Noun Phrase Conjunction in Three Puyuma Dialects

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This paper examines noun phrase conjunction in three Puyuma dialects spoken in Nanwang, Katripul, and Tamalakaw villages. In each dialect, there is one strategy that only appears in noun phrase (NP) conjunction (e.g. *kay* in Nanwang, *za+i/na* in Katripul, inclusory pronouns in Tamalakaw) and one that is also used in clausal and sentential conjunction in addition to NP conjunction (e.g. *aw* in Nanwang and *zi* in Katripul and Tamalakaw). Based on their asymmetric properties when occurring in reciprocal vs. non-reciprocal constructions, the paper shows that *kay* in Nanwang and *za+i/na* in Katripul originally encoded a comitative meaning and are now in the process of being grammaticalized to mark coordination. On the other hand, *aw* and *zi* being used to mark NP conjunction tell a different story. By observing and comparing their occurrence in different types of texts, we suggest that *aw* and *zi* originally conjoined clauses and their usage in NP conjunction is a later development out of the need for literary clarity.

Key words: Formosan, Puyuma, noun phrase conjunction, comitative, grammaticalization, literacy

1. Introduction

This study deals with conjunctive strategies in three Puyuma dialects (Nanwang, Katripul and Tamalakaw). The geographical location of the Puyuma villages is given in Map 1.

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In this paper, I shall only focus on those conjunctive constructions in which noun phrases are involved. Although the Puyuma dialects are said to be mutually intelligible according to previous studies (cf. Ting 1978, Li 1991 and Huteson 2005), I shall show that the markers or constructions used to indicate noun phrase (NP) conjunction are very diverse in the three dialects under study. In addition, I shall also show that some of the strategies used in NP conjunction nowadays may have been a later development. This is related to the fact that, in written form, means to indicate NP conjunction are needed, while they were originally signaled by intonation alone.

Five types of NP conjunction are examined in this study: personal nouns, common nouns, location nouns, possessive NPs, and personal pronouns. The first four categories all require a noun phrase marker before the noun to indicate case/definiteness/number, while the case/number of the last category, personal pronouns, is shown by the form itself. I shall show that when different types of nouns are conjoined, the conjunction marker is chosen based on the type of NP the second NP is. The grammatical function of the NPs will be taken into consideration as well; we shall see whether being a subject/non-subject or being core/non-core will affect the choice of conjunction strategies.

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1 In this study, possessive NPs refer to constructions that consist of a noun and a possessor.
The organization of the paper is as follows. In §2 through §4, I present and compare the strategies of NP conjunction used in Nanwang, Katripul, and Tamalakaw respectively. Section 5 examines how verbal semantics (i.e. reciprocal verbs vs. non-reciprocal verbs) affects the manifestation of NP conjunction. Section 6 discusses the analysis of the Nanwang kay marker and Katripul za+i/na. Section 7 shows how changes may have arisen because of the need for literary clarity.

2. Nanwang

There are two conjunction markers in Nanwang Puyuma: aw and kay. While kay only appears in NP conjunction, the marker aw is also used in clausal/sentential conjunction.

2.1 NP conjunction in types of NPs

The conjunction marker aw may be used to conjoin all types of NP; the distribution of kay, on the other hand, is restricted to personal nouns.

A. Personal nouns

Personal nouns, including personal proper names and elder kinship terms, may be conjoined by either kay or aw. When they are conjoined by aw, the two NPs are preceded by the same noun-phrase marker, as shown in (1) and (2).

(1) i namali aw i bae li i, as atr.2
    Sg.Nom my.father and Sg.Nom my.elder.sibling Top tall
    ‘My father and my brother are tall.’

(2) tu=ka-dreki-aw=ku kan namali aw kan
    my.elder.sibling
    ‘I was scolded by my father and my brother.’

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2 Abbreviations: 1, first person; 2, second person; 3, third person; AV, actor voice; C, conveyance; Caus, causative; Coll, collective; Comm, common; COP, copular; Df, definite; Excl, exclusive; Gen, genitive; Id, indefinite; Incl, inclusive; IMPF, imperfective; L, location; Loc, locative; LK, linker; Neu, neutral; Nmzr, nominalizer; Nom, nominative; Obl, oblique; P, patient; Perf, perfective; Pers, personal; PJ, projective; Pl, plural; Prog, progressive; PSR, possessor; Recip, reciprocal; Red, reduplication; Sg, singular; Stat, stative; Top, topic; UV, undergoer voice.
In (1), the NPs appear in the topic position and they are also subject of the sentence. In (2), the NPs are non-subject actors, which agree with the genitive clitic pronoun \( tu= \).

When NPs are conjoined by \( kay \), the second NP is not preceded by any marker, and the first NP may be preceded by either a plural or a singular noun phrase marker, as shown below.\(^3\)\(^4\)

\( (3) \)  
\text{ulaya isuwa } \text{ina } \text{Sawagu kay Kelralaw?} 
\text{exist where Sg.Nom/Pl.Nom Sawagu KAY Kelralaw} 
\text{‘Where are Sawagu and Kelralaw?’}

\( (4) \)  
\text{ina } \text{Tayban kay Demalasaw } \text{tu=ki-anger-aw} 
\text{Sg.Nom/Pl.Nom Tayban KAY Demalasaw 3.Gen=get-thought-UV:P} 
\text{idrini na lemak.} 
\text{this Df.Nom thing} 
\text{‘Tayban and Demalasaw remembered this thing.’}

In addition to conjoining NPs, \( kay \) also appears in inclusory pronominal constructions (IPC, following Lichtenberk 2000 and Reid 2009).\(^5\) For example:

\( (5) \)  
\text{m-u-a-ruma’=mi } \text{kay nanali, aw i baeli.} 
\text{AV-go-Prog-house=1P.Excl KAY my.mother and Sg.Nom my.elder.sibling} 
\text{‘I went home with my mother and my elder sister.’}

The syntactic role that the conjoined NPs play does not affect the choice of strategy.

\(^3\) In sentence (4), the conjoined NPs are topicalized. When they are not topicalized, as in the sentence below, they are marked oblique, manifesting the non-subject actors (but have a genitive bound pronoun \( tu= \) cross-referencing with them).

\( \text{tu=ki-anger-aw idrini na lemak kan/kana Tayban kay Demalasaw.} \) 
\text{3.Gen=get-thought-UV:P this Df.Nom thing Sg.Obl/Pl.Obl Tayban KAY Demalasaw} 
\text{‘Tayban and Demalasaw remembered this thing.’}

\(^4\) Section 6 provides an explanation for the reason why both plural and singular markings are possible in these examples.

\(^5\) An inclusory pronominal is defined by Lichtenberk (2000:3-4) as “a pronominal form that identifies a total set of participants (i.e. \( =mi \) in (5)), a subset of which is identified by a lexical NP (i.e. \( nanali \) in (5)).” He also distinguishes four types of IPC according to two parameters: (i) whether the inclusory pronominal and the included NP together form a syntactic construction (phrasal vs. split); and (ii) whether there is an overt marker of the relation between the inclusory pronominal and the included NP (explicit vs. implicit). In the three dialects studied, Nanwang and Katripul IPCs are examples of split explicit; whereas in Tamalakaw, IPCs are split implicit.
For personal proper nouns, which can be conjoined by either *kay* or *aw*, both strategies are acceptable when they are: (i) subject, as in (6); (ii) non-subject agents (marked by an oblique noun phrase marker but have a clitic pronoun cross-referencing with them), as in (7); or (iii) oblique arguments, as in (8).

(6) a. *mi-rawa i Ukak aw i Lrugi.*  
    have-prey Sg.Nom Ukak and Sg.Nom Lrugi  
    ‘Ukak and Lrugi have prey.’  

    b. *mi-rawa i/na Ukak kay Lrugi.*  
    have-prey Sg.Nom/Pl.Nom Ukak KAY Lrugi  

(7) a. *tu=ka-dreki-aw=ku kan namali aw kan*  
    my.father  
    ‘I was scolded by my father and my mother.’  

    b. *tu=ka-dreki-aw=ku kan/kana namali kay*  
    my.father  

(8) a. *kadru=ku i palrakuan ma-dreki kan Ukak aw kan Lrugi.*  
    there=1S.Nom Loc men’s.meeting.house AV-scold Sg.Obl Ukak aw kan Lrugi.  
    and Sg.Obl Lrugi  
    ‘I scolded Ukak and Lrugi in men’s meeting house.’  

    b. *kadru=ku i palrakuan ma-dreki kan/kana*  
    there=1S.Nom Loc men’s.meeting.house AV-scold Sg.Obl/Pl.Obl Ukak KAY Lrugi.  
    Ukaka KAY Lrugi  

**B. Common nouns**

Common nouns can only be conjoined by *aw*, and the two NPs need to be marked by an identical noun phrase marker, which is obligatory.

(9) *daleu na kidra aw/*kay na belbel.*  
    sweet Df.Nom custard.apple and/*KAY Df.Nom banana  
    ‘The custard apples and the bananas are sweet.’
C. Location Nouns

Like common nouns, location nouns can only be conjoined by *aw, as shown below:

\[(11) \text{ulaya } ku=wa-wadi-an \quad i \quad \text{Katripul } aw/*kay \quad i \quad \text{Tamalakaw}.
\]

Loc Tamalakaw

'I have brothers and sisters in Katripul and Tamalakaw.'

D. Possessive NPs

In Puyuma, the possessor can either be encoded as a pronoun or as an NP. If it is encoded as an NP, it is manifested twice; as a pronoun preceding the noun denoting the possessum, and as an NP (marked oblique) following the possessum. Semantically speaking, possessive NP conjunction can be divided into two subtypes in terms of whether the possession attributes to a unified group of owners (collective possession, i.e. John and Mary’s) or to separate owners (distributive possession, i.e. John’s and Mary’s). In distributive possession, the *aw strategy is used, as in (12), and the *kay strategy is used in collective possession, as in (13).

\[(12) \text{m-uka } i \quad \text{Taihok } tu=walak \quad kan \quad \text{Pilay } aw \quad tu=walak \quad \text{kan } \quad \text{Senayan}.
\]

AV-go Loc Taipei 3.PSR=child Sg.Obl Pilay and 3.PSR-child Sg.Obl Senayan

‘Pilay’s and Senayan’s children went to Taipei.’

\[(13) \text{m-uka } i \quad \text{Taihok } tu=walak \quad kan \quad \text{Ukak } k\text{ay } \text{Senayan}.
\]

AV-go Loc Taipei 3.PSR=child Sg.Obl Ukak KAY Senayan

‘Ukak and Senayan’s child went to Taipei.’

E. Personal Pronouns

Personal pronoun conjunction only happens when the pronouns appear in a topic position, as in (14) or in a non-verbal clause, as in (15).
(14) *kuiku aw taytaw i, mare-kataguin.*
1S.Neu and 3.Neu Top Recip-spouse
‘He and I are husband and wife.’

(15) *idru na paisu i, nanku aw nantaw.*
that Df.Nom money Top my.Nom and his.Nom
‘That money is mine and his.’

Only the *aw* strategy is permitted when the pronoun appears after the conjoining element, as shown in (16) and (17).

(16) *taytaw kay Senayan i, mare-kataguin.*
3.Neu KAY Senayan Top Recip-spouse
‘He and Senayan, they are husband and wife.’

(17) *i Senayan aw/*kay taytaw i, mare-kataguin.*
Sg.Nom Senayan and/* KAY 3.Neu Top Recip-spouse
‘Senayan and he, they are husband and wife.’

2.2 Summary and additional comments

Table 1 gives a summary of the conjunctive strategies used by different categories of NPs, and Table 2 summarizes the distribution and characteristics of *aw* and *kay*.

### Table 1: Conjunctive strategies in noun phrases

<table>
<thead>
<tr>
<th>Type of NPs</th>
<th><em>aw</em> strategy</th>
<th><em>kay</em> strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal nouns</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Common nouns</td>
<td>✓</td>
<td>×</td>
</tr>
<tr>
<td>Location nouns</td>
<td>✓</td>
<td>×</td>
</tr>
<tr>
<td>Possessive NPs</td>
<td>✓ (distributive)</td>
<td>✓ (collective)</td>
</tr>
<tr>
<td>Personal pronouns</td>
<td>✓</td>
<td>×</td>
</tr>
</tbody>
</table>

### Table 2: A comparison of *aw* and *kay*

<table>
<thead>
<tr>
<th>Position of the marker</th>
<th><em>aw</em></th>
<th><em>kay</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>Marking of case and definiteness of the NPs</td>
<td>the two conjoined NPs are preceded by the same noun phrase marker, indicating they have the same case/definiteness</td>
<td>the second NP is not preceded by any marker</td>
</tr>
<tr>
<td>Marking of number of the conjoined personal nouns</td>
<td>the number of each NP is indicated by the noun phrase marker preceding it</td>
<td>the noun phrase marker before the first NP can be marked plural</td>
</tr>
<tr>
<td>Types of the second NPs</td>
<td>all types of nouns</td>
<td>personal nouns and pronouns</td>
</tr>
</tbody>
</table>
While *aw* occurs in all kinds of NP conjunction, the distribution of *kay* is more restricted, as only personal nouns and possessive NPs with a collective meaning can be conjoined by *kay*. Regarding the position of the marker, they occupy the same position (between the conjoined NPs). In addition to the differences/similarities given above, Teng (1997) observes that while *aw* may conjoin more than two NPs, *kay* cannot.

(18) \[ m-uka=ku \text{ kana Pilay } aw \text{ kana Ukak } aw \text{ kana Atrun. } \]
\[ \text{AV-go=1S.Nom Pl.Obl Pilay and Pl.Obl Ukak and Pl.Obl Atrun} \]
\[ \text{‘I went to Pilay’s and Ukak’s and Atrun’s.’} \]

(19) \[ *m-uka=ku \text{ kana Pilay } kay \text{ Ukak } kay \text{ Atrun.} \]
\[ \text{AV-go=1S.Nom Pl.Obl Pilay KAY Ukak KAY Atrun} \]

On the other hand, *kay* may appear between a verbal predicate and an NP, which is impossible for *aw*.

(20) \[ m-uka=mi \text{ kay nanali.} \]
\[ \text{AV-go=1P.Excl.Nom KAY my.mother} \]
\[ \text{‘I went with my mother.’} \]

(21) \[ *m-uka=mi \text{ aw i nanali.} \]
\[ \text{AV-go=1P.Excl.Nom and Sg.Nom my.mother} \]

2.3 Conjunction marker *aw* in texts

In Ogawa & Asai (1935), and the oral texts collected by the author, *aw* is mostly used as a clause connector. NP conjunction in those texts is mostly encoded by a list-like enumeration, as in (22), or by *kay* (for personal nouns only), as in (23).

(22) \[ idru \text{ na kawi i, ma-risan katrebe } tu=lrudus \text{ tu=rami.} \]
\[ \text{that Df.Nom timber Top AV-same thick 3.PSR=end 3.PSR=root} \]
\[ \text{‘That timber, its root, and the other end are of the same thickness.’} \]

(23) \[ ta=temuwamuwan \text{ i } Adulrumaw \text{ kay Adulrusaw.} \]
\[ \text{1P.Incl.PSR=ancestor Sg.Nom Adulrumaw KAY Adulrusaw} \]
\[ \text{‘Our ancestors Adulrumaw and Adulrusaw.’} \]
Table 3: The occurrence of *aw* in texts

<table>
<thead>
<tr>
<th></th>
<th>total</th>
<th>clausal</th>
<th>NP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ogawa &amp; Asai (1935; 7 texts)</td>
<td>130</td>
<td>130</td>
<td>0 (out of 5)</td>
</tr>
<tr>
<td>Teng (2003, 8 texts)</td>
<td>165</td>
<td>164</td>
<td>1 (out of 10)</td>
</tr>
<tr>
<td>Cauquelin (2008; 31 texts)</td>
<td>34</td>
<td>34</td>
<td>—</td>
</tr>
<tr>
<td>Textbook (Book 5-9)</td>
<td>34</td>
<td>24</td>
<td>10 (out of 16)</td>
</tr>
</tbody>
</table>

As can be seen from Table 3, in Ogawa & Asai’s (1935) 7 texts, the total occurrence of *aw* is 130, all of them were used in connecting clauses. Within these 7 texts, there are 5 instances of NP conjunction, and none of them use *aw* as a conjunctive marker. In the texts collected by the author, the occurrence of *aw* is 165; only 1 is used in NP conjunction. There are only 34 instances of *aw* in Cauquelin’s (2008) texts, none of which are used in NP conjunction. On the other hand, in the Textbooks published by the Ministry of Education, R.O.C., of the 16 examples of NP conjunction, 10 use *aw* as the conjunction marker.

3. Katripul

There are two conjunction markers in Katripul: *za* and *zi*. The form *za* is also used as a noun phrase marker indicating that the noun following it is indefinite and in oblique case. The form *zi* is also used to connect two clauses/sentences.

3.1 NP conjunction in types of NPs

A. Personal nouns

Personal nouns can only be conjoined by *za*, and the second NP is always preceded by *i*, as shown below, regardless of the case role of the big NP.

(24) *s<em>angal* *i* Senayan *za* *i* tinataw.

*<AV>*happy Sg.Nom Senayan *ZA* Pers<sup>9</sup> her.mother

‘Senayan and her mother were happy.’

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<sup>6</sup> Because Puyuma ritual texts make heavy use of systematic doubling, it is difficult to decide whether a juxtaposition of NPs is an instance of NP conjunction or synonyms.

<sup>7</sup> The Textbooks can be downloaded from the following website: http://www.alcd.nccu.edu.tw/classroom/downbook-m.html

<sup>8</sup> Six of them were collected for the Formosan Language Archive, and two of them appear in the appendix of Teng (2008).

<sup>9</sup> The noun phrase marker *i* or *na* after *za* seem to fail to indicate the case role of the noun following it. Hence I do not gloss them as Sg.Nom/Df.Nom, but as Pers/Comm: they seem only to indicate the noun is a personal noun or a common noun.
tu=vaaw=ku ni Senayan za i/*ni Ukak.
3.Gen=save=1S.Nom Gen Senayan ZA Pers/*Gen Ukak
‘Senayan and Ukak saved me.’

*s<em>angal i Senayan zi i Ukak.
<AV>happy Sg.Nom Senayan and Sg.Nom Ukak

B. Common nouns

Conjunction of Katripul common nouns shows the greatest diversity among different subclasses of nouns. For some informants, only the zi strategy is acceptable, and for some others, both zi and za are acceptable.

In the zi strategy, the occurrence of a noun phrase marker before the second NP is optional, and when it does occur, it may either be an identical marker to the one preceding the first NP, or it may be an invariant na marker. For instance:

(27) tavu’ na kizay zi na velvel.
sweet Df.Nom custard.apple and Df.Nom banana
‘The custard apples and the bananas are sweet.’

(28) sahar=ku za kizay zi na/za velvel.
like=1S.Nom Id.Obl custard.apple and LK10/Id.Obl banana
‘I like custard apples and bananas.’

In a Bible translated by a bishop from Katripul, when zi is used to conjoin common nouns, there is always a copula maw following zi. For example:

(30) natu in-a-ekan mu, na kakenin zi maw
3.PSR Perf-Red-eat Top Df.Nom locust and COP
na ka-walu-an.
Df.Nom Stat-sweet-Nmzr
‘His food was locusts and honey.’

In the same Bible, za can also be used to conjoin two common NPs. In those cases, the second NP is always preceded by na.

10 In this instance, na functions as a linker rather as a noun phrase marker. See Teng (2008:90-91) for more discussion on the functional extension of na as a linker in Puyuma.
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(31) natu in-a-ekan mu, na kakenin za na ka-walu-an.
    ‘His food was locusts and honey.’

C. Location nouns

Like common nouns, both zi and za strategies are acceptable for the conjunction of location nouns. When conjoined by zi, the locative noun phrase marker i is optional; when conjoined by za, the marker is obligatory.

(32) m-ukua=ku i Valangaw zi (i) Kalingko.
    AV-go=1S.Nom Loc Taitung and Loc Hualien
    ‘I went to Taitung and Hualien.’

(33) m-ukua=ku i Valangaw za i Kalingko.
    AV-go=1S.Nom Loc Taitung ZA Loc Hualien
    ‘I went to Taitung and Hualien.’

D. Possessive NPs

Like in Nanwang, a distinction between distributive possession and collective possession is made in Katripul by using different conjunctive strategies: the zi strategy is used in distributive possession, while the za strategy is chosen in collective possession. When the zi strategy is used, the possessum needs to be repeated again, as indicated in (34). In the za strategy, only the possessor appears after za, and it is preceded by i, rather than by ni.

(34) tu=uma’ ni Ukak zi tu=uma’ ni Risem
    3.PSR=farm Gen Ukak and 3.PSR=farm Gen Risem
    ‘Ukak’s and Risem’s farms’

(35) tu=uma’ ni Ukak za i Risem
    3.PSR=farm Gen Ukak ZA Pers Risem
    ‘Ukak and Risem’s farm’

E. Personal pronouns

Katripul speakers do not use zi to connect personal pronouns in a verbal clause. IPCs are used when one or both of the NP is a first/second person participant.
The marker za cannot be followed by a pronoun, as shown in (38). Instead, zi is used, as in (37). When the order of the NPs is reversed, it is acceptable, as in (39). Or, when nantu alak is changed to alaktaw, za is acceptable, as in (40). In that case, alak-taw is treated like a kinship term and thus a personal noun.

(37) m-ukuwa i zenan i Senayan zi nantu alak.
    AV-go Loc mountain Sg.Nom Senayan and 3.PSR child
    ‘Senayan and her child went to the mountains.’

(38) *m-ukuwa i zenan i Senayan za nantu alak.
    AV-go Loc mountain Sg.Nom Senayan ZA 3.PSR child

(39) m-ukuwa i zenan nantu alak za i Senayan.
    AV-go Loc mountain 3.PSR child ZA Pers Senayan
    ‘Her child and Senayan went to the mountains.’

(40) m-ukuwa i zenan i Senayan za i alak-taw.
    AV-go Loc mountain Sg.Nom Senayan ZA Pers child-her
    ‘Senayan and her child went to the mountains.’

3.2 Summary and additional comments

Table 4 summarizes the conjunctive strategies used in different categories of noun phrases in Katripul. Table 5 compares the distribution and characteristics of the conjunction markers zi and za.

Table 4: Conjunctive strategies in Katripul

<table>
<thead>
<tr>
<th></th>
<th>zi</th>
<th>za+i/na</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal nouns</td>
<td>×</td>
<td></td>
</tr>
<tr>
<td>Common nouns</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Location nouns</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Possessive NPs</td>
<td>✓  (distributive)</td>
<td>✓ (collective)</td>
</tr>
<tr>
<td>Personal pronouns</td>
<td>✓</td>
<td>×</td>
</tr>
</tbody>
</table>
Table 5: A comparison of zi and za

<table>
<thead>
<tr>
<th>position of the marker</th>
<th>zi</th>
<th>za</th>
</tr>
</thead>
<tbody>
<tr>
<td>noun phrase marker before the second NP</td>
<td>A co-B</td>
<td>A co-B</td>
</tr>
<tr>
<td>May be (i) omitted; (ii) nominative, or (iii) the same as the one before the first NP</td>
<td></td>
<td>Is always either i (for personal names and place names) or na (for common nouns)</td>
</tr>
<tr>
<td>types of the second NPs</td>
<td>All types of nouns except for personal nouns</td>
<td>All types of nouns except for personal pronouns</td>
</tr>
</tbody>
</table>

The form za is also used as a noun phrase marker indicating the noun following it is an oblique/indefinite common noun. When connecting NPs, the NP following it must be preceded by a nominative noun phrase marker, which is a puzzle.

(41) `angal i Senayan za i Ukak."

‘Senayan and Ukak are happy.’

(42) `tu=vaaw=ku ni Senayan za i/*ni Ukak."

‘Senayan and Ukak saved me.’

3.3 Conjunction marker zi in texts

In Ogawa & Asai (1935), Schröder & Quack (1979), and four texts collected by the author herself, zi solely functions to connect clauses. In Bible One, which is translated by a bishop from Katripul, the 11 tokens used in NP conjunction in the first three chapters of the Book of Mark all have the copular marker maw following zi. In Book Two, which is a work of collaboration from speakers of different villages, 23 out of 27 examples of NP conjunction use either zi or zi maw to conjoin NPs. In the textbooks published by the Ministry of Education, 15 out of 18 examples of NP conjunction use either zi or zi maw.
Table 6: The occurrence of \textit{zi} in texts

<table>
<thead>
<tr>
<th></th>
<th>total</th>
<th>clausal</th>
<th>\textit{zi}</th>
<th>\textit{zi maw}</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ogawa &amp; Asai (1935; 1 text)</td>
<td>28</td>
<td>28</td>
<td>0/1</td>
<td>0/1</td>
</tr>
<tr>
<td>Schröder &amp; Quack (1979; 22 texts)</td>
<td>12</td>
<td>12</td>
<td>\textit{---}^{11}</td>
<td>\textit{---}</td>
</tr>
<tr>
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<td>63</td>
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<td>4/27</td>
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<tr>
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<td>20</td>
<td>13/18</td>
<td>2/18</td>
</tr>
</tbody>
</table>

4. Tamalakaw

There are two strategies used in marking NP conjunction in Tamalakaw Puyuma; the \textit{zi} strategy and the IPC strategy.

4.1 NP conjunction in types of NPs

A. Personal nouns

Both the IPC strategy and the \textit{zi} strategy are found in conjoining personal nouns. However, according to the older informants,\textsuperscript{12} IPC is favored. Unlike the IPCs we have seen in Nanwang and Katripul, in which the pronoun is manifested as a clitic and is used only when there is a first person participant, in Tamalakaw, the pronoun appears twice; as a clitic on the predicate and as a free form after the first NP, as shown in (43) and (44). The second NP is always preceded by \textit{i}, regardless of whether the first NP is marked as nominative or not.

(43) \textit{asat\textbf{r} i Senay\textup{n} intaw \textbf{i} Ukak.}
\hspace{1.5cm} tall Sg.Nom Senayan 3.Neu Pers Ukak
\hspace{1.5cm} ‘Senayan and Ukak are tall.’

\textsuperscript{11} Like what happens in the ritual texts collected by Cauquelin (2008), Katripul ritual texts collected by Schröder & Quack (1979) also make heavy use of systematic doubling, so it is difficult to decide whether a juxtaposition of NPs is an instance of NP conjunction or synonyms.

\textsuperscript{12} Two older informants over 80 years of age whom I consulted favor IPC strategy.
At first glance, readers may wonder why not treat intaw as a conjunction marker. It will become clear later that the position occupied by intaw in the above sentences is not invariant; when there is a first person or a second person participant involved, the pronoun will be changed to a corresponding inclusory form, as shown below.

(45) m-ukua=mi i zenan iniyam i Senayan.  
AV-go=1P.Excl.Nom Loc mountain 1P.Excl.Neu Sg.Nom Senayan  
‘Senayan and I went to the mountains.’

(46) m-ukua=mu i zenan inmu i Senayan.  
AV-go=2P.Nom Loc mountain 2P.Neu Sg.Nom Senayan  
‘You and Senayan went to the mountains.’

When zi is used, the two NPs are either preceded by the same noun phrase marker or the noun phrase marker preceding the second NP is omitted. For instance:

(47) tu=vaaw-aw ni Senayan zi (ni/*i) Ukak.  
3.Gen=save-UV:P Gen Senayan and Gen/*Sg.Nom Ukak  
‘Senayan and Ukak saved her.’

B. Common nouns

Common nouns denoting animate participants can use either the IPC strategy or the zi strategy. For example, in (48), zi is used to conjoin ‘this old man’ and ‘that child’, and in (49), a pronoun intaw appears between the two NPs. Again, the second NP following the pronoun intaw must be preceded by na, as indicated in (50).

13 Animate/non-human common nouns can use IPC strategy, but inanimate common nouns cannot. Compare a and b.

a. mare-‘alri’ na ’arem intaw na lrutung.  
‘The pangolin and the monkey are friends.’

b. tavu’ na kiza’ zi*intaw na velvel.  
‘The custard apples and the bananas are sweet.’
C. Location nouns

Location nouns can only be conjoined by \textit{zi}. For example:

(51) \textit{m-ukua=ku i valangaw zi i kalingko.}
\textit{AV-go=1S.Nom Loc Taitung and Loc Hualien}
‘I went to Taitung and Hualien.’

D. Possessive NPs

Collective possession can be expressed by using the IPC strategy (as in (52)) or indicated by a plural noun phrase marker (as in (53)).

(52) \textit{tr<em>akaw=ku zatu paysu ni Senayan intaw i Sunay.}
\textit{<AV>steal=1S.Nom 3.PSR money Gen Senayan 3.Neu Pers Sunay}
‘I stole Senayan and Sunay’s money.’

(53) \textit{tr<em>akaw=ku zatu paysu na Senayan.}
\textit{<AV>steal=1S.Nom 3.PSR money Pl.Gen Senayan}
‘I stole Senayan’s (and her gangs’) money.’

The \textit{zi} strategy is used to denote distributive possession, as shown below.

(54) \textit{m-ukua=mi kanantu ruma’ ni Senayan zi kanantu}
\textit{AV-go=1P.Excl.Nom 3.PSR.Obl house Gen Senayan and 3.PSR.Obl ruma’ ni Kulrung.}
\textit{house Gen Kulrung}
‘We went to Senayan’s and Kulrung’s house.’
E. Personal pronouns

Personal pronouns can be conjoined by zi when they are: (i) in topic position; or (ii) modified by a relative clause in a non-verbal clause.

(55) *inu zi ingku mu, ta=vaaw-aw i Ukak.*  
2S.Neu and 1S.Neu Top 1P.Gen=save-UV:P Sg.Nom Ukak  
‘You and I, we’ve saved Ukak.’

(56) *inu zi ingku na v<en>aaw kani Ukak.*  
2S.Neu and 1S.Neu Df.Nom <AV>save Sg.Obl Ukak  
‘You and I are the ones who saved Ukak.’

4.2 Summary and additional comments

Table 7 summarizes the conjunctive strategies used in different categories of noun phrases in Tamalakaw. Table 8 compares the distribution and characteristics of the conjunction strategies.

<table>
<thead>
<tr>
<th>Table 7: Conjunctive strategies in Tamalakaw</th>
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<tbody>
<tr>
<td>zi</td>
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<tr>
<td>------------------</td>
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<tr>
<td>Personal nouns</td>
</tr>
<tr>
<td>Common nouns</td>
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<tr>
<td>Location nouns</td>
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<tr>
<td>Possessive NPs</td>
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<tr>
<td>Personal pronouns</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 8: A comparison of zi and IPC strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>position of the marker</td>
</tr>
<tr>
<td>-------------------------</td>
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<tr>
<td>A co-B</td>
</tr>
<tr>
<td>noun phrase marker before the second NP</td>
</tr>
<tr>
<td>types of the second NPs</td>
</tr>
</tbody>
</table>

4.3 Conjunction marker zi in texts

As in Katripul, the marker *zi* in Tamalakaw also occurs in clausal conjunction. In fact, except for Nanwang, all the other villages use this marker in conjoining clauses. Table 9 compares the occurrence of *zi* in different types of texts in Tamalakaw. Recall that Bible Two is a work done by a group of people from different villages. As a result,
NP conjunction is marked either by juxtaposition or by zi. In the two texts collected by the author, only the IPC strategy is used in the instances of NP conjunction.

<table>
<thead>
<tr>
<th></th>
<th>total</th>
<th>clausal</th>
<th>NP</th>
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<tbody>
<tr>
<td>Teng (2008-2009; 2 texts)</td>
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<td>57</td>
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<tr>
<td>Textbook (Book 5-9)</td>
<td>45</td>
<td>27</td>
<td>18/21</td>
</tr>
</tbody>
</table>

5. Reciprocal vs. non-reciprocal

In the previous sections, we have only seen examples of NP conjunction in non-reciprocal constructions. In this section, we shall see how verbal semantics, i.e. reciprocal vs. non-reciprocal, affects the manifestation of NP conjunction. I shall discuss the reciprocal vs. non-reciprocal asymmetries from the following three aspects: (i) the choice of a conjunctive strategy; (ii) permission of topicalization of one of the conjoined NPs; and (iii) intervention by a temporal/locational expression between the conjoined NPs.

5.1 Conjunctive strategies

In Nanwang, both aw and kay strategies are acceptable in reciprocal and non-reciprocal constructions, and according to the informants the two strategies are interchangeable, as indicated in (57).

(57) Nanwang

\[
a. \text{<em>s<em>-a-senay i Senayan aw i Pilay.} \\
\text{<AV> Red-sing Sg.Nom Senayan and Sg.Nom Pilay} \\
\text{‘Senayan and Pilay are singing.’}
\]

\[
a'. \text{<em>s<em>-a-senay i/na Senayan kay Pilay.} \\
\text{<AV> Red-sing Sg.Nom/Pl.Nom Senayan KAY Pilay} \\
\text{‘Senayan and Pilay are singing.’}
\]

There has been much discussion in the literature on how types of verbs (especially reciprocal vs. non-reciprocal) interacts with the reading of coordination vs. comitativity; for example Chuang (2007) and Zeitoun et al. (2011), among others.
b. *ma dra-dreki15 i Senayan aw i Pilay.*
Recip-scold Sg.Nom Senayan and Sg.Nom Pilay
‘Senayan and Pilay spoke ill of each other.’

b’.* ma dra-dreki i na Senayan kay Pilay.*
Recip-scold Sg.Nom/Pl.Nom Senayan KAY Pilay
‘Senayan and Pilay spoke ill of each other.’

In Katripul, both the zi strategy and the za strategy are acceptable in non-reciprocal constructions, as shown in (58a), but only the za strategy can be used in reciprocal constructions, as in (58b).

(58) Katripul

a. s<em>a-senay i Senayan zi/za i Ukesang.
  <AV> Red-sing Sg.Nom Senayan and/ZA Pers Ukesang
  ‘Senayan and Ukesang are singing.’

b. *ma re-ka-sa-selru’ i Senayan *zi/za i Ukesang.
Recip-Stat-Red-scold Sg.Nom Senayan and/ZA Pers Ukesang
‘Senayan and Ukesang spoke ill to each other.’

In Tamalakaw, both the zi and the IPC strategies are acceptable in non-reciprocal construction, but only the IPC strategy is permitted in reciprocal constructions, as shown in (59).

(59) Tamalakaw

a. s<em>a-senay i Senayan zi/intaw i Ukesang.
  ‘Senayan and Ukesang are singing.’

b. ma va-varang i Senayan *zi/intaw i Ukesang.
Recip-scold Sg.Nom Senayan and/3.Neu Pers Ukesang
‘Senayan and Ukesang spoke ill of each other.’

To summarize the above discussion, Table 10 is given below:

15 Because the affixes indicating reciprocal meaning consist of two elements (a prefix ma- plus Ca- reduplication), I use a dot instead of a hyphen to avoid possible confusion with other affix combination.
Table 10: Conjunctive strategies in reciprocal and non-reciprocal constructions

<table>
<thead>
<tr>
<th></th>
<th>Nanwang</th>
<th>Katripul</th>
<th>Tamalakaw</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-reciprocal</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Reciprocal</td>
<td>✔️</td>
<td>✔️</td>
<td>x</td>
</tr>
</tbody>
</table>

5.2 Topicalization of one of the conjoined NPs

In Nanwang non-reciprocal constructions, it is forbidden to topicalize only one of the conjoined NPs, regardless of which conjunction strategy is used, as shown in the examples below.

(60) Nanwang Puyuma (kay strategy)
   a. m-uka i Balrangaw i Senayan kay Pilay.
      AV-go Loc Taitung Sg.Nom Senayan KAY Pilay
      ‘Senayan and Pilay went to Taitung.’
   b. i Senayan kay Pilay i, m-uka i Balrangaw.
      Sg.Nom Senayan KAY Pilay Top AV-go Loc Taitung
      ‘Senayan and Pilay, they went to Taitung.’
   c. *i Senayan i, m-uka i Balrangaw kay Pilay.
      Sg.Nom Senayan Top AV-go Loc Taitung KAY Pilay

(61) Nanwang Puyuma (aw strategy)
   a. m-uka i Balrangaw i Senayan aw i Pilay.
      AV-go Loc Taitung Sg.Nom Senayan and Sg.Nom Pilay
      ‘Senayan and Pilay went to Taitung.’
   b. i Senayan aw i Pilay i, m-uka i Balrangaw.
      Sg.Nom Senayan and Sg.Nom Pilay Top AV-go Loc Taitung
      ‘Senayan and Pilay, they went to Taitung.’
   c. *i Senayan i, m-uka i Balrangaw aw i Pilay.
      Sg.Nom Senayan Top AV-go Loc Taitung and Sg.Nom Pilay

In Katripul, on the other hand, in the za strategy, it is permitted to topicalize either (i) only one of the conjoined NPs, or (ii) the whole conjoined NPs, as shown in (62b) and (62c).
(62) Katripul Puyuma (za strategy)
   a. \textit{m-ukua i Valrangaw i Ukesang za i Risem.}
      \textit{AV-go Loc Taitung Sg.Nom Ukesang \textsc{ZA} Pers Risem}
      ‘Ukesang and Risem went to Taitung.’
   b. \textit{i Ukesang za i Risem mu, m-ukua i Valrangaw.}
      \textit{Sg.Nom Ukesang ZA Pers Risem Top AV-go Loc Taitung}
      ‘Ukesang and Risem, they went to Taitung.’
   c. \textit{i Ukesang mu, m-ukua i Valrangaw za i Risem.}
      \textit{Sg.Nom Ukesang Top AV-go Loc Taitung ZA Pers Risem}
      ‘Ukesang, she went went to Taitung with Risem.’

However, in the \textit{zi} strategy, only topicalization of the whole conjoined NPs is allowed.

(63) Katripul Puyuma (zi strategy)
   a. \textit{ma-lemes na hung zi na verek.}
      \textit{A V-disappear Df.Nom ox and Df.Nom pig}
      ‘The ox and the pig disappeared.’
   b. \textit{na hung zi na verek mu, ma-lemes.}
      \textit{Df.Nom ox and Df.Nom pig Top AV-disappear}
      ‘The ox and the pig, they disappeared.’
   c. *\textit{na hung mu, ma-lemes zi na verek.}
      \textit{Df.Nom ox Top AV-disappear and Df.Nom pig}

In Tamalakaw, as in the case of Nanwang, only topicalization of the whole conjoined NPs is allowed in both strategies, as shown below.

(64) Tamalakaw Puyuma (IPC strategy)
   a. \textit{marelang m-ukua i zenan na/i Senayan intaw}
      \textit{i Pilay.}
      \textit{Pers Pilay}
      ‘Senayn and Pilay went to the mountains together.’
b. \textit{nali Senayan intaw i Pilay mu, marelang}
\begin{itemize}
\item Pl.Nom/Sg.Nom Senayan 3.Neu Pers Pilay Top together
\item m-ukua i zenan.
\item AV-go Loc mountain
\item ‘Senayan and Pilay, they went to the mountains together.’
\end{itemize}

c. \textit{*i Senayan mu, marelang m-ukua i zenan intaw}
\begin{itemize}
\item Sg.Nom Senayan Top together AV-go Loc mountain 3.Neu
\item i Pilay.
\item Pers Pilay
\end{itemize}

(65) Tamalakaw Puyuma (zi strategy)

a. \textit{marelang m-ukua i zenan i Senayan zi}
\begin{itemize}
\item together AV-go Loc mountain Sg.Nom Senayan and
\item i Pilay.
\item Sg.Nom Pilay
\item ‘Senayan and Pilay went to the mountains together.’
\end{itemize}

b. \textit{i Senayan zi i Pilay mu, marelang m-ukua}
\begin{itemize}
\item Sg.Nom Senayan and Sg.Nom Pilay Top together AV-go
\item i zenan.
\item Loc mountain
\item ‘Senayan and Pilay, they went to the mountains together.’
\end{itemize}

c. \textit{*i Senayan mu, marelang m-ukua i zenan zi}
\begin{itemize}
\item Sg.Nom Senayan Top together AV-go Loc mountain and
\item i Pilay.
\item Sg.Nom Pilay
\end{itemize}

In reciprocal constructions, one of the conjoined NPs in a kay construction is permitted to move to the topic position in Nanwang Puyuma, as shown in (66b). Topicalization of one of the conjoined NPs in aw construction is not permitted, as in (67b).

(66) Nanwang Puyuma (kay strategy)

a. \textit{mare-kataguin i Senayan kay Ukak.}
\begin{itemize}
\item Recip-spouse Sg.Nom Senayan KAY Ukak
\item ‘Senayan and Ukak are husband and wife.’
\end{itemize}

b. \textit{i Senayan i, mare-kataguin kay Ukak.}
\begin{itemize}
\item Sg.Nom Senayan Top Recip-spouse KAY Ukak
\item ‘Senayan, she and Ukak are husband and wife.’
\end{itemize}
(67) Nanwang Puyuma (aw strategy)
   a. *ma.dra-drikul i Senayan aw i Ukak.
      Recip-brawl Sg.Nom Senayan aw Sg.Nom Ukak
      ‘Senayan and Ukak brawled.’
   b. *i Senayan i, ma.dra-drikul aw i Ukak.
      Sg.Nom Senayan Top Recip-brawl and Sg.Nom Ukak

   Similarly, moving one of the conjoined NPs in a za construction (Katripul) or in an
   IPC (Tamalakaw) to the topic position is permitted.16

(68) Katripul Puyuma (za strategy)
   a. mare-ka-sa-selru’ i Senayan za i Ukesang.
      Recip-Stat-Red-scold Sg.Nom Senayan ZA Pers Ukesang
      ‘Senayan and Ukesang spoke ill of each other.’
   b. i Senayan mu, mare-ka-sa-selru’ za i Ukesang.
      Sg.Nom Senayan Top Recip-Stat-Red-scold ZA Pers Ukesang
      ‘Senayan, she and Ukesang spoke ill of each other.’

(69) Tamalakaw Puyuma (IPC strategy)
   a. ma.va-varang i Senayan intaw i nani.
      Recip-scold Sg.Nom Senayan 3.Neu Pers my.mother
      ‘Senayan and my mother spoke ill of each other.’
   b. i Senayan mu, ma.va-varang intaw i nani.
      Sg.Nom Senayan Top Recip-scold 3.Neu Pers my.mother
      ‘Senayan, she and my mother spoke ill of each other.’

From the above examples, we find that the kay construction in Nanwang and the
IPC in Tamalakaw have asymmetrical properties in reciprocal and non-reciprocal
constructions, with regard to the possibility of topicalizing one of the conjoined NPs. In
non-reciprocal constructions, their behaviors are similar to the standard coordination
constructions (aw construction in Nanwang and zi in Tamalakaw), whereas in reciprocal
constructions, kay and IPC display distinctive characteristics to aw and IPC. The
situation in Katripul, however, is different. It is possible to topicalize one of the
conjoined NPs in a za construction, regardless of whether it indicates a reciprocal or a
non-reciprocal meaning.

16 Recall that the zi strategy is not permitted in a reciprocal construction in both Katripul and
Tamalakaw.
5.3 Intervention of a temporal/locative expression between conjoined NPs

In a non-reciprocal construction in Nanwang, whether applying the *aw* or the *kay* strategy, a temporal or a locative expression cannot appear between the conjoined NP. In a reciprocal construction, a locative or a temporal expression still cannot intervene between the two conjoined NPs in the *aw* strategy, but such a restriction does not exist in the *kay* strategy.

(70) Nanwang Puyuma (non-reciprocal; *aw* strategy)
   a. *mi-rawa i Isaw *aw i Ukak i drenan.*
      have-prey Sg.Nom Isaw and Sg.Nom Ukak Loc mountain
      ‘Isaw and Ukak got their prey in the mountains.’
   a’. *mi-rawa i Isaw i drenan *aw i Ukak.
      have-prey Sg.Nom Isaw Loc mountain and Sg.Nom Ukak
   b. *mi-rawa i Isaw *aw i Ukak adaman.*
      have-prey Sg.Nom Isaw and Sg.Nom Ukak yesterday
      ‘Isaw and Ukak got their prey yesterday.’
   b’. *mi-rawa i Isaw adaman *aw i Ukak.
      have-prey Sg.Nom Isaw yesterday and Sg.Nom Ukak
      ‘Isaw got his prey yesterday, and Ukak too.’

(71) Nanwang Puyuma (non-reciprocal; *kay* strategy)
   a. *mi-rawa na Isaw *kay Ukak i drenan.*
      have-prey Pl.Nom Isaw KAY Ukak Loc mountain
      ‘Isaw and Ukak got their prey in the mountains.’
   a’. *mi-rawa na Isaw i drenan *kay Ukak.
      have-prey Pl.Nom Isaw Loc mountain KAY Ukak
   b. *mi-rawa na Isaw *kay Ukak adaman.*
      have-prey Pl.Nom Isaw KAY Ukak yesterday
      ‘Isaw and Ukak got their prey yesterday.’
   b’. *mi-rawa na Isaw adaman *kay Ukak.
      have-prey Pl.Nom Isaw yesterday KAY Ukak

(72) Nanwang Puyuma (reciprocal; *aw* strategy)
   a. *mare-kataguin i Ukak *aw i Pilay i balrangaw.*
      Recip-spouse Sg.Nom Ukak and Sg.Nom Pilay Loc Taitung
      ‘Ukak and Pilay got married in Taitung.’
Noun Phrase Conjunction in Three Puyuma Dialects

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Recip-spouse Sg.Nom Ukak Loc Taitung and Sg.Nom Pilay

‘Ukak and Pilay got married yesterday.’

b’. *mare-kataguin i Ukak adaman aw i Pilay.

Recip-spouse Sg.Nom Ukak yesterday and Sg.Nom Pilay

‘Ukak and Pilay got married yesterday.’

(73) Nanwang Puyuma (reciprocal; kay strategy)

a. mare-kataguin i Ukak kay Pilay i balrangaw.

Recip-spouse Sg.Nom Ukak KAY Pilay Loc Taitung

‘Ukak and Pilay got married in Taitung.’

a’. *mare-kataguin i Ukak i balrangaw kay Pilay.

Recip-spouse Sg.Nom Ukak Loc Taitung KAY Pilay

‘Ukak and Pilay got married in Taitung.’

b. mare-kataguin i Ukak kay Pilay adaman.

Recip-spouse Sg.Nom Ukak KAY Pilay yesterday

‘Ukak and Pilay got married yesterday.’

b’. *mare-kataguin i Ukak adaman kay Pilay.

Recip-spouse Sg.Nom Ukak yesterday KAY Pilay

In Katripul, a locative or temporal expression cannot intervene the conjoined NPs when the zi strategy is applied, but it is permitted to appear between the conjoined NPs when the za strategy is used (regardless of whether it is a reciprocal or a non-reciprocal construction).

(74) Katripul Puyuma (non-reciprocal; zi strategy)

a. m-ukua i Valrangaw izu na dawdawan zi izu

AV-go Loc Taitung that Df.Nom old.person and that

Df.Nom child

‘The old man and the child went to Taitung.’

a’. *m-ukua izu na dawdawan i Valrangaw zi izu

AV-go that Df.Nom old.person Loc Taitung and that

Df.Nom child

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b. *s<em>angal izu na dawdawan adaman zi izu na alak
<AV>happy that Df.Nom old.person yesterday and that Df.Nom child
adaman.

yesterday

‘The old man and the child were happy yesterday.’

b'. *s<em>angal izu na dawdawan adaman zi izu
<AV>happy that Df.Nom old.person yesterday and that
na alak.

Df.Nom child

(75) Katripul Puyuma (non-reciprocal; za strategy)
a. *m-ukua i Valrangaw i Ukesang za i Risem.
AV-go Loc Taitung Sg.Nom Ukesang za i Risem
‘Ukesang and Risem went to Taitung.’

a'. m-ukua i Ukesang i Valrangaw za i Risem.
AV-go Sg.Nom Ukesang Loc Taitung za i Risem
‘Ukesang and Risem went to Taitung.’

b. m-ukua i Valrangaw i Ukesang za i Risem adaman.
AV-go Loc Taitung Sg.Nom Ukesang za i Risem yesterday
‘Ukesang and Risem went to Taitung yesterday.’

b'. m-ukua i Valrangaw i Ukesang adaman za i Risem.
AV-go Loc Taitung Sg.Nom Ukesang yesterday za i Risem
‘Ukesang and Risem went to Taitung yesterday.’

(76) Katripul Puyuma (reciprocal; za strategy)
a. mare-ka-sa-selru’ i Senayan za i Ukesang i kungkwana.
Recip-Stat-Red-scold Sg.Nom Senayan za i Ukesang Loc
kungkwan.

school

‘Senayan and Ukesang spoke ill of each other at school.’

a'. mare-ka-sa-selru’ i Senayan i kungkwan za
Recip-Stat-Red-scold Sg.Nom Senayan Loc school za
i Ukesang.

Pers Ukesang

‘Senayan and Ukesang spoke ill of each other at school.’
b. mare-ka-sa-selru’ i Senayan za i Ukesang
Recip-Stat-Red-scold Sg.Nom Senayan ZA Pers Ukesang

adaman.
yesterday

‘Senayan and Ukesang spoke ill of each other yesterday.’

b’. mare-ka-sa-selru’ i Senayan adaman za i Ukesang.
Recip-Stat-Red-scold Sg.Nom Senayan yesterday ZA Pers Ukesang

‘Senayan and Ukesang spoke ill of each other yesterday.’

To summarize the above discussion, Table 11 is given below:

<table>
<thead>
<tr>
<th></th>
<th>Nanwang</th>
<th>Katripul</th>
<th>Tamalakaw</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Reciprocal</td>
<td>Non-reciprocal</td>
<td>Reciprocal</td>
</tr>
<tr>
<td>kay</td>
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<tr>
<th>Topicalization of one of the conjoined NPs</th>
<th>kay</th>
<th>aw</th>
<th>za</th>
<th>zi</th>
<th>IPC</th>
<th>za</th>
<th>zi</th>
<th>IPC</th>
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<td>✓</td>
<td>x</td>
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<th>Intervention of a temporal/locative expression between the conjoined NPs</th>
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<th>aw</th>
<th>za</th>
<th>zi</th>
<th>IPC</th>
<th>za</th>
<th>zi</th>
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<td>x</td>
<td>x</td>
<td>✓</td>
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</tbody>
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From Table 11 we see that the kay strategy in Nanwang and the IPC strategy in Tamalakaw display asymmetrical properties when used in reciprocal and non-reciprocal constructions. In a non-reciprocal construction, their behavior is similar to that of aw (or zi), a standard coordinator, whereas in a reciprocal construction, their behavior is distinct from that of the standard coordinators.

6. The analysis of Nanwang kay and Katripul za+i/na

At least diachronically, kay can be analyzed as consisting of two elements; ka and i. The form *ka- is reconstructed in PAN by Ross (2006:528) as a preposition based on data from Saisiyat, Puyuma, and PMP. Teng (2008) has a brief discussion of the status of kay,18 as to whether it should be analyzed as a connector, conjoining two nouns, or

17 The zi strategy is not permitted in reciprocal constructions in Katripul as well as in Tamalakaw.
18 An example from Teng (2008) also suggests that kay may be a verb. In that example, it
as a comitative marker. If it is a connector, then the noun phrase marker preceding the big NP should be a plural marker, but sometimes it is not. If it is a comitative marker, then, the noun phrase marker preceding the first NP should only indicate the number of the first NP. There are counterexamples to either analysis. Its different behaviors in reciprocal vs. non-reciprocal constructions discussed in §5 suggest that it is still undergoing a grammaticalization process: from a comitative marker to a connector and this can explain its dual properties. Thus, in a reciprocal construction, the NPs conjoined by it can be separated by a locative or a temporal expression, and one of the NPs can be topicalized. On the other hand, in a non-reciprocal construction, kay functions more like a connector and so the NPs conjoined are always standing together.

The case in Katripul is slightly different. Unlike in Nanwang, the conjunctive strategy za+i/na consists of two elements not only diachronically; synchronically they are still treated as two elements morphologically as well as phonologically. While kay diachronically came from *ka ‘preposition’ and i ‘noun phrase marker’, the strategy za+i/na consists of two noun phrase markers: za ‘oblique noun phrase marker’ and i/na ‘nominative noun phrase marker’. This fact leads us to think that the forms in the current noun phrase marker paradigm are historically from different sources.

Syntactically, kay and za+i/na also display similar properties, with one exception. While kay is like a comitative marker in reciprocal construction, but like a linker in non-reciprocal construction, za+i/na behaves like a comitative marker in both constructions; the NPs can be separated by a temporal/locative expression, and one of the conjoined NPs can be put in the topic position alone.

Incidentally, Nanwang and Katripul also show how different dialects of a language can grammaticize different markers for the same purpose, and because the dialects remain in contact, their histories are similar even though the forms are different.

It is worth pointing out that although the Tamalakaw IPC is different, Austronesian inclusory constructions function more like comitatives than like conjoined NPs (see Bril 2011).

\[\text{andaman } i, \quad \text{kay}=\text{ta}=\text{driya}\]
\[\text{days.later Top go}=1\text{P.Incl.Nom}=1\text{MPF Caus-ka-know-PJ}\]
\[\text{‘A few days later, we all went together to let people know.’}\]

\[\text{19 It is possible that the status of za is like a preposition, and i and na are noun class markers.}\]
7. The rise of conjunction markers

Mithun (1988:331-333) points out that coordination may be indicated in two ways; first, by intonation, and second, by formal markers. When signaled intonationally, the coordinate constituents may be combined with no intonation break or they may be separated by a pause and a special non-final pitch. Teng (2008:271) shows that in the case of Puyuma, when there is no formal marker, a pause appears between coordinated constituents, and all the non-final constituents in a coordinate sequence have a rising contour, as shown in (77).

(77) Nanwang Puyuma

\[ ta=puka-ay \quad dra \quad palrubelrub \quad i \quad sabak \quad dra \quad kalang, \]
\[ 1P.Gen=put-UV:L \quad Id.Obl \quad filling \quad Loc \quad inside \quad Id.Obl \quad crab \]
\[ dra \quad patraka, \quad dra \quad in-iyam-an, \quad dra \quad ni-rames. \]
\[ Id.Obl \quad meat \quad Id.Obl \quad Perf-salt-Nmzr \quad Id.Obl \quad Perf-pickled \]

‘We put filling inside, including crab meat, meat, and pickled vegetables.’

We have seen in the previous sections that NP conjunction with no overt marker is default in oral texts in Puyuma. In addition to juxtaposition, each dialect has two distinct ways in marking NP conjunction, as summarized below.

**Table 12:** Diachronic sources of the conjunction markers

<table>
<thead>
<tr>
<th>Marker/construction</th>
<th>Source</th>
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| **Nanwang**
| aw | Clausal connective element |
| kay | Comitative marker (diachronically from a preposition plus a noun phrase marker) |
| **Katripul**
| zi | Clausal connective element |
| za+i/na | Obl NP marker plus a noun phrase marker |
| **Tamalakaw**
| zi | Clausal connective element |
| intaw/inmu/iniyam | Pronoun |

Mithun (1988) points out that NP coordinators derive from various sources by way of a process of grammaticalization. Possible sources are: comitative marker, sentence adverbials with the original meaning ‘also, too, as well’ or ‘furthermore, then’. This is the case of *kay*, *za+i/na*, *aw* and *zi* in Puyuma dialects. Stassen (2003) adds several other diachronic possibilities, such as numerals or quantifiers like ‘two’, ‘both’ or ‘all’, and pronouns (dual or plural personal pronouns). This last is the case of *intaw/inmu/iniyam* in Tamalakaw.
From the texts collected by Ogawa & Asai and by this author, Nanwang *aw* and Katripul-Tamalakaw *zi* are mainly used as a clausal connective element, meaning “and then”. They are rarely used as an NP connector in oral texts, and NP conjunction is mostly indicated by zero-marked enumeration. Both Mithun (1988) and Stassen (2000) note that this kind of coordination tends to be marginalized into specific functions or becomes replaced by an overt strategy. Mithun further suggests that this is due to increased literacy. The case in Puyuma is a typical example.

Teng (2008) suggests that in Puyuma the need for an overt marking in written language is important also because of the difficulty of differentiating a modifying construction from a coordinate NP construction without an overt coordinator. In Nanwang Puyuma, a modifying construction consists of two constituents, the modifier and the modifeye being marked by an identical noun phrase marker. Thus a modifying construction, as in (78a), looks similar to an NP conjunction, as in (78b), except that the intonation patterns of the two are different, and there is always a pause between two NPs in NP conjunction. In (79), there are four constituents marked by *na*, the relation of the first three is conjunction, but the relation between the last two is modification.

(78) Nanwang Puyuma
   a. *a kawi a matrina idrunu.*
      Id.Nom tree Id.Nom big that.Nom
      ‘That is a big tree.’
   b. *ulaya a kawi, a ’aputr.*
      exist Id.Nom tree Id.Nom flower
      ‘There are trees and flowers.’

(79) Nanwang Puyuma
   *maumau na Pasara’adr, na Raera, na miasama*
   only Df.Nom Pasara’adr Df.Nom Raera Df.Nom some
   *na temaramaw.*
   Df.Nom witch
   ‘Only the Pasara’adr family, the Raera family, and some witches.’

Another piece of evidence supporting our hypothesis that *aw/zi* was originally used as a clausal connector comes from the fact that, in the case of Nanwang Puyuma, when there is a temporal expression standing between the conjoined NPs, a distributive meaning is obtained. For instance:
Noun Phrase Conjunction in Three Puyuma Dialects

(80) Nanwang Puyuma

\[
\text{mi-rawa i Isaw adaman aw i Ukak.}
\]

\begin{align*}
\text{have-prey Sg.Nom} & \quad \text{Sg.Nom Isaw} \\
\text{yesterday and Sg.Nom} & \quad \text{Sg.Nom Ukak}
\end{align*}

‘Isaw got his prey in the mountains, and Ukak too.’

In §3, we have seen that in Katripul, \textit{zi} is usually followed by \textit{maw} when conjoining NPs in natural texts. This implies that the part following \textit{zi} is a clause not an NP.

(81) natu in-a-ekan mu, na kakenin zi maw

\begin{align*}
\text{3.PSR Perf-Red-eat Top Df.Nom locust and COP} \\
\text{Stat-sweet-Nmzr}
\end{align*}

‘His food was locusts and honey.’

In this paper I have seen the strategies used in the Puyuma dialects spoken in Nanwang, Katripul, and Tamalakaw villages, and I have successfully shown that although the differences among the dialects are said to be trivial, the strategies and markers used in NP conjunction are rather diverse. I have also shown that in each dialect there is a marker which displays the properties of being a coordinator, and this marker (\textit{aw} in Nanwang and \textit{zi} in Tamalakaw and Katripul), in the oral texts collected by Ogawa & Asai and this author, almost always functions to connect clauses. Their functioning as an NP connector is mostly found in (i) textbooks, (ii) elicitation, and (iii) translated works, such as the Bible. Thus I conclude that their functioning as an NP connector is a later development out of the need for literary clarity.
References


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卑南語三個方言的名詞組連接

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本文探討卑南語南王、知本、泰安三村的名詞組連接結構。這三個方言都各有一個策略是僅用於名詞組連接（如南王方言的 kay，知本方言的 za+i/na，以及泰安方言的包含式代名詞），而有另一策略是不限於用在名詞組連接，亦可用於子句或句子的連接。根據在相互及非相互結構中這兩個策略所表現出來不相稱的特質，我們認為南王方言的 kay 及知本方言的 za+i/na 原本是用來標記伴同結構，而今經歷了語法化的過程，也可用來標記並列結構。一方面，南王方言的 aw 及知本、泰安方言的 zi 之被用於名詞組連接則有不同的起因。藉由比較不同種類的篇章語料與它們出現的比例，我們認為，aw 跟 zi 原是用來連接子句，它們被用於名詞組連接，是為因應近期文字化之需要而有的後起發展。

關鍵詞：名詞組連接，卑南語，伴同，語法化，文字化