　REC-wife　　1EXC.PRON two
　　　"We two are husband and wife."

(46) *__pusu__-qedin yami　　　daha.
　　　REC-wife　　1EXC.PRON two
　　　"We two are husband and wife."

If a sentence is non-indicative, *pVsV-* is used instead of *mVsV-* as in (48). Example (47) shows the negative construction with *pVsV-*. In (48), the prefix is replaced by *mVsV-*, which is unacceptable.

(47) *ini*　__pusu__-qedin yami　　　daha.
　　　NEG REC-wife　　1EXC.PRON two
　　　"We two are not husband and wife."

(48) *ini __musu__-qedin yami　　　daha.
　　　NEG REC-wife　　1EXC.PRON two
　　　"We two are not husband and wife."

In (47), *pusu-qedin* is preceded by the negator *ini*, which means that *pusu-qedin* is

a verb. However, these reciprocal expressions with *mVsV-*/*pVsV-* also show a nominal feature. This is evidenced by the co-occurrence with the nominal negator *uxe*. Example (49) shows that not only *ini* in (47) but also *uxe* can be used for the negative constructions; however, the verb form after *uxe* is *mVsV-*, not *pVsV-* (50).

(49) *uxe* **musu**-*qedin yami   daha.*
     NEG REC-wife   1EXC.PRON two
     "We two are not husband and wife."

(50) **uxe* **pusu**-*qedin yami   daha.*
     NEG REC-wife   1EXC.PRON two
     "We two are not husband and wife."

The two negative constructions, (47) and (49), however, slightly differ in meaning. If the negator is *uxe* as in (49), the sentence means that the two people are not husband and wife; if the negator is *ini*, the sentence implies that the two people were going to marry and become husband and wife, but did not in the end.

Similarly, some reciprocal forms in Table 4 are used as nouns. These include *musu-bais* "be next door to each other," *musu-sipo* "be on the two sides of a river," *musu-daliŋ* "be near each other," *musu-teheya* "be far from each other," and *musu-liwaŋ* "be in an adulterous relationship."[24] These words are characterized by spatial or social relationships. Examples of the root *bais* [n] "window" are given below: (51a) is an affirmative sentence, (51b) is a negative construction with *ini*, and (51c) is a negative construction with *uxe*. Example (51b) shows the verbal usage and (51c) shows the nominal usage.[25]

(51) a. *musu-bais   sapah =miyan.*
       REC-window house =1EXC
       "We are next door."
    b. **ini** *pusu-bais   sapah =miyan.*
       NEG REC-window house =1EXC
       "We are not next door."
    c. **uxe** *musu-bais   sapah =miyan.*
       NEG REC-window house =1EXC
       "We are not next door."

5 Interim summary: Two reciprocals

The similarities and differences between the two pairs of reciprocal prefixes, (i) *mCVC-*/*pCVC-* and (ii) *mVsV-*/*pVsV-* are summarized in Table 7.

---

[24] It appears that *musubarux* "exchange labor" is used as a noun as well as a verb. My consultant accepted constructions with the negators *uxe* (nominal) and *ini* (verbal). However, he mentioned this word was not usually used with negative constructions; the negative constructions are understandable but he was not sure whether it was the correct usage.

[25] For the reciprocal forms with both verbal and nominal usage, it is difficult to decide which usage is employed unless the negators appear before them. Other reciprocal forms with *mVsV-*/*pVsV-* are verbs, so the author assumes that the default word class are verbs.

Table. 7: The two reciprocal pairs

	(i) *mCVC-/pCVC-*	(ii) *mVsV-/pVsV-*
m/p pairing	✓	✓
Productivity	high	low
Transitive pair	✓	---
Kin-term derivation	---	✓
Typological type	grammatical	lexical

Both reciprocals are in common in that they have *m-* forms and *p-* forms; the former is used indicatively, the latter non-indicatively. However, the two reciprocals differ in productivity, the pairing with transitive verbs, derivation with kin-terms and typological type. The prefix (i) *mCVC-/pCVC-* is a typical reciprocal marker. Derived reciprocals have the transitive forms derived from the same root and the prefix attaches to verbs related to mutual situations. The prefix (ii) *mVsV-/pVsV-*, on the contrary, is an atypical reciprocal as the forms derived by this prefix do not have transitive verbs derived from the same root, the root (other than nominal roots) cannot stand alone, and the affixation is unproductive and lexically determined. Roots need the prefix (ii) *mVsV-/pVsV-* to become full verbs and the derived verbs form one meaning unit. It is characteristic of (ii) *mVsV-/pVsV-* to attach to kin-terms for deriving a relational meaning. The roots attached with (ii) *mVsV-/pVsV-* show a limited semantic class range. This semantic class is distinctive of a lexical reciprocal (a reciprocal without a verbal marker) from a typological viewpoint. Although these forms in Paran Seediq are attached with (ii) *mVsV-/pVsV-*, they could be said to be a special kind of lexical reciprocal.

In the remainder of this paper, the prefix (ii) *mVsV-/pVsV-* is discussed from a historical perspective. Section 6 investigates this prefix in Taroko Seediq, the other Seediq dialect, followed by an analysis of Atayal in Section 7.

6   The reciprocal prefix *mVsV-/pVsV-* in Taroko Seediq

Paran Seediq has a pair of reciprocal prefixes *mVsV-/pVsV-* (Section 4) and there is a cognate prefix in Taroko Seediq. Tsukida (2009:259-260) stated that *məsə-* and its imperative/connegative form *pəsə-* denote reciprocity in Taroko Seediq (the pre-stress vowels are also weakened). In Taroko Seediq, the schwa is chosen to show weakened vowel, so the prefix can be rewritten as *mVsV-/pVsV-*, wherein V represents a weakened vowel.

Tsukida noted that the prefix *mVsV-/pVsV-* attached to kinship terms such as *daɲi* "fiancé" or *anay* "son-in-law." Tsukida's examples are given in (52-53).[26]

(52) Tsukida (2009:259)
   məsə-*daɲi ka   Lawkiŋ   ni   Rubiq.*
   REC-fiancé SUB Lawking(male.name) CONJ Rubiq(female.name)
   "Lawkiŋ and Rubiq are fiancés (to each other)."

(53) Tsukida (2009:260)

---

[26] The glosses have been slightly modified by the author.

məsə-*dalih ka   sapah =daha.*
REC-near   SUB house =3PL.GEN
"Their houses are near to one another"

Tsukida (2009:291, 304) also gives another expression for a relational noun as in (54), in which a sporadic sound change from *s* to *n* seems to have occurred in the prefix.[27] This form seems to be used as a kind of vocative expression for greetings in this sentence.

(54) Tsukida (2009:291)
    *kana ita   **mən**-səwayi*
    all   1INC brothers.and.sisters
    "All of us brothers and sisters."

More examples identified in the Taroko Seediq dictionary (Pecoraro 1977) are listed in Table 8 with slight modifications. The original transcriptions are in parentheses.

Table. 8: Examples with *məsə*- from Pecoraro (1977)

Root	Reciprocal
barux (sbalox[28])	**məsə**-*barux* (msbalox)
"change a place"	"come and go, respond to each other"
daŋi (dangi)	**məsə**-*daŋi* (msdangi)
"fiancé/fiancée"	"meet, have a friendship, engage"
dawin (dawin)	**məsə**-*dawin* (msdawin)
"friend"	"hold tightly by the arm or neck"
	"show friendship"
duŋus (dungus)	**məsə**-*duŋus* (msdungus)
"evident, normal, suitable, decent, agree"	"agree, conscientious, harmonized"
qapah (qapax)	**məsə**-*qapah* (msqapah)
"stick"	"adhesive"
wayai (swayai[29])	**məsə**-*wayai* (mswayai)
"separate"	"be separated"
lutut (lutut)	**məsə**-*lutut* (mslutut)
"relative"	"be a relative"
manu (manu)	**məsə**-*manu* (msmanu)
"what"	"in what relationship with each other"
bəlaiq (blaeq)	**məsə**-*sə*-*bəlaiq* (mssblaeq)
"good"	"do something good for each other"
kuxul (kuxul)	**məsə**-*sə*-*kuxul* (msskuxul)
"feeling, joy"	"love each other"
ləpoŋ (l'pong)	**məsə**-*sə*-*ləpoŋ* (mssl'pong)

---

[27] The reciprocal form corresponds to *mutu-suwai* "be in a relationship with siblings" in Paran Seediq.

[28] Pecoraro designated *səbarux* as the root. However, Paran Seediq (e.g., *kun-barux* "borrow") shows that the root is *barux*.

[29] Pecoraro designated *səwayay* as the root. However, Paran Sediq has the cognate *waye* as the root. Therefore, I considered the root in Taroko to also be *wayay*.

"friend"	"show friendship to each other"
səpoŋ (spoŋ)	**məsə**-*sə-səpoŋ* (msspoŋ)
"weigh, measure"	"compete with each other"
riyux (sliyux[30])	**məsə**-*sə-riyux* (mssliyux)
"change"	"exchange"
təruŋ (st'long[31])	**məsə**-*sə-təruŋ* (msst'long)
"meet, marry"	"meet, marry"

These forms with *mVsV-/pVsV-* in Table 8 can be said to represent reciprocal meanings. Of these forms, the last six have the prefix *məsə-sə-* instead of *məsə-* (*məsə-sə-bəlaiq* "do good to each other," *məsə-sə-kuxul* "love each other," *məsə-sə-ləpoŋ* "show friendship to each other," *məsə-sə-səpoŋ* "compete with each other," *məsə-sə-riyux* "exchange" and *məsə-sə-təruŋ* "meet marry"). In these words, *sə* in the prefix is reduplicated; however, the reason for this is not clear. An example with *məsə-sə-bəlaeq* "do good for each other" is (55)[32].

(55) Pecoraro (1977:23)

   ga   **məsə**-*sə-bəlaiq pax   suxal daha pai   ni   baki   nii.*
   PROG REC-RED-good since past   two   grandmother CONJ grandfather this
   "The old woman and the old man have been taking care of each other for a long time."

Notably, the interrogative *manu* "what" is used as a root. The example using this reciprocal form is (56).

(56) Pecoraro (1977:166)

   məsə-*manu =ta   ka   ita?*
   REC-what   =1INC SUB 1INC.PRON
   "What is the relationship between us?"

In fact, there are more forms with the prefix *mə-sə-* which also seem to indicate reciprocity in Pecoraro (1977). However, as these have the *s* segment as the root initial consonant, it is not clear whether the prefix *məsə-* should be analyzed as a reciprocal prefix with the reduplication (i) *mVCV-/pVCV-* or as the prefix (ii) *mVsV-/pVsV-*. As for (i) *mVCV-/pVCV-* in Taroko Seediq, Tsukida (2009:267) explained that there was a reciprocal pair *mVCV-/pVCV-* that indicates reciprocity and gave an example with the root *dayaw* "to help." The reciprocal forms are *mədə-dayaw* and *pədə-dayaw* "help one another."

The ambiguous examples between (i) *mVCV-/pVCV-* and (ii) *mVCV-/pVCV-* are given in Table 9. In Paran Seediq *mVsV-/pVsV-* forms lack a transitive derivation of the same root (Table 7) with some small exceptions.Therefore, it is supposed that this is also applicable to Taroko Seediq. The reciprocals in Table 9 has transitive forms, which were

---

[30] Pecoraro designated *səriyux* as the root. However, Paran Sediq has the cognate *riyux* as the root. Therefore, I considered the root in Taroko to also be *riyux*.

[31] Pecoraro designated *səəruŋ* as the root. However, Paran Sediq has the cognate *teruŋ* as the root. Therefore, I consider the root in Taroko to also be *teruŋ*.

[32] For Pecoraro's data, the interlinear glosses are added by the present author.

also taken from Pecoraro (1977). Hence, they are considered to belong to a reciprocal prefix with the reduplication (i) *mVCV-/pVCV-*.

Table. 9: *məsə-* and transitive forms in Taroko Seediq

Root	Reciprocal	Transitive
səbu (sbu")	**məsə**-*səbu* (msbu")	*s\<əm>əbu* (smbu")
"throw"	"throw things to each other"	"throw"
səli (sli)	**məsə**-*səli* (mssli)	*s\<əm>li* (smli)
"gather"	"gather all around"	"gather"
sikul (sikul)	**məsə**-*sikul* (mssikul)	*s\<əm>əikul* (smikul)
"shove"	"shove each other"	"shove"
siliŋ (siliŋ)	**məsə**-*siliŋ* (mssiliŋ)	*s\<əm>iliŋ* (smiliŋ)
"ask"	"ask each other"	"ask"
sipaq (sipaq)	**məsə**-*sipaq* (mssipaq)	*s\<əm>ipaq* (smipaq)
"cut off a head"	"cut off each other's head"	"strike"
siyuk (siyuk)	**məsə**-*siyuk* (mssiyuk)	*s\<əm>iyuk* (smiyuk)
"respond"	"respond to each other"	"respond"
sənugul (snugul)	**məsə**-*sənugul* (mssnugul)	*s\<əm>nugul* (smnugul)
"follow"	"follow each other"	"follow"

Next, it is characteristic of Paran Seediq that *mVsV-/pVsV-* attaches to kin-terms including words such as *pais* "enemy" (Table 4). *mVsV-/pVsV-* also attaches to nouns denoting spatial relationship such as *sipo* "the other side of the river" (Table 6). However, Pecoraro's (1970) data shows that Taroko Seediq kin-terms and other nouns are attached with prefixes other than *mVsV-/pVsV-* (Table 10) such as *mə-*, *məkə-*, or *məCə-* (C is a reduplicated consonant).

Table. 10: Taroko Seediq kin-terms with prefixes

Root	Reciprocal
anay (anai)	**mə**-*anay* (m'anai)
"sister's husband"	"be male-relatives to each other"
xəmadan (xmadan)	**mə**-*həmadan* (mxmadan)
"relatives"	"be relatives to each other"
sipaw (sipao)	**məkə**-*sipaw* (mksipao)
the other side	'be face to face'
pais (pais)	**məpə**-*pais* (mppais)
"enemy"	"be enemies to each other"
bais (bais)	**məbə**-*bais* (mbbais)
"partner"	"be companions to each other"

Nonetheless, Tsukida's (2009) description and Pecoraro's data (Table 8) show that Taroko Seediq has a reciprocal prefix *mVsV-/pVsV-*. Therefore, this prefix is reconstructed for Proto-Seediq.

7 The reciprocal prefix *mVsV-/pVsV-* in Atayal

Ogawa and Asai (1953:23) described the function of the prefix *məsə-* in Atayal (Squliq dialect) as reciprocal and gave the two examples in (57).

(57) Ogawa and Asai (1953:23)
   a. *mə-tanaq* "same"
      məsə-*tanaq* "meet each other"
   b. *jaqeh* "bad"
      məsə-*jaqeh* "be on bad terms"

Ogawa (1930:4) discussed the accent and vowel weakening in Atayal, saying that "the accent falls on the second syllable, but the position of the syllable moves backwards if a prefix is attached to a word. In either event, the vowels before the accented syllable usually become schwa."[33]   Vowels in the pre-stress position undergo weakening as in Seediq.
   The Atayal dictionary (Egerod 1980) includes words with the reciprocal meaning which are prefixed with *mVsV-* or *pVsV-*. Table 11 lists these roots and prefixed forms.[34] For each root, either a *m-* form or a *p-* form or both are obtained in the dictionary. The distribution pattern for *m-* forms and *p-* forms in Atayal are not clear from this data.

Table. 11: *mVsV-/pVsV-* forms in Atayal (Egerod 1980)

Root	Reciprocal *m-* form	Reciprocal *p-* form
bayux	**məsə**-*bayux*[35]	
"cooperate"	"exchange labor"	
balay	**məsə**-*balay*	
"true"	"reconcile"	
gluu	**məsə**-*gluu*	
"be with"	"work together"	
yaqeh	**məsə**-*yaqeh*	**pəsə**-*yaqeh*
"bad"	"not agree"	"be on bad terms"
bəlaq	**məsə**-*liq*[36]	**pəsə**-*liq*
"good"	"love each other"	"love each other"
səli	**məsə**-*səli*	**pə**-*səli*[37]
"gather"	"gather"	"gather"
səpuə	**məsə**-*supuŋ*	

---

[33] 『アクセントハ末尾ヨリ第二音節目ニ在ルモ語法変化ノ為メ語尾ヲ附スル場合ニ在リテハ、語尾ノ音節ニ伴ヒ下方ニ移転ス、何レノ場合ニ在リテモアクセントヲ有スル音節ノ前ニ来ル母音ハ普通中性母音ニ転化ス』

[34] There is one additional form that may belong to the reciprocal form, i.e., *pəsiau* "quarrel with each other." Egerod designated the root as *siauʔ* "argue, quarrel." If so, the prefix for reciprocity would be *pə* in this form, instead of *pəsə-*.

[35] Egerod does not provide the meaning for this form; he cites from Ogawa (1931).

[36] The first syllable of the root *bə* is deleted and the final vowel changes into *i*.

[37] This form might have undergone haplology (*pəsə-səli* > *pə-səli*).

"measure"	"compete"	
cəqun	***məsə*-*qun***[38]	***pəsə*-*qun***
"marry"	"marry"	"marry"
siyuk[39]	***məsə*-*siyuk***	
"turn off"	"tell each other"	
alu	***məsə*-*alu***	
"loan"	"loan, borrow"	
səʔinu[40]	***məsə*-*ʔinu***	***pəsə*-*ʔinu***
"miss, long for"	"miss each other"	"miss each other"
səsue	***mətə*-*səsue***[41]	***pətə*-*səsue***
"younger sibling"	"siblings"	"siblings"

As the items in Table 11 show forms with *mVsV-*/*pVsV-* indicate reciprocity. Therefore, Atayal as well as Seediq (both Paran Seediq and Taroko Seediq) have the reciprocal prefix *mVsV-*/*pVsV-*.

8   Interim summary: Reconstruction of **mVsV-*/**pVsV-*

Paran Seediq has *mVsV-*/*pVsV-* "reciprocity," Taroko Seediq has *mVsV-*/*pVsV-* "reciprocity," so Proto-Seediq is reconstructed as **mVsV-*/**pVsV-* "reciprocity." Seediq and Atayal form the Atayalic subgroup, one of the first-order branches of Proto-Austronesian (Blust 1999). Atayal has *mVsV-*/*pVsV-* "reciprocity," so Proto-Atayalic is reconstructed as **mVsV-*/**pVsV-* "reciprocity."

A further question is whether this reciprocal prefix is found in other Formosan languages. According to Zeitoun (2007:107-109), for example, Rukai (Mantauran dialect) uses prefix *maʔa-* and *paʔa-* as a reciprocal relationship marker (e.g., *maʔa-tina* (REC-mother) "mother and daughter"). Atayalic (Atayal and Seediq) and Rukai data alone suggest that the prefix is reconstructable as the Proto-Austronesian **maSa-*, with the second consonant here being **S*, which becomes *s* in Atayalic and *ʔ* in Mantauran Rukai. In addition, Pazih has *maa-* and *paa-* as reciprocal markers (Li and Tsuchida 2001). If it is a cognate, the expected form in Pazih would be *masa-* and *pasa-*. The loss of *s*, however, needs further explanation. More research across Formosan and extra-Formosan (Malayo-Polynesian languages) is required to verify the possibility of these being cognate with the Proto-Atayalic **mVsV-*/**pVsV-*.

Proto-Austronesian reciprocals have been reconstructed with (A) **maCa-*/**paCa-* and (B) **maR(a)-*/**maR(a)-* by Zeitoun (2002) and this paper suggests that (C) **maSa-*/**paSa-* is another possibility if other Formosan data supports this supposition. The distribution of reciprocals (A) (B) and (C) in the Proto-Austronesian (Table 12) needs further

---

[38] The initial syllable of the root is deleted by prefixation.

[39] Egerod designated *ssiuk* [səsiyuk] as the root. However, this has the cognate *ciyuk* "respond" in Paran Seediq.

[40] Egerod gives this as the root; however, the author believes that *(ʔ)inu* is the root, as this root is compatible with a typical two syllable structure in Atayalic languages. The extra element *sə* may be the second syllable of the prefix *mVsV-*/*pVsV-*.

[41] The prefix seems to have undergone sporadic sound change (*məsə-səsue* > *mətə-səsue*). This chage (from *s* to *t*) is similar to the near cognate in Paran Seediq (*musu-suwai* > *mutu-suwai*).

research as it is not plausible that three reciprocal forms synchronically exist in a language. Ross (2015) cited Zeitoun (2002) and stated that (A) is used with a class of verbs called zero verbs (which, in this paper, are the verbs with high transitivity that are typically infixed with <um>) and (B) is used with a class of verbs that Ross (2015) called K verbs (or stative verbs), indicating that (A) and (B) were complementary.

Table. 12: Reciprocal forms in Proto-Austronesian (tentative)

(A)	(B)	(C)
*maCa-/*paCa-*	**maR(a)-/ma-R(a)-*	**maSa-/*paSa-*

In addition, the existence or non-existence of the reciprocals (A), (B) and (C) in each Formosan language needs to be verified. As far as Seediq is concerned, (A) and (C) exist in both the Paran and Taroko dialects. However, there is no (B). However, (B) is seen in a few Formosan languages such as Amis *maro-/mari-* (Ogawa and Asai 1953), Puyuma *mari-* (Ogawa and Asai 1953) and Paiwan *mari-* (Ogawa and Asai 1953). (B) is also wide spread in Malayo-Polynesian subgroups, as it is seen in the examples from Oceanic languages in Section 1.2 wherein the prefix glossed with REC is the descendant of reciprocal (B), as Lichtenberk (2000) noted in passing.

9 Conclusion

The first part of this paper described reciprocals in Paran Seediq. Reciprocals with reduplication (i) *mVCV-/pVCV-* were introduced followed by reciprocals without reduplication (ii) *mVsV-/pVsV-*. Next, the two pairs were compared in terms of the existence of transitive forms, productivity, and the occurrence with kin-terms. The prefix (i) *mVCV-/pVCV-* is a typical reciprocal marker as it is productive and have transitive forms. However, the prefix (ii) *mVsV-/pVsV-* is an atypical reciprocal marker as it is not productive and has no (or few) transitive forms. Roots (that are not originally nouns) are dependent on the prefix as they need the reciprocal marker to be a full verb. It is also a characteristic of (ii) *mVsV-/pVsV-* that it attaches to kin-terms. Forms derived by (ii) *mVsV-/pVsV-* belong to a semantically small set that coincides the lexical reciprocals from a typological perspective. These can be said to be a special kind of lexical reciprocal, although they are attached with prefixes and in this sense, not purely lexical.

The second part of this paper examined (ii) *mVsV-/pVsV-* forms in other dialects and languages closely related to Paran Seediq. Taroko Seediq and Atayal both have *mVsV-/pVsV-*. These three pieces of data reconstruct the Proto-Atayal reciprocal prefix **mVsV-/*pVsV-*.

List of abbreviations

AP: applicative

ART: article

ASP: aspect

CONNEG: connegative

CONJ: conjunctive

CONT: continuative

DU: dual

EXC: exclusive plural

GEN: genitive

IMP: imperative

INC: inclusive plural

MID: middle

NEG: negator

NOM: nominative

NONFUT: non-future

NONV: non-volitional

NPAST: non-past

NS: non-specific aspect

PL: plural

PRES: present

PRON: independent pronoun

PROG: progressive

PROH: prohibitive

REC: reciprocal

RED: reduplication

SG: singular

SUB: subject

TOP: topic

UVP: undergoer voice, patient subject

VT: transitive

1: first person

2: second person

3: third person

Appendix

Table13 shows the cognate sets of forms with *mVsV-/pVsV-* in Paran Seediq or Taroko Seediq presented in this paper. This table only lists the *m*-forms. Taroko Seediq data are from Pecoraro (1977) unless cited otherwise. The cognate sets are shown first, followed by the prefix mismatch between Paran Seediq and Taroko Seediq. Next, the reciprocal forms attested in Paran Seediq are given, followed by those attested in Taroko Seediq.

Table. 13: Cognate sets for **mVsV-* in Seediq

Paran Seediq	Taroko Seediq
musu-*bale*	**məsə**-*bəlaiq*
"be on good terms with each other"	"do good to each other"
musu-*barux*	**məsə**-*barux*
"exchange labor"	"come and go, respond to each other"
musu-*kuxun*	**məsə**-*sə-kuxul*
"love each other"	"love each other"
musu-*seli*	**məsə**-*səli*
"gather"	"gather all around"
musu-*teruŋ*	**məsə**-*sə-teruŋ*
"marry"	"meet, marry"
musu-*waye*	**məsə**-*wayay*
"be separated from each other"	"be separated"
mutu-*suwai*	**mən**-*səwayi* (Tsukida 2009)
"be siblings to each other"	"brothers and sisters"
musu-*daŋ*	**məsə**-*daŋ*
"be friends to each other,"	"be fiancés (to each other) (Tsukida 2009)"
"hold each other's shoulders"	"meet, have a friendship, engage"
musu-*daliŋ*	**məsə**-*dalih*
"be near each other"	"approach one another" (Tsukida 2009)
musa-*ane*	**mə**-*anay*

"be male relatives to each other"	"be male relatives to each other"
musu-*hulumadan*	**mə**-*həmadan*
"be siblings to each other"	"be siblings to each other"
musu-*pais*	**məpə**-*pais*
"be enemies to each other"	"be enemies to each other"
musu-*bais*	**məbə**-*bais*
"be next door to each other"	"be companions to each other"
musu-*sipo*	**məkə**-*sipaw*
"live across rivers"	"be face to face"
musu-*dehu*	---
'agree, be engaged'	
muse-*ʔedan*	---
"stick together"	
musu-*muqedin*	---
"fight to gain a woman"	
musu-*tuʔuqu*	---
"misunderstand each other"	
musu-*mawan*	---
"be male relatives to each other"	
musu-*laqi*	---
"be parent and child"	
musu-*teheya*	---
"be far from each other"	
musu-*liwaŋ*	---
"be in an adulterous relationship"	
---	**məsə**-*dawin*
	"hold tightly to show friendship"
---	**məsə**-*duŋus*
	"agree, conscientious, harmonize"
---	**məsə**-*sə-ləpoŋ*
	"to show friendship to each other"
---	**məsə**-*qapah*
	"adhesive"
---	**məsə**-*manu*
	"in what relationships with each other"

References

Alpatov, Vladimir M. and Vladimir P. Nedjalkov (2007) Reciprocal, sociative and competitiveconstructions in Japanese. In Vladimir P. Nedjalkov (ed.), *Reciprocal constructions*, 1021-1094. Amsterdam: John Benjamins.

Asai, Erin (1953) *The Sedik Language of Formosa.* Kanazawa: Cercle Linguistique de Kanazawa.

Blust, Robert (1999) Subgrouping, Circularity and Extinction: Some Issues in Austronesian Comparative Linguistics. In *Selected Papers from the Eighth Interna-*

tional Conference on Austronesian Linguistics, edited by Elizabeth Zeitoun and Paul Jen-kuei Li, 31-94. Taipei: Institute of Linguistics (Preparatory Office), Academia Sinica.

Blust, Robert (2013) *The Austronesian languages.* [Asia-Pacific Linguistics Open Access Monographs, no.8]. Canberra: Australian National University, Research School of Pacific and Asian Studies.

Chen, Jye-Huei (1996) The Negators in Seediq. Master's thesis, National Tsing Hua University.

Davis, Karen (1997) A grammar of the Hoava language, Western Solomons. Ph.D. diss. University of Auckland.

Dixon, R. M. W. (1988) *A grammar of Boumaa Fijian.* Chicago: University of Chicago Press.

Egerod, Søren (1980) Atayal-English dictionary. Scandinavian Institute of Asian Studies Monograph Series, no. 35, vol. 1-2. London: Curzon.

Haspelmath, Martin (2007) Further remarks on reciprocal constructions. In Vladimir P. Nedjalkov (ed.), *Reciprocal constructions*, 2087-2115. Amsterdam: John Benjamins.

Holmer, Arthur (1996) *A Parametric Grammar of Seediq.* Lund: Lund University Press.

Jones, Alan A. (1993) Towards a lexicogrammar of Mekeo. Ph. D. dissertation, Australian National University.

Li, Paul Jen-kuei and Shigeru Tsuchida (2001) *Pazih dictionary.* Taipei: Institute of Linguistics (Preparatory Office), Academia Sinica.

Lichtenberk, Frantisek (2000) Reciprocals Without Reflexives. In Zygmunt Frajzyngier and Traci S. Curl (eds.) *Reciprocals: Forms and Functions*, 31-62. Amsterdam: John Benjamins.

Milner, George B. (1972) *Fijian grammar.* Suva, Fiji: Government Press.

Moyse-Faurie, Claire (2007) Reciprocal, sociative, middle, and iterative constructions in East Futunan. In Nedjalkov Vladimir P. (ed.) *Reciprocal Constructions*, 1511-1543. Amsterdam: John Benjamins.

Ochiai, Izumi (2016) Sedekkugo Paran hōgen no bunpō kijutsu to hiishisei settouji no hikaku gengogakuteki kenkyū [A Descriptive Grammar of Paran Seediq and a Comparative Study of Non-volitional Prefix], Ph. D dissertation, Kyoto University.

Ogawa, Naoyoshi (1931) *Atayaru gosyū* [Atayal Vocabulary]. Taihoku: Government of Taiwan.

Ogawa, Naoyoshi and Asai Erin (1935) *The Myths and Traditions of the Formosan Native Tribes.* Taipei: Taihoku Imperial University.

Pecoraro, Ferdinando (1977) *Essai de Dictionnaire Taroko-Français. Cahier d'Archipel 7.* Paris: Société pour l'Etude et la Connaissance du Monde Insulindien.

Ross, Malcolm (2015) Reconstructing Proto Austronesian verb classes. *Language and Linguistics* 16(3): 279-345.

Schütz, Albert J. (1985) *The Fijian language.* Honolulu: University of Hawaii Press.

Tsukida, Naomi (2009) Sedekkugo (Taiwan) no bunpō [A grammar of Seediq (Taiwan)]. Ph.D dissertation, The University of Tokyo.

Yang, Hsiu-fang (1976) The Phonological Structure of the Paran Dialect of Seediq. *Bulletin of the Institute of History and Philology*, Academia Sinica 47: 611-706.

Zeitoun, Elizabeth (2002)   Reciprocals in the Formosan languages: a preliminary study. Paper presented at the Nineth International Conference on Austronesian Linguistics (ICAL-9), January 8-11, 2002. Canberra: The Australian National University.

Zeitoun, Elizabeth (2007)   *A grammar of Mantauran (Rukai).* Taipei: Institute of Linguistics, Academia Sinica.

Zeitoun, Elizabeth, Tai-hwa Chu, Lalo a tahesh kayabaybaw (2015)   *A Study of Saisiyat Morphology.* Honolulu: University of Hawaiʻi Press.

セデック語の相互形とその歴史的背景

落合　いずみ

要旨

　　本稿前半はセデック語パラン方言（オーストロネシア語族アタヤル語群）の相互形を記述する。先行研究において報告されている相互形は *mCVC-/pVCV-* であった。これは語根の初頭子音の重複を取り入れた接頭辞である。本稿ではこの接頭辞が類型論的に見ても典型的な相互形標識であることを述べる。しかし、セデック語パラン方言にはもう一つ相互形が存在する。これは *mVsV-/pVsV-* という形式であり、親族名称に付加することなどが主だった特徴である。この接頭辞が付加する語の数は少なく、この接頭辞を持つ形式が表す意味も限られた範囲のものである。この意味範疇は、類型論的に言えば語彙的相互形と重なる部分が多い。セデック語パラン方言においては接頭辞が付加しているため完全に語彙的とは言えないが、語彙的相互形の特殊な部類として含めることができるだろう。本稿後半ではこの接頭辞 *mVsV-/pVsV-* がセデック語タロコ方言とアタヤル語 (セデック語同様アタヤル語群に属する言語) にも見られることを述べ、アタヤル語群祖形として **mVsV-/*pVsV-* を再建する。

キーワード

　　台湾オーストロネシア諸語　セデック語　アタヤル語　相互形　歴史言語学