

Comitative vs. Conjunctive Constructions in Paiwan*

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Paiwan exhibits synchronic co-existence of three diachronically related ways of encoding the notion of collectivity: the comitative preposition *ka*, the comitative case markers *KATI/KATUA* and the distributive/collective coordinators *KATI/KATUA*, in which the merged *ti* and *tua* act as noun class markers rather than case markers. The semantically non-ambiguous comitative preposition/case markers are morphosyntactically different from the ambiguous conjunctive coordinators. Like disjunctive *manu*, conjunctive *KATI/KATUA* conjoin DP, not KP, arguments; however, unlike disjunctive *manu*, conjunctive *KATI/KATUA* do not take non-nominal conjuncts. Similar morphosyntactic contrasts are also found with Puyuma comitative/conjunctive constructions and observations of this kind may have important implications for the theory of coordination.

Key words: Paiwan, comitative, coordination, conjunctive, disjunctive, distributive, collective

1. Introduction

In English, the conjunctive coordinator *and* can express distributive and collective readings, as in (1a-b), whereas the comitative preposition *with* can only denote interpretation of collectivity, as in (2a-b).

English

- (1) a. John and Bill live separately.
b. John and Bill live together.
- (2) a. *John lives separately with Bill.
b. John lives together with Bill.

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On the other hand, both collective verbs like *mix*, as in (3a-b), and non-collective verbs like *bake*, as in (4a-b), can take conjunctive *and* and comitative *with*.

English

- (3) a. John mixed the rice and the powder.
b. John mixed the rice with the powder.
- (4) a. John and Mary baked a cake together.
b. John baked a cake together with Mary.

This paper examines how comitative and conjunctive constructions are morphosyntactically encoded in an Austronesian language like Paiwan.¹ Tang (1999), for instance, indicates that in Paiwan, *KATI*,² which co-occurs with personal proper nouns and pronouns, as in (5a), as well as *KATUA*, which appears with personal common nouns and non-personal nouns, as in (5b), can both be treated as conjunctive coordinators which can convey meanings of distributivity and collectivity like English *and*.³

Paiwan (Tang 1999:574)

- (5) a. na-dukuL ti kai tai kui KATI palang.⁴
Perf-<AV>beat Nom Kai Obl Kui and Palang
'Kai beat Kui and Palang separately/together.'
- b. d<in>ukuL ni kai a vatu KATUA ngiaw.
<PV>beat Gen Kai Nom dog and cat
'Kai beat the dog and the cat separately/together.'

¹ In the paper, the discussion is focused on Northern Paiwan, but when relevant, Southern Paiwan will also be touched upon. In Paiwan, the Southern counterparts of Northern *KATI* and *KATUA* are *'ATI* and *'ATA*, respectively.

² The capitalized morphemes *KATI* and *KATUA* stand for the relevant Paiwan comitative/conjunctive markers with no specification of the internal morphosyntactic structures. See Tang (2010c) for a claim that Paiwan exhibits composite forms of syntactically merged *ka-ti* and lexically fused *ka-tua*, comitative or conjunctive, in addition to a lexically formed non-composite conjunctive *katua*.

³ The paper only examines coordination of nominal arguments in Paiwan. For a discussion of conjunction/disjunction of nominal non-arguments, see Tang (2010c).

⁴ Abbreviations used in the author's Paiwan examples are as follows: AV: Agent Voice, Com: Comitative Preposition/Case, Gen: Genitive, Instr: Instrumental Case, Loc: Locative Case, MM: Modification Marker, NCM: Noun Class Marker, NFM: Non-finite Marker, Nom: Nominative, Obl: Oblique, Perf: Perfective, PTEM: Past Temporal Case, PV: Patient Voice, Reci: Reciprocal, Red: Reduplication, 1S: First Person Singular.

However, it remains unclear why Paiwan observes two different kinds of nominal coordinators and whether Paiwan manifests denotation of collectivity by means of comitative constructions.

In A. Chang (2006), by contrast, the form *ka-* itself is analyzed as a comitative clitic, as in (6a-b), in which only collective reading is available. In (6a) the form *ti* adjacent to comitative *ka-* is treated as a nominative marker, whereas in (6b) the form *tua* following comitative *ka-* is regarded as an oblique marker.

Paiwan (A. Chang 2006:180)

- (6) a. 'eci-in ti tjaina ka=ti tjama.
kill-GV Nom.ps.sg mother Comt=Nom.ps.sg father
'Your mother together with your father was killed.'
- b. ku=k<in>an=anga a za
1sg.Gen=eat<GV.Perf>=Com Nom.cm that
ci'aw ka=tua vutul.
fish Comt=Obl.cm meat
'I have eaten fish together with meat.'

In view of A. Chang's analysis, three important questions are raised. For one thing, what is the categorial property of the proposed comitative proclitic *ka-*? For another, why is it that nominal hosts of comitative *ka-* exhibit a nominative/oblique distinction in case marking? Also, is it really the case that sentences like (6a-b), with non-collective verbs like *'eci* 'kill' and *kan* 'eat', do not express distributive meaning?

As opposed to A. Chang (2006), it is suggested in the paper that morphosyntactically, Paiwan exhibits three different ways of denoting collectivity: the semantically ambiguous conjunctive coordinators *KATI/KATUA*, the non-ambiguous comitative case markers *KATI/KATUA* and preposition *ka*. Conjunctive *KATI/KATUA* do not take case-marked arguments, whereas prepositional *ka* marks oblique case.

Conjunctive *KATI/KATUA* may appear with verbs that do not involve lexical noun incorporation of conjoined elements. On the other hand, case marking *KATI/KATUA* and prepositional *ka* are not subject to a condition of this kind.

While no element may intervene between conjunctive *KATI/KATUA* and their preceding associated nominals, the same constraint does not apply to case marking *KATI/KATUA* and prepositional *ka*.

The comitative case markers *KATI/KATUA* may be claimed to have resulted from fusion of the affixal case marker *ka-* evolved from the comitative free preposition *ka* with the personal non-common noun class marker *ti*, on the one hand, and with the quasi-common noun class marker *tua* functionally extended from the oblique marker

tua, on the other.

Conjunctive *KATI/KATUA* may also be said to have derived from merging of the noun class markers *ti/tua* with the affixal coordinator *ka-* grammaticalized from comitative case marking *ka-* (see Tang 2010c for a detailed discussion).

The paper is organized as follows. Section 2 compares English *and* with Paiwan coordinators *KATI/KATUA*. Unlike *and*, *KATI/KATUA* can only take nominal conjuncts.

Section 3 presents evidence for a non-case analysis of the *ti/tua* appearing with *ka-*⁵ and for a morphosyntactic distinction between collectivity encoded by conjunctive coordinators and that encoded by comitative case markers/prepositions. The *ti* following prepositional *ka* or fused with comitative/conjunctive *ka-* serves as a personal non-common noun class marker, not as a nominative marker. And the seemingly oblique marker *tua* merged with comitative/conjunctive *ka-* also acts as some sort of common noun class marker. No distributional variation is allowed for the first/external conjuncts of the coordinators *KATI* and *KATUA*, regardless of whether they are interpreted as distributive or collective (cf. Zhang 2010).

Section 4 concludes the paper with a comparison of Paiwan comitative/conjunctive *KATI/KATUA* with comitative/conjunctive markers in Nanwang/Tamalakaw Puyuma and with a discussion of their implications for the theory of coordination.

2. Conjunctive *KATI/KATUA* vs. English *and*

In Paiwan, two nominals can be conjoined by juxtaposition, as in (7a-b), or by coordinators like *KATI*, as in (8a), and *KATUA*, as in (8b).

Paiwan

(7) a. *tengeLay ti kui tai kai tai muni.*
 like Nom Kui Obl Kai Obl Muni
 ‘Kui likes Kai and Muni.’

b. *tengeLay ti kui tua ngiaw tua watu.*
 like Nom Kui Obl cat Obl dog
 ‘Kui likes cats and dogs.’

(8) a. *tengeLay ti kui tai kai KATI muni.*
 like Nom Kui Obl Kai and Muni
 ‘Kui likes Kai and Muni.’

⁵ See also Tang (2010c) for a similar analysis of composite and non-composite coordinators in Amis, Atayal, Saisiyat and Puyuma.

- b. *tengeLay ti kui tua ngiaw KATUA watu.*
 like Nom Kui Obl cat and dog
 ‘Kui likes cats and dogs.’

In English, by comparison, nominal coordination by juxtaposition is not grammatical, as in (9).

English

- (9) Mary loves John *(and) Bill.

Another difference between English *and* and Paiwan conjunctive *KATI/KATUA* has to do with the categorial types of conjuncts. In English, as in (10a-c), the two conjuncts coordinated by *and* can be noun phrases, verb phrases or clauses.

English

- (10) a. John bought two books and three magazines.
 b. He scolded Mary and beat John.
 c. John is a teacher and Mary is a nurse.

In Paiwan, by contrast, the coordinators *KATI* and *KATUA* can only conjoin nominals, hence the ungrammaticality of (11b), as opposed to (11a).

Paiwan

- (11) a. *'au-'aung ti kai sa(ka) pede-deLi.*
 <AV>Red-cry Nom Kai and Red-laugh
 ‘Kai is crying and laughing.’
 b. **'au-'aung ti kai KATI/KATUA pede-deLi.*
 <AV>Red-cry Nom Kai and and Red-laugh

The coordinator *sa(ka)* ‘and’ in (11a), however, cannot take nominal conjuncts, as shown in (12).

Paiwan

- (12) **tengeLay ti kui tua ngiaw sa(ka) (tua) watu.*
 like Nom Kui Obl cat and Obl dog

Note that, unlike Paiwan, other Formosan languages like Nanwang Puyuma, Mayrinax Atayal and Kavalan, for example, exhibit a type of coordinator that may

appear with both nominal and non-nominal conjuncts. Nanwang *aw* as in (13a-b), Mayrinax *ru'* as in (14a-b) and Kavalan *uu* as in (15a-b) are all of this kind.

Nanwang Puyuma

- (13) a. salpit kana walak i pilay aw i ukak.
 <AV>beat Obl.Df child Nom.Sg Pilay and Nom.Sg Ukak
 'Pilay and Ukak beat the child.' (Teng 1997:110)
- b. tu-a-'apak-an Da dinaleg na wataw aw
 he.Gen-Red-put-PV Obl rice Nom big-bowl and
 tu-a-'apak-an Da irupan na kaysin.
 he.Gen-Red-put-PV Obl vegetable Nom small-bowl
 'The big bowl is for rice and the small bowl is for vegetables.' (Huang 2000a:189)

Mayrinax Atayal (Huang 2000b:84)

- (14) a. niq-un=mu ku' guqiluh ru' cai'.
 eat-PV=I.Gen Nom.Ref banana and taro
 'I ate the banana and the taro.'
- b. m-aniq=cu ru' k-um-itaal=ci' cu' ruwas.
 AV-eat=I.Nom and read-AV=I.Nom Obl book
 'I eat and read books.'

Kavalan (H. Chang 2000:171)

- (15) a. ngil=isu qan tu 'esi uu tamun?
 want=you.Nom eat Obl meat or vegetable
 'Do you want to eat meat or vegetables?'
- b. qatiw aisu uu mai qatiw aisu?
 go you.Nom or not go you.Nom
 'Are you going or are you not going?'

In Formosan languages, coordinators may thus be classified into three types. General coordinators that may take nominal/non-nominal conjuncts, non-nominal coordinators that do not appear with nominals and nominal coordinators that can only conjoin nominals. Paiwan only observes the latter two kinds.

Note also that, according to Teng (1997), Nanwang general coordinator *aw* needs to conjoin nominals that are each identically theta and case-marked, hence the ill-formedness of sentences like (16) below, in which *Ukak* itself is not overtly case-marked, to be compared with grammatical (13a).

Nanwang Puyuma (Teng 1997:111)

- (16) *salpit kana walak i pilay aw ukak.
 <AV>beat Obl.Df child Nom.Sg Pilay and Ukak

The grammaticality of Mayrinax (14a) and Kavalan (15a), by comparison, seems to suggest that Mayrinax *ru* and Kavalan *uu* are not subject to the considered condition of separate marking of identical overt case.

Therefore, it seems that in Formosan languages, there exist at least two distinct types of general coordinators, one kind that requires conjunction of two identically overtly case-marked nominals (KPs), as in Puyuma, and the other kind that may conjoin two caseless nominals (DPs) that in turn need to be jointly case-marked, as in Mayrinax and Kavalan.

As pointed out in (5a-b), repeated here as (17a-b), Tang (1999) claims that in Paiwan, *KATI* and *KATUA* can act as nominal coordinators to express distributive and collective readings.

Paiwan (Tang 1999:574)

- (17) a. na-dukuL ti kai tai kui KATI palang.
 Perf-<AV>beat Nom Kai Obl Kui and Palang
 ‘Kai beat Kui and Palang separately/together.’
- b. d<in>ukuL ni kai a watu KATUA ngiaw.
 <PV>beat Gen Kai Nom dog and cat
 ‘Kai beat the dog and the cat separately/together.’

If Tang’s approach to conjunctive *KATI* and *KATUA* in sentences like (17a-b) is correct, the non-general coordinators *KATI* and *KATUA* are used to conjoin two nominals non-separately case-marked (DPs).

Summarizing, Formosan languages exhibit general, non-nominal and nominal coordinators. Conjunction of two nominals may involve two KPs and/or two DPs. In Paiwan, conjunctive *KATI/KATUA* can function only as nominal coordinators that need to take two DP arguments.

3. Encoding of collectivity

It is mentioned in §1 that in English, collective reading can be expressed by the conjunctive coordinator *and* and by the comitative preposition *with*. While comitative *with* denotes collectivity exclusively, conjunctive *and* can also express a distributive interpretation.

In this section, arguments will be given to show that morphosyntactically, Paiwan exhibits three distinct ways of denoting collectivity: the conjunctive coordinators *KATI/KATUA*, the comitative case markers *KATI/KATUA*, and the comitative preposition *ka*.

3.1 Conjunctive *KATI/KATUA* vs. disjunctive *manu*

In Paiwan, disjunction of two nominals is marked by *manu* ‘or’. In (18), for instance, two oblique common nouns are disjoined and the appearance of oblique *tua* after *manu* is disallowed.

Paiwan

- (18) *tengeLay-sun tua ngiaw manu (*tua) vatu?*
 like-2S.Nom Obl cat or Obl dog
 ‘Do you like cats or dogs?’

In cases like (19), by contrast, two oblique personal proper nouns are disjoined and the presence of *ti* after *manu* is, however, required.

Paiwan

- (19) *tengeLay-sun tai kai manu *(ti) muni?*
 like-2S.Nom Obl Kai or NCM Muni
 ‘Do you like Kai or Muni?’

Two important things are revealed by further examination of the disjunctive coordinator *manu* in (18)-(19) against the conjunctive coordinators *KATI/KATUA* in (8a-b), repeated here as (20a-b). First, the presence of *ti* is obligatory after both disjunctive *manu* and conjunctive *ka-*. Second, the presence of *tua* is, nevertheless, possible only after conjunctive *ka-*.

Paiwan

- (20) a. *tengeLay ti kui tai kai KATI muni.*
 like Nom Kui Obl Kai and Muni
 ‘Kui likes Kai and Muni.’
 b. *tengeLay ti kui tua ngiaw KATUA vatu.*
 like Nom Kui Obl cat and dog
 ‘Kui likes cats and dogs.’

Based on the contrasts between (18)-(19) and (20a-b), we follow Tang’s (1999: 574-575) analysis. First, *manu* is a disjunctive, not a preposition, hence the incapability

of assigning the oblique case *tua* to the second/internal conjuncts. The form *manu* does not serve as a case marker, either.

Second, in Paiwan, conjunction or disjunction of two nominal arguments needs to involve two DPs, hence the impossibility of separate case realization of internal conjuncts, regardless of whether they may be jointly case-marked with external conjuncts as nominative, as in (17b), or as oblique, as in (17a) and (20a-b).

Third, the form *ti* that is required after the disjunctive *manu*, on the one hand, and that is a fused part of the conjunctive coordinator *KATI*, on the other, is not a nominative marker. Instead, it is a noun class marker indicating the non-common noun status of disjoined or conjoined internal conjuncts.⁶

Under this approach, the form *tua* that is also a fused part of the conjunctive coordinator *KATUA* cannot be treated as an oblique marker, either. This is because, as illustrated in (17b), internal conjuncts of conjunctive *KATUA* may, for instance, be jointly case-marked with external conjuncts as nominative, a case that is distinct from oblique marking. It is claimed here that, as argued in Tang (2010c), the form *tua* in conjunctive *KATUA* functions as a quasi-noun class marker of common nouns via functional extension of oblique *tua* marked with common nouns.

If, as proposed in A. Chang (2006), the forms *ti* and *tua* in the seemingly comitative (6a-b), repeated here as (21a-b), should be respectively regarded as a nominative marker and as an oblique marker, one will be forced to claim that, unlike those in non-disjunctive (21a-b), internal conjuncts in disjunctive (18)-(19) need either to bear no case marking or to be case-marked as nominative in accordance with the types of nominal conjuncts.

Paiwan (A. Chang 2006:180)

- (21) a. 'eci-in ti tjaina ka=ti tjama.
kill-GV Nom.ps.sg mother Comt=Nom.ps.sg father
'Your mother together with your father was killed.'
- b. ku=k<in>an=anga a za
1sg.Gen=<GV.Perf>eat =Com Nom.cm that
ci'aw ka=tua vutul.
fish Comt=Obl.cm meat
'I have eaten fish together with meat.'

⁶ For a detailed discussion of the morphosyntactic behavior of noun class markers in Formosan languages like Paiwan and Kavalan, for example, see Tang et al. (1998) and H. Chang et al. (1998), respectively.

An asymmetrical analysis of this kind, nevertheless, seems to be rather arbitrary and the pointed-out parallelism about DP requirement will also be missed between disjunctive *manu* and conjunctive *KATI/KATUA*. In addition, the cross-linguistic DP/KP contrast given in §2 concerning case-manifestation of internal conjuncts will also be lost in Paiwan and other Formosan languages.

Evidence for the grammatical presence of noun class markers in coordinate constructions may also be drawn from Kavalan, for instance. As stated in H. Chang et al. (1998), the personal non-common noun class marker *ti* is also found in Kavalan, as in (22), in which the nominative markers *ya* and *a* are optional and *ti* cannot act as a case marker.

Kavalan (H. Chang 2000:78)

- (22) me-tawa (ya/a) sunis/ti-tuyaw.
AV-laugh Nom Nom child NCM-Tuyaw
'The child/Tuyaw is laughing.'

In Kavalan, according to H. Chang (2000), the personal non-common noun class marker *ti* is also observed to follow the coordinator *tu*, as in (23b).

Kavalan (H. Chang 2000:171)

- (23) a. yau=iku q-em-an tu qawpiR tu sbata.
Prog=1P.Nom eat-AV Obl sweet.potato and aro
'I am eating sweet potatoes and taros.'
- b. tul-an-na ti-abas tu ti-upa sateza'i.
teach-PV-3P.Gen NCM-Abas and NCM-Upa sing
'He taught Abas and Upa how to sing.'

To sum up, in Paiwan, conjunction or disjunction of two nominal arguments needs to take nominals with the projection of DP, not KP. In addition, like the *ti* obligatorily following Paiwan disjunctive *manu* and Kavalan conjunctive *tu*, the instances of Paiwan *ti* that appear after the oblique-assigning comitative preposition *ka* and that are a fused part of conjunctive(/comitative) *KATI* should also be treated as personal non-common noun class markers, not as nominative markers. Similarly, the *tua* fused with *ka-* in conjunctive(/comitative) *KATUA* should be analyzed as a quasi-noun class marker of common nouns, not as an oblique marker.

3.2 Comitative preposition *ka* vs. case markers *KATI/KATUA*

With the claim that in Paiwan, the noun class markers *ti* and *tua* may be merged with comitative *ka-* and conjunctive *ka-* to result in the case markers *KATI/KATUA* and the coordinators *KATI/KATUA*, let us now turn to discussion of the comitative preposition *ka* and the comitative case markers *KATI/KATUA*, both of which exclusively denote collective meaning.

To begin with, there seems to appear evidence for a postulation that in Paiwan, bound *ka-* as a distributive/collective conjunctive prefix has in fact been evolved from the comitative case marking *ka-* that in turn has been grammaticalized from the comitative free preposition *ka*. In Southern Paiwan, the oblique marker *ta* can be present, as in (24a), or be absent, as in (24b), between the comitative marker *'a* and the personal non-common noun class marker *ti*.

Southern Paiwan

- (24) a. mare-kilivak ti kapi 'a ta ti 'umi.
 Reci-care Nom Kapi Com Obl NCM 'umi
 'Kapi and 'umi care about each other.'
- b. mare-kilivak ti kapi 'ATI 'umi.
 Reci-care Nom Kapi Com 'umi
 'Kapi and 'umi care about each other.'

The form *tua*, by contrast, cannot be absent between the comitative marker *ka* and the common noun *paday* 'rice' in sentences like (25a-b) below.

Paiwan

- (25) a. pataud-in ni kai a va'u ka *(tua) paday.
 mix-PV Gen Kai Nom millet Com Obl rice
 'Kai mixed the millet with the rice.'
- b. pataud-in ni kai a va'u KA*(TUA) paday.
 mix-PV Gen Kai Nom millet Com rice
 'Kai mixed the millet with the rice.'

The possibility of the presence/absence of oblique *ta* in the personal proper noun (24a-b) and the obligatory occurrence of *tua* in the common noun (25a-b) seem to suggest two important things. First, the comitative marker *ka* can act as an oblique-case assigning free preposition, hence the obligatory presence of oblique *t(u)a* in sentences

like (24a) and (25a). The form **ka-* is also reconstructed in PAn by Ross (2006) as a preposition based on data from Saisiyat, Puyuma, and PMP.

Second, the comitative preposition *ka* seems to be in the process of evolving to comitative case markers and conjunctive coordinators through prefixation of comitative case marking/conjunctive *ka-* with the personal non-common noun class marker *ti*, on the one hand, and with the quasi-common noun class marker *tua*, on the other (cf. A. Chang 2006), hence the lack of oblique *ta* in (24b), but not in (24a).

In other words, Paiwan exhibits synchronic co-existence of different degrees of grammaticalization of the comitative preposition *ka*, hence the possibility of acting as a comitative case marker with collective verbs as in (24b), (25b) and as a conjunctive coordinator with non-collective verbs as in (17a-b), in addition to lexical realization as a comitative preposition with collective verbs as in (24a), (25a).

In Paiwan, as will be shown in §3.3 and §3.4, the appearance of the comitative case markers *KATI* and *KATUA* are subject to the types of co-occurring verbs. Only non-collective verbs with lexical incorporation of associated nominals and collective verbs may take comitative marking.

In English, by contrast, no similar kinds of co-occurrence conditions on verb and noun types are observed with the comitative preposition *with*, as in (26a-b). English comitative *with* can appear with collective/non-collective verbs as well as with common/non-common nouns.

English

- (26) a. John mixed the rice with the powder.
b. John baked a cake together with Mary.

On the other hand, in Nanwang Puyuma and Mayrinax Atayal, for example, comitative case markers cannot take common nouns, as in (27a-c) and (28), respectively.

Nanwang Puyuma (Teng 1997:112-113)

- (27) a. p<un>ukpuk=ku kana/kan ukak kay pilay.
<AV>beat=1S.Nom Obl.PI/Obl.Sg Ukak KAY Pilay
'I beat Ukak and Pilay.'
- b. iDi na paysu i nanku kay pilay.
this Nom money top 1S.Gen KAY Pilay
'This money is mine and Pilay's.'
- c. *Tima=ku kana kabung kay kiruan.
<AV>buy=1S.Nom Obl.Df hat KAY clothes

Mayrinax Atayal (Huang 2000b:84) (cf. Rau 1992 and Chen 2007)

- (28) ma-quwas 'i' limuy ki' watan.
 AV-sing Nom Limuy Com Watan
 'Limuy is singing with Watan.'

Typologically speaking, as also discussed in Tang (2010c), English differs from Paiwan in that conjunctive *and* can conjoin nominal/non-nominal conjuncts and comitative *with* is not grammaticalized to a coordinator that only takes nominal conjuncts. On the other hand, Nanwang Puyuma and Mayrinax Atayal differ from Paiwan in that in Nanwang and Mayrinax, no case markers are grammaticalized to serve as quasi-common noun class markers.

3.2.1 Comitative *ka* vs. locative *i*

Before going into the next section, it should be noted here that in Paiwan, the possibility of synchronic co-existence of different degrees of grammaticalization is by no means restricted to marking of comitativity.

The locative marker *i*, for example, can act as a verbal prefix, as in (29a), or as a free preposition, as in (29b). The non-finite complement marker *a* must appear after the verbal prefix *i-* in the complex sentence (29a); it, however, cannot be present before the preposition *i* in the simple sentence (29b).

Paiwan

- (29) a. ku-p<in>i-tua-vavu'a *(a) taljem a vurasi.
 1S.Gen-<PV>Caus:in-Obl-field Lnk <AV>plant Nom sweet.potato
 'I planted the sweet potato in the field.' (Wu 2004)
- b. na-taLem ti kai tua vasa (*a) i tua gadu.
 Perf-<AV>plant Nom Kai Obl taro NFM in Obl mountain
 'Kai planted taros in the mountain.' (Tang 2002)

Similar to the locative preposition *i* in (29b), the comitative prepositions *'a/ka* in (30a-b) cannot take the non-finite complement marker *a*, either.

(30) Southern Paiwan

- a. mare-kilivak ti kapi (*a) 'a ta ti 'umi.
 Reci-care Nom Kapi NFM Com Obl NCM 'umi
 'Kapi and 'umi care about each other.'

Paiwan

- b. pataud-in ni kai a va'u (*a) ka tua paday.
mix-PV Gen Kai Nom millet NFM Com Obl rice
'Kai mixed the millet with the rice.'

Locative *i* may also be lexically unified with the locative pronoun *zua* 'there' to form the existential/possessive verb *izua* 'exist/have', as in (31).

Paiwan

- (31) izua a paisu ni Palang.
exist Nom money Gen Palang
'Palang has money.'

Further evolution of prepositional *i* to case marking *i-* can be evidenced by the grammaticality contrast in co-occurrence with the nominal coordinator *KATUA* between (32b), with the locative case marker *i-*, and (32a), with the locative preposition *i* (see also Tang 2010c).

Paiwan

- (32) a. *uri-ta-Lem ti kui tua vasa i tua vavua KATUA
will-<AV>plant Nom Kui Obl taro in Obl field and
i tua gadu.
in Obl mountain
b. uri-ta-Lem ti kui tua vasa i-vavua KATUA i-gadu.
will-<AV>plant Nom Kui Obl taro Loc-field and Loc-mountain
'Kui will plant taros in the field and on the mountain.'

It should also be pointed out here that, as discussed in Tang (2010c), similar to different encoding of comitative *ka/ka-* in Paiwan, *ka-* in Nanwang and *k-* in Mayrinax,⁷ distinct manifestation of locative *i* is also found in Paiwan, Nanwang, and Mayrinax.

According to Teng (2008), Nanwang locative *i* can appear with common/non-common nouns, as in (33a-b), and it cannot co-occur with oblique markers, as in (33c). Under Tang's (2010c) analysis, Nanwang locative *i-* in (33a-b) and Paiwan locative *i-* in (32b) both function as locative case prefixes lexically affixed to bare nouns in the lexicon.

⁷ In Tang (2010c), Nanwang *KAY* and Mayrinax *KI'* are respectively analyzed as composite forms of lexically fused *ka-i* and syntactically merged *k-i'*.

Nanwang Puyuma (Teng 2008:53-55)

- (33) a. ulaya a ariwanes i LangiT.
 exist ID.NOM rainbow LOC sky
 ‘There is a rainbow in the sky.’
- b. m-uka kaDi i baLangaw.
 ITR-go here LOC Taitung
 ‘They came here to Taitung.’
- c. *TekeL=ta i kantu ruma’.
 <ITR>drink=1P.ICL.NOM LOC DF.OBL/3.PSR house

Mayrinax Atayal, according to Huang (2000b), exhibits three distinct kinds of locative marking, as in (34a-c). Under Tang’s (2010c) analysis, Mayrinax locative case markers *i’*, *ki’* and *cku’* are structurally assigned to noun phrases at syntax.

Mayrinax Atayal (Huang 2000b:80-81)

- (34) a. m-a’usa’ i’ bali’ ku’ nabakis.
 AV-go Loc Bali’ Nom old-man
 ‘The old man will go to Bali.’
- b. m-in-uwah ki’ watan ’i’ yumin.
 AV-Perf-come Loc Watan Nom Yumin
 ‘Yumin came to Watan’s place.’
- c. tayhok cku’ ’ulaqi’=mi’ yumin.
 arrive Loc kid=my Yumin
 ‘Yumin arrives at my kid’s place.’

On the whole, the morphosyntactic contrasts among locative markers in Paiwan, Nanwang Puyuma, and Mayrinax Atayal clearly reveal the fact that, like that of comitative *ka*, different degrees of grammaticalization of locative *i* are also observed within and across Paiwan. In §4, synchronic co-existence of distinct degrees of grammaticalization of comitative markers in Puyuma will also be illustrated.

To sum up, it is shown in this section that in Paiwan, by prefixation with the personal noun class marker *ti* as well as with the quasi-common noun class marker *tua*, the comitative preposition *ka* seems to be in the process of evolving to the comitative case markers *KATI/KATUA* and the conjunctive coordinators *KATI/KATUA*. In Paiwan, synchronic co-existence of different degrees of grammaticalization of lexical elements are found with, for instance, the comitative preposition *ka* and the locative preposition *i*.

3.3 Symmetrical vs. asymmetrical comitatives

In Paiwan, the comitative case marker *KATUA* (and preposition *ka*) can co-occur with a lexically incorporated instrumental bare noun to denote meaning of instrumental collectivity, as in (35).

Paiwan

- (35) na-sa-’aseLu-aken KATUA vaLanga a ma-isu
 Perf-<AV>use-pestle-1S.Nom Com mortar NFM AV-pound
 tua va’u.
 Obl millet
 ‘I used the pestle together with the mortar to pound the millet.’

In (35) the tool *vaLanga* ‘mortar’ together with the comitative case marker *KATUA* is interpreted as an instrument simultaneously used with the other tool ‘*aseLu* ‘pestle’, the latter of which is an instrumental bare noun that is merged with the verbal prefix *sa-* ‘use’ in the lexicon.

Note here that in (35) the form *KATUA* cannot be analyzed as a coordinator for two reasons. First, it is ungrammatical for the bare noun ‘*aseLu* contained within the lexically formed instrumental verb *sa-’aseLu* to be syntactically conjoined with the noun phrase *vaLanga* by the nominal coordinator *KATUA*.

Second, the interpretation of distributivity of a nominal coordinator *KATUA* is not available in (35), in which no collective verbs are observed.

Instrumental comitative sentences like (35) have the following three properties. First, the occurrence of the instrumental comitative cluster is not obligatory, as in (36).

Paiwan

- (36) sa-’ecap-aken (KATUA kisi) a kan.
 <AV>use-chopsticks-1S.Nom Com bowl NFM <AV>eat
 ‘I use chopsticks (together with a bowl) to eat.’

Second, intervening elements like arguments and adjuncts are allowed before the comitative case marker *KATUA*, as in (37)-(38).

Paiwan

- (37) sa-’ecap ti kai KATUA kisi a kan.
 <AV>use-chopsticks Nom Kai Com bowl NFM <AV>eat
 ‘Kai uses chopsticks together with a bowl to eat.’

- (38) na-sa-’acilay-aken katiaw KATUA kasiv
 Perf-<AV>use-stone-1S.Nom yesterday Com stick
 a dukuL tai kui.
 NFM <AV>beat Obl Kui
 ‘Yesterday I used stones together with a stick to beat Kui.’

Third, the form *KATUA* can act as a comitative case marker, but not as an instrumental case marker, given the fact that it cannot occur alone to denote the semantic role of instrument, as in (39).

- Paiwan
 (39) *na-kan ti kai KATUA kisi.
 Perf-<AV>eat Nom Kai Instr bowl

Unlike the possibility of optional appearance of the comitative cluster with instrumental verbs in cases like (36), collective verbs like *patau* ‘mix’ must take the comitative cluster, as in (40).

- Paiwan
 (40) pataud-in ni kai a va’u *(KATUA paday).
 mix-PV Gen Kai Nom millet Com rice
 ‘Kai mixed the millet with the rice.’

In both types of comitative constructions, however, intervening elements are allowed before the comitative case markers *KATUA/KATI*, as in (37)-(38) and (41).

- Paiwan
 (41) na-pucekel ti kai ka-icavil KATI kui.
 Perf-marry Nom Kai PTem-year Com Kui
 ‘Last year Kai and Kui married each other.’

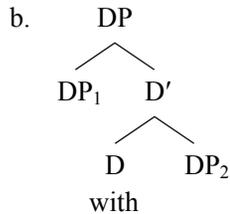
In view of sentences like (36) and (40), it seems that in Paiwan, symmetrical comitatives are basically encoded by the co-occurrence of the comitative case markers *KATI/KATUA* with collective verbs, and asymmetrical comitatives by that of the comitative case marker *KATUA* with verbs involving lexical noun incorporation.

According to Zhang (2007), among others, English observes symmetrical comitatives as in (42a) and asymmetrical comitatives as in (43a) (cf. Kayne 1994).

English

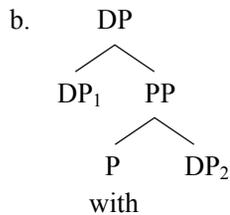
(42) Zhang (2007:152)

a. John mixed the rice with the powder.



(43) Zhang (2007:156)

a. John baked a cake together with Mary.



Under Zhang's analysis, the comitative preposition *with* in the symmetrical (42b) has the features of [D, plural, case assigning], and it takes DP₁ as its specifier and DP₂ as its complement. In the asymmetrical (43b), by contrast, the comitative preposition *with* is a regular preposition, and the comitative cluster [*with* DP₂] is an adjunct PP adjoined to DP₁.

Furthermore, by being an adjunct, the optionality of the comitative cluster [PP *with* DP₂] is permitted only in (43b); by being able to inherit case feature from DP₁, the distribution of the complex cluster [DP DP₁ *with* DP₂] in subject position is allowed only in (43b); by an obligatory raising of DP₁ in (42b), the complex cluster [DP DP₁ *with* DP₂] takes A'-movement like topicalization only in (43b); by a default grammatical principle, the presence of a plural feature with a singular DP₁ is found only in (42b). In both (42b) and (43b), however, the comitative cluster [*with* DP₂] may be moved to sentence-initial A'-positions either by remnant movement of the complex cluster that contains the trace of DP₁, as in (42b) and (43b), or by movement of the comitative PP adjunct alone, as in (43b).

With the above postulations and the assumption that the complex DP clusters in (42b) and (43b) are base-generated in sentence-final positions, Zhang (2007) claims that in English, the grammaticality contrasts between the symmetrical (44a-d) and the asymmetrical (45a-d) can be properly accounted for.

English (Zhang 2007)

- (44) a. John is friends *(with Bill).
 b. *John with his wife collided.
 c. *The apple with the orange, Mary compared.
 d. With whom did you discuss linguistics?
- (45) a. John ate the apple (together with the orange).
 b. John with Bill by his side will drink beer.
 c. A mother together with her two children, Mary saw.
 d. Together with wine sauce, John ate the fish.

Though, as proposed in §3.2, in Paiwan, the comitative case markers *KATI/KATUA* may be said to have resulted from fusion of the grammaticalized comitative preposition *ka* with the personal noun class marker *ti*, on the one hand, and with the quasi-common noun class marker *tua*, on the other, there, however, appear reasons for the inapplicability of Zhang's analysis to Paiwan symmetrical/asymmetrical comitatives like (40) and (36).

To begin with, as shown by the grammatical (46), the considered complex nominal cluster is permitted in Paiwan to appear as subjects of symmetrical comitatives, an option that is disallowed in English (44b).

Paiwan

- (46) pataud-in ni kai a va'u KATUA paday.
 mix-PV Gen Kai Nom millet Com rice
 'Kai mixed the millet with the rice.'

Note that the complex nominal cluster in question is projected as KP, not as DP, in an overt case marking language like Paiwan. Therefore, in the Paiwan counterpart of English symmetrical (42b), the complex KP cluster need not inherit case feature from KP_1 and KP_1 also need not be obligatorily raised out of the complex KP cluster.

Next, in Paiwan asymmetrical comitatives like (35), the comitative case-marked cluster [$_{KP}$ *KATUA* DP] (or the comitative PP cluster [$_{PP}$ *ka tua* DP]) is associated with a non-case-marked instrumental bare noun that is lexically incorporated to verbal prefixes. Therefore, no projection of a complex nominal cluster exists in the Paiwan counterpart of English asymmetrical (43b).

Furthermore, in Paiwan symmetrical/asymmetrical comitatives, the comitative case-marked cluster [$_{KP}$ *KATI/KATUA* DP] (or the comitative PP cluster [$_{PP}$ *ka tua* DP]) cannot appear in A'-positions c-commanding the associated nominal (see also the discussion of (55) in §3.4). Therefore, neither the operation of remnant movement of the complex KP cluster nor that of movement of the comitative PP adjunct can take

place in Paiwan symmetrical/asymmetrical comitatives.

Finally, it seems rather arbitrary that in Paiwan, complex KP clusters in symmetrical comitatives also need to be analyzed as being base-generated in sentence-final positions, given the observation that, as shown in (46), they can appear as subjects.

The above grammaticality distinctions between English and Paiwan symmetrical/asymmetrical comitatives may have to do with the facts that the Paiwan comitative preposition *ka*, not its English counterpart *with*, is in the process of evolving into a comitative case marker and that Paiwan, not English, exhibits overt case marking. We shall leave this issue to further research.

It should be further pointed out here that in Paiwan, encoding of asymmetrical comitativity by means of verbs involving lexical noun incorporation is rather productive. To give one more kind of example, according to Tang (2010b), Paiwan bound spatial verbs may be classified as verbal prefixes or proclitics (cf. Wu 2004, 2009). Syntactic cliticization of spatial verbal proclitics to object nominals do not involve noun incorporation, as in (47c); affixation of spatial verbal prefixes, by contrast, may be done by the processes of lexical and syntactic noun incorporation, as in (47a) and (47b), respectively.

Paiwan

- (47) a. na-[sa-[pana]]-aken.
 Perf-<AV>go.to-river-1S.Nom
 ‘I went to the riverbank.’
- b. na-[sa-[tua pana]]-aken.
 Perf-<AV>go.to-Obl river-1S.Nom
 ‘I went to the riverbank.’
- c. na-sa-[tua pana ni kui]-aken.
 Perf-<AV>go.to-Obl river Gen Kui-1S.Nom
 ‘I went to Kui’s riverbank.’

The notions of distributivity and collectivity are encoded differently in Paiwan cases with lexical noun incorporation, as in (48a), and those with syntactic noun incorporation, as in (49b). In (48a) only collective reading is available, whereas in (49b) both distributive and collective readings are possible.

Paiwan

- (48) a. na-[sa-[pana]]-aken KATUA tapaw.
 Perf-<AV>go.to-river-1S.Nom Com barn.house
 ‘I went to the riverbank and the barn house at the same time.’

- b. *na-[sa-[pana KATUA tapaw]]-aken.
 Perf-<AV>go.to-river Com barn.house-1S.Nom
- (49) a. *na-[sa-[tua pana]]-aken KATUA tapaw.
 Perf-<AV>go.to-Obl river-1S.Nom and barn.house
- b. na-[sa-[tua [pana KATUA tapaw]]]-aken.
 Perf-<AV>go.to-Obl river and barn.house-1S.Nom
 ‘I went to the riverbank and the barn house at the same/different time(s).’

In Paiwan, in other words, lexically formed spatial and instrumental verbs can both license the comitative case marker *KATUA*. By contrast, syntactically formed spatial verbs, like other types of non-collective verbs, need to take the distributive/collective coordinator *KATUA*.

To summarize, it has been demonstrated in this section that Paiwan exhibits symmetrical and asymmetrical comitative constructions. Obligatory comitative expressions are subcategorized by collective verbs, whereas optional comitative elements are selected by non-collective verbs involving lexical noun incorporation. In Paiwan, while obligatory subcategorization of the comitative case markers *KATI/KATUA* (and preposition *ka*) is due to the s-selectional requirement of the argument structure of collective verbs, optional selection of the comitative case marker *KATUA* (and preposition *ka*) seems to have something to do with the particular involvement of lexical noun incorporation in verbal formation. Unlike the restrictive selection of the comitative case markers *KATI/KATUA* (and preposition *ka*), the distributive/collective coordinators *KATI/KATUA* can appear with verbs that are not formed by the process of lexical noun incorporation.

3.4 Comitative case markers *KATI/KATUA* vs. conjunctive coordinators *KATI/KATUA*

In this section, discussion is focused on syntactic and semantic comparison of the comitative case markers *KATI/KATUA* with the distributive/collective coordinators *KATI/KATUA*. It will be further evidenced that, as also shown in §3.3, besides verbs formed by lexical noun incorporation, only collective verbs can take the comitative case markers *KATI/KATUA* (and preposition *ka*).

To begin with, as exemplified in (49a-b), with syntactic noun incorporation, cliticization of the pronominal enclitic *-aken* to the syntactically formed spatial verb *sa-[tua pana]* ‘go to the riverbank’ needs to apply to the complex conjunctive cluster *pana KATUA tapaw* ‘riverbank and barn house’, as in (49b), but not to the external conjunct *pana* ‘riverbank’, as in (49a).

In Paiwan, the process of noun incorporation taking place at syntax, not in the lexicon, may involve oblique nominals co-occurring with stranded modifiers, as in (50b), as opposed to the ungrammatical (50a), with lexical noun incorporation.

Paiwan (Tang 2010b)

- (50) a. *na-[sa-[pana]]-aken ni kui.
 Perf-<AV>go.to-river-1S.Nom Gen Kui
- b. na-[sa-[tua pana]]-aken ni kui.
 Perf-<AV>go.to-Obl river-1S.Nom Gen Kui
 ‘I went to Kui’s riverbank.’

The observation that the operations of syntactic N-reanalysis and noun incorporation of the oblique marker *tua* and the noun *pana* are permitted in (50b), but not in (49a), suggests that in (49a) the form *KATUA* functions as a coordinator. Consequently, no conjuncts in (49a) can be separately extracted to undergo the process of syntactic noun incorporation.

In the following discussion, non-collective verbs other than those involving syntactic noun incorporation will be examined against collective verbs to further support the claim that in Paiwan, an s-selectional requirement of comitativity is observed with different verb types. Specifically, it will be illustrated that intervening elements like arguments and adjuncts are allowed before the comitative case markers *KATI/KATUA*, but no distributional variation is permitted for external conjuncts of the nominal coordinators *KATI/KATUA*, regardless of whether they are interpreted as distributive or collective.

In (51a-b), for example, in which no plural interpretation is required for subjects or objects of non-collective verbs like *dukuL* ‘beat’ and *veLi* ‘buy’, readings of distributivity and collectivity are both available.

Paiwan

- (51) a. na-dukuL ti kui (KATI kai) tai muni.
 Perf-<AV>beat Nom Kui and Kai Obl Muni
 ‘Kui (and Kai) beat Muni (at the same/different time(s)).’
- b. na-v<en>eLi ti kai tua kun (KATUA vurasi).
 Perf-<AV>buy Nom Kai Obl skirt and sweet.potato
 ‘Kai bought a skirt (and sweet potatoes at the same/different time(s)).’

Non-collective verbs like *dukuL* and *veLi* differ from the previously discussed collective verbs like *pataud* ‘mix’ not only in the (im)possibility of distributive reading,

but also in the (im)possibility of distributional variation of nominals associated with the distributive/collective coordinators *KATI/KATUA* and with the comitative case markers *KATI/KATUA*.

That is, non-collective verbs that cannot license comitative denotation do not permit the intervention of adjuncts or arguments between external conjuncts and the distributive/collective nominal coordinators *KATI/KATUA*, as in (53a-b). Topicalization of external conjuncts is also disallowed with non-collective verbs, as in (53c). By contrast, collective verbs that can assign the semantic role of comitativity are not subject to conditions of these kinds, as in (52a-c).

Paiwan

- (52) a. na-mazepezep ti kai katiaw *(KATI kui).
 Perf-discuss Nom Kai yesterday Com Kui
 ‘Yesterday Kai discussed with Kui.’
- b. na-mazepezep ti kai tua azua a sengsengan
 Perf-discuss Nom Kai Obl that MM matter
 KATI kui.
 Com Kui
 ‘Kai discussed that matter with Kui.’
- c. ti kai na-mazepezep KATI kui tua azua a sengsengan.
 NCM Kai Perf-discuss Com Kui Obl that MM matter
 ‘(lit.) Kai, discussed that matter with Kui.’
- (53) a. *na-v<en>eLi ti kai katiaw KATI muni tua luang.
 Perf-<AV>buy Nom Kai yesterday and Muni Obl cow
- b. *na-v<en>eLi ti kai tua luang KATI muni.
 Perf-<AV>buy Nom Kai Obl cow and Muni
- c. *ti kai na-v<en>eLi KATI muni tua luang.
 NCM kai Perf-<AV>buy and Muni Obl cow

Though in Paiwan, collective and non-collective verbs may differ in the s-selection of comitativity encoded by case markers *KATI/KATUA* (and preposition *ka*), they both seem to be able to take the nominal coordinators *KATI/KATUA*, as in (54a-b).⁸

⁸ Alternatively, it may be proposed that in Paiwan, collective verbs do not take non-comitative conjunctive markers and a projection of &P may dominate symmetric comitative complexes encoded by prepositions/case markers. We shall leave this option to further research.

Paiwan

- (54) a. [azua a va'u KATUA paday] pataud-in ni kai.
that MM millet and rice mix-PV Gen Kai
'(lit.) The millet and the rice, were mixed by Kai.'
- b. [ti kui KATI kai] na-dukuL tai muni.
NCM Kui and Kai Perf-<AV>beat Obl Muni
'(lit.) Kui and Kai, beat Muni.'

And, as stated in §3.3, partly due to the involvement of grammaticalization of the comitative preposition *ka* to the comitative case markers *KATI/KATUA* and to the nominal coordinators *KATI/KATUA*, both the case marking and the conjunctive *KATI/KATUA* clusters need to be c-commanded by the preceding associated nominals, hence the ungrammaticality of (55a-b).

Paiwan

- (55) a. *KATI kui na-mare-cekel ti kai.
Com Kui Perf-Reci-marry Nom Kai
- b. *tengeLay KATI kui ti kai tai palang.
like and Kui Nom Kai Obl Palang

To give one more illustration of the examined morphosyntactic contrasts between the comitative case markers *KATI/KATUA* and the distributive/collective coordinators *KATI/KATUA*, in sentences like (56a), with verbs like *pucekel* 'marry', the form *KATI* is ambiguous with readings of distributivity and collectivity. By contrast, in those like (56b), with prefixation of *tara-* 'both', and in those like (56c), with that of *mare-* 'each other', the form *KATI* can only be interpreted as distributive and collective, respectively.

Paiwan

- (56) a. na-pucekel ti kai KATI kui.
Perf-marry Nom Kai Com/and Kui
'Kai and Kui married each other. / Both Kai and Kui got married.'
- b. tara-pucekel ti kai KATI kui.
both-marry Nom Kai and Kui
'Both Kai and Kui got married.'
- c. na-mare-cekel ti kai KATI kui.
Perf-Reci-marry Nom Kai Com Kui
'Kai and Kui married each other.'

And, as predicted, only in the comitative (57a) and (57c) can an intervening temporal be allowed.

Paiwan

- (57) a. na-pucekel ti kai ka-icavil KATI kui.⁹
 Perf-marry Nom Kai PTEM-year Com Kui
 ‘Last year Kai and Kui married each other.’
- b. *tara-pucekel ti kai ka-icavil KATI kui.
 both-marry Nom Kai PTEM-year and Kui
- c. na-mare-cekel ti kai ka-icavil KATI kui.
 Perf-Reci-marry Nom Kai PTEM-year Com Kui
 ‘Last year Kai and Kui married each other.’

Before concluding, note here that, as pointed out in §2, nominal conjunction by juxtaposition is allowed in Paiwan. However, as in (58d), the juxtaposed complex nominal cannot move together to undergo topicalization, an indication that in Paiwan, the structure of nominal juxtaposition should be analyzed as distinct from that of nominal coordination. Furthermore, the ungrammaticality of (58b-c) and the distributivity of (58e) also suggest that in Paiwan, the meaning of comitativity cannot be expressed in terms of nominal juxtaposition.

Paiwan

- (58) a. tengeLay ti kui ti kai tai muni.
 like Nom Kui Nom Kai Obl Muni
 ‘Kui and Kai like Muni.’
- b. *tengeLay ti kui ka-icavil ti kai tai muni.
 like Nom Kui PTEM-year Nom Kai Obl Muni
- c. *ti kui tengeLay ti kai tai muni.
 Nom Kui like Nom Kai Obl Muni

⁹ In cases like (i) below, to be compared with (57a), Kai and Kui also need to be interpreted as a couple.

Paiwan

- (i) na-pucekel ti kai ka-icavil tai kui.
 Perf-marry Nom Kai PTEM-year Obl Kui
 ‘Kai married Kui last year.’

- d. **ti* *kui* *ti* *kai* *tengeLay* *tai* *muni*.
 Nom Kui Nom Kai like Obl Muni
- e. *na-pucekel* *ti* *kui* *ti* *kai*.
 Perf-marry Nom Kui Nom Kai
 ‘Both Kui and Kai got married.’

Summing up, in addition to the exclusive interpretation of collectivity, the comitative case markers *KATI/KATUA* are morphosyntactically distinct from the distributive/collective nominal coordinators *KATI/KATUA*. In Paiwan, nominal juxtaposition cannot denote comitativity and its grammatical structure is different from that of nominal coordination.

4. Conclusion

It has been claimed in the above discussion that Paiwan exhibits synchronic coexistence of three diachronically related ways of encoding the notion of collectivity: the comitative preposition *ka*, the comitative case markers *KATI/KATUA*, and the distributive/collective coordinators *KATI/KATUA*, in which the merged *ti* and *tua* act as noun class markers rather than case markers. The semantically unambiguous comitative preposition/case markers are morphosyntactically different from the ambiguous conjunctive coordinators. Like disjunctive *manu*, conjunctive *KATI/KATUA* conjoin DP, not KP, arguments; however, unlike disjunctive *manu*, conjunctive *KATI/KATUA* do not take non-nominal conjuncts.

In Nanwang Puyuma, as pointed out in Teng (2011), the comitative case marker *KAY* has also in turn evolved to a nominal coordinator. In Nanwang, nevertheless, case marking *KAY* still co-exists with conjunctive *KAY*. Thus, our proposed synchronic coexistence of different degrees of grammaticalization of comitative markers is also found in Formosan languages other than Paiwan.

According to Teng (2011), in Nanwang Puyuma, the forms *aw* and *KAY* may both appear with reciprocal and non-reciprocal verbs; in Tamalakaw Puyuma, while non-reciprocal verbs can take inclusory pronoun strategy and *zi*, reciprocal verbs must take inclusory pronoun strategy. Only in the case of Nanwang reciprocal verbs with *KAY* and of Tamalakaw reciprocal verbs with inclusory pronoun strategy, however, can the *KAY*/inclusory pronoun clusters be immediately preceded by temporal/locative expressions and can the preceding associated nominals undergo topicalization.

It seems that Tamalakaw inclusory pronoun, not *zi*, can act as a comitative marker and, like Nanwang comitative marker *KAY*, the Tamalakaw comitative marker inclusory pronoun is also in the process of evolving into a conjunctive marker. Therefore,

Formosan languages like Nanwang/Tamalakaw Puyuma provide further evidence for our postulation of a grammatical distinction between non-ambiguous comitative markers and ambiguous conjunctive markers.

If the posited approach to the different ways of encoding comitativity and collectivity in Paiwan is on the right track, two implications will be briefly mentioned here. First, in Zhang's (2010) theory of coordination, external conjuncts may undergo optional movement if their coordinators have intrinsic nominal features and get interpreted as collective. In Paiwan and Nanwang/Tamalakaw Puyuma, conjunctive coordinators grammaticalized from comitative case markers can only conjoin nominals and can express distributivity/collectivity. Nevertheless, as shown in the paper, extraction of external conjuncts of such kind of coordinators will result in ungrammaticality, regardless of whether the nominal coordinators are interpreted as distributive or collective.¹⁰

Second, the observation that in Paiwan, conjunction by nominal juxtaposition cannot undergo topicalization also suggests that in Paiwan, the grammatical structures of nominal juxtaposition and nominal coordination need to be syntactically differentiated.

¹⁰ See also Tang (2010a) for a discussion of problems raised by Chinese comitative and conjunctive *gen* for Zhang's hypothesis.

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排灣語伴同結構與並列結構的比較

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當今排灣語具有三種語法史上相關的「共同」語意的表達方式：伴同介詞 *ka*，伴同格位標誌 *KATI/KATUA*，以及並列連詞 *KATI/KATUA*。被併入的 *ti* 與 *tua* 所標示的是名詞類別，而非格位劃分。獨具「共同」語意的伴同介詞及伴同格位標誌與兼具「各自」/「共同」語意的並列連詞分別具有不同的詞彙句法行為。非並列連詞 *manu* 以及並列連詞 *KATI/KATUA* 都只能後接不具格位標誌的限定名詞組論元，但唯獨並列連詞 *KATI/KATUA* 只可以連接名詞性的句法成分。卑南語也顯現類似的伴同/並列結構對比特徵，而這類的語法現象對並列結構的理論分析有重要的意涵。

關鍵詞：排灣語，伴同結構，並列結構，並列連詞，非並列連詞，各自語意，共同語意