

7 *Nominal aspect in Tsou**

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1 Introduction

It is generally held that temporal information is characteristic of verbal categories and normally marked on them. However, recent studies have shown that temporal marking is also possible and productive with nominal categories across many genetically unrelated languages (Nordlinger & Sadler 2004, 2008; Tonhauser 2007, 2008, among others). A grammatical analog in familiar languages like English is that adjectival modifiers which specify the temporal dimension of their head nouns, as in *the late president* and *a frequent flyer*, are paired up with tense/aspect projections in nominal syntactic structures (Cinque 2005). Along this line of thought, this paper investigates nominal aspect in Tsou, with a special focus on the nominal temporal marking particle *nia*.

Before entering into a detailed discussion of Tsou nominal temporal marking, a clarification on the term ‘nominal temporal marking’ is necessary. In this paper, the term refers to the temporal marking on a plain noun instead of a nominal derived from a verb. In the latter case, temporal marking is much expected and widespread cross-linguistically, given the verbal source of the nominal. In the Formosan language Mayrinax Atayal, for example, a derived nominal can carry mood/aspectual affixes: *paquriq* ‘thief’ is made up of the irrealis prefix *pa-* and the verb root *quriq* ‘steal’; *tinahuq* ‘cooked dish’ is made up of the perfective infix *<in>* and the verb root *tahuq* ‘cook’ (L.M. Huang 2002:211, 216).

In the Tsou literature, there is no systematic study of nominal temporal marking; neither is there any serious work done on the semantic functions and syntactic structure of the nominal temporal particle *nia*. Previous studies either leave *nia* undocumented or simply gloss it without any justification. The present paper attempts to fill the gap.

Tsou is an Austronesian language spoken in the southwest highlands of Taiwan with a population of around 4,610 people (up to August 2014). Like most of the other Formosan languages, Tsou is a predicate-initial language—the predicate of the sentence precedes

* This paper makes a substantial revision of H.Y. Chang (2012b) and replaces H.Y. Chang’s tense analysis with an alternative aspect analysis. For this significant improvement, I acknowledge the critical input from Jo-Wang Lin and Jackson Sun. I also thank Niina Zhang and Guglielmo Cinque for their helpful suggestions. I am indebted to my principal language consultants Mo’e Peongsi (Mo’o Peongsi), Mo’e Yakumangana (Mo’o Yakumangana), Sayung’e Yulunana (Sayungu Yulunana). Thanks are also due to my research assistants Chiafen Wu, Terry T.-W. Lee, and Maochang Ku for their assistance of various kinds. I am equally grateful to three anonymous reviewers and the editors of this volume for their useful comments. The usual disclaimer applies.

the associated arguments and adjuncts; functional categories precede the lexical categories they associate with. Grammatical transitivity is marked both on a lexical verb and its preceding realis auxiliary, as illustrated in Table 1.

Table 1: Markers of grammatical transitivity in Tsou (H.Y. Chang 2012a)

	Auxiliary	Lexical Verb
Intransitive (INTR)	<i>mi-, mo, moh-, moso</i>	<i><m>/Ø</i>
Transitive (TR)	<i>i-, os-, oh-</i>	- <i>a</i> (plain transitive, TR) - <i>i</i> (TR/High applicative, LA) - <i>(n)eni</i> (Instrumental applicative, IA)

Readers are referred to Zeitoun (2005) and H.Y. Chang (2012a-b, forthcoming) for further information about Tsou basic grammar. Given the fact that this paper is concerned with temporality in Tsou noun phrases, a brief introduction to its temporal marking system and noun phrase structure is provided below.

Let's consider Tsou temporal marking system first. In Tsou, temporal/mood information is encoded on the sentence-initial auxiliary rather than on the lexical verb following it (Zeitoun 1996, Weng 2000, S. Huang & Huang 2003). Auxiliaries distinguish between realis and irrealis mood.¹ In realis mood, the auxiliary additionally differentiates grammatical transitivity. The temporal/mood system is summarised in Table 2 below.

Table 2: The temporal, mood and aspectual system in Tsou²

Reality Transitivity	Realis INTR	TR	Irrealis INTR/TR			
Proximity						
Immediate to speech time	<i>mi-, mio, mo</i>	<i>i-</i>	Habitual —	Predictive <i>te-, tena, ta-</i>	Hypothetical <i>n-te</i>	Counterfactual —
Remote from speech time	<i>mo(h)- moso</i>	<i>o(h)-</i>	<i>la-</i>	—	—	<i>nto(h)-, ntoso</i>

Let's move on to look at Tsou noun phrase structure briefly. As in other Formosan languages, every argument noun phrase is normally preceded by a case marker in Tsou. It is worth noting that in addition to their grammatical functions, Tsou case markers also encode pragmatic and cognitive functions; specifically, they can indicate (i) whether the nominal argument they mark is visible at speech context, (ii) how far the nominal

¹ In S. Huang & Huang (2003), the realis-irrealis distinction is treated as a distinction between a future tense and a nonfuture tense. In this view, Tsou would be a tense language, an account different from ours.

² This table is based on Zeitoun (2005:279), with the substitution of the term 'grammatical transitivity' for the term 'voice'. For reasons why 'voice' markers are analysed as markers of grammatical transitivity, we refer to H.Y. Chang (2011).

argument is from the speaker, and (iii) how the nominal argument is perceived by the speaker, as summarised in Table 3 below.

Table 3: The case-marking system in Tsou³

Visibility	Proximity/Perceptibility	Ergative/Genitive	Oblique	Absolutive
Visible	proximal	<i>ta</i>	<i>ta</i>	<i>'e</i>
	intermediate	<i>ta</i>	<i>ta</i>	<i>si</i>
	distal	<i>ta</i>	<i>ta</i>	<i>ta</i>
Invisible	witnessed	<i>to</i>	<i>to</i>	<i>'o</i>
	unwitnessed	<i>no</i>	<i>no</i>	<i>na</i>
	perceptible	—	<i>nca</i>	<i>co</i>
	locative	—	<i>ne</i>	—

Within a case-marked nominal constituent, a demonstrative typically immediately follows the noun phrase it refers to, as in (1a-b).⁴

(1) Demonstrative and noun phrase

- a. *i-he=n'a* *nookai* *ne hucma* *'e* *emoo* *eni*.
 TR.REAL-3PL.ERG=DT move.into yesterday ABS house this
 'They just moved into this house yesterday.'
- b. *os-'o* *toveuc-i* *si* *bunvhu* *sico*.
 TR.REAL-1SG.ERG pick-LA ABS plum that
 'I picked up plums from that tree.'

In contrast, a numeral/adjectival modifier precedes the head noun, with a relativiser *ci* coming between the modifier and the modifiee, as in (2a-b).

(2) Numeral/Adjectival modifier and noun phrase

- a. *mi-'o* *at'uc* *to* *mo* *tuyu ci* *fe'u*.
 INTR.REAL-1SG.ABS raise[INTR] OBL INTR.REAL three REL pig
 'I raise three pigs.'
- b. *zou* *mululu* *ci* *yaefuefa* *'o* *mo'o*.
 EMP handsome REL young.man ABS PN
 'Mo'o is a handsome young man.'

In this regard, a numeral/adjectival modifier patterns with a relative clause. As in (3), a relative clause *mo m'out'ut'u* 'dozed off' precedes its head noun *oko* 'child', with *ci* intervening between them:

(3) Relative clause and noun phrase

- i-si* *p'-eac'-a* *'o* *mo* *m'out'ut'u ci* *oko*
 TR.REAL-3SG.GEN CAUS-stand-TR ABS INTR.REAL doze.off[INTR] GEN child
 'He asked the child who dozed off to stand up.'

³ For typographic convenience, this paper substitutes *ng* for the velar nasal, and *'* for the glottal stop.

⁴ This paper follows the Leipzig Glossing Rules, with the following amendments: APPL.H, high applicative; COS, change of state; D, deictic; DT, downtoner; EMP, emphatic marker; EVI, evidential; EXP, experiential perfect aspect; HAB, habitual; IA, instrumental applicative; LA, locative applicative; NPST, nonpast; PLN, place name; PN, personal name; REAL, realis; and SUB, subordinator.

The paper is organised as follows. Section 2 explores the semantic functions of *nia*. Section 3 identifies the grammatical status of *nia* and section 4 presents the syntactic structure of *nia*-phrases. Section 5 concludes the paper by discussing the typological and theoretical implications following from the proposed analysis as well as pointing out some directions for future study.

2 The functions of *nia*

In Tsou, nouns can be temporally marked by the morpheme *nia*, which Tung (1964) treats as a lexical item meaning ‘passed-away’ or ‘ancient’. However, the semantic functions of *nia* are much wider than previously thought. In what follows, I summarise the semantic properties of *nia*.

2.1 Discontinuous existence (DE)

The most prominent function of *nia* is to encode an entity that used to exist prior to the utterance time. In (4a), *nia* is associated with a person described by the kinship term *amo* ‘father’, who passed away prior to the utterance time. Likewise, in (4b), *nia* marks the proper name *beoku* and indicates that he is no longer alive.

(4) Kinship term and proper name

- a. *kuhcu* *to* ***nia*** *amo-’u* (*na*) *eni*.
 fur.clothing GEN NIA father-1SG.GEN ABS this
 ‘This is my deceased father’s fur clothing.’
- b. *moso* *la* *nana* *aacni* *yuso* *na* *la-si*
 INTR.REAL HAB reportedly always two ABS HAB-3SG.GEN
 ~~*keɸpɸ*~~ *no* ***nia*** *beoku*.
 bag GEN NIA PN
 ‘It is said that the late Beoku’s bags used to be always two (in a pair).’

This is the sense which Tung (1964) glosses as ‘passed-away/ancient’, a sense comparable to the English temporal adjective *late*, as indicated in the above translations. I label this function as discontinuous existence (DE), which is intended for a state of existence that holds prior to the speech time but discontinues from it.

The DE function of *nia* is also observed with terms of occupations and artifacts, as in (5).

(5) Terms of occupation and artifacts

- a. *mi=cu* *kuzo* *’o* ***nia*** *icangaya* *ta* *tapangɸ*.⁵
 INTR.REAL=COS bad ABS NIA chief GEN PLN
 ‘The chief of the Tapangɸ village passed away.’
- b. *i-si* *haf-a* *to* *chumu* *’o* ***nia***
 TR.REAL-3SG.ERG bring-TR ERG water ABS NIA

⁵ The predicate *kuzo* ‘bad’ is an euphemism for ‘die’ in this circumstance.

hiapeoza ne eovokutana.

bridge LOC PLN

‘The Eovokutana bridge was washed away by the flood.’

It even applies to temporal expressions, as in (5c). In (5c), the *nia*-phrase refers to a temporal point that passes by before the utterance time:

(5) Temporal expressions s

- c. *mi-'o* *maine'e* *to* *nia* *taseona-si* *ne*
 INTR.REAL-1SG.ABS return[INTR]OBL NIA morning-3SG SUB.PST
moso *meesi.*
 INTR.REAL rite
 ‘I went home in the morning on the day of war rite.’

Note that Tung’s characterisation does not work for (5b–c), though it holds true of (5a). A washed-away bridge is neither ‘dead’ nor ‘ancient’ in the usual sense; a past moment does not refer to its death either. Meanwhile, the entities encoded by *nia* in (5a–c) share the property of change of existence—they used to exist but are gone prior to the speech time.

2.2 Discontinuous identity (DI)

In this function, which I label as discontinuous identity (DI), *nia* refers to an entity that used to hold a certain identity/post but has lost it prior to the utterance time. In (6a), *nia* is concerned with an individual who used to be Mo’o’s wife but broke up with him prior to the utterance time; in (6b), *nia* describes an individual who used to be a township chief but has left the post before the speech time.

(6) Terms of relation/occupation

- a. *'a* *nia* *(la)* *vcong#* *to* *mo'o* *(na)* *taini.*
 EVI NIA HAB spouse GEN PN ABS 3SG.ABS
 ‘She is indeed Mo’o’s ex-wife.’
- b. *'a* *nia* *(la)* *ngocoo* *(na)* *taini.*
 EVI NIA HAB township.chief ABS 3SG.ABS
 ‘He is indeed an ex-township chief.’

In this usage, *nia* functions like the English temporal prefix *ex-*. The relevant individuals are still alive; they are neither dead nor ancient. Tung’s glossing leaves this function unexplained.

2.3 Discontinuous possession (DPoss)

In this function, *nia* describes an entity that used to belong to some individual but the possessive relation has ceased to exist prior to the speech time. I label this function as

discontinuous possession (DPoss). In (7a), the DPos applies to a building; in (7b), it applies to an animal.⁶

(7) Artifacts and animals

- a. *nia la emoo-'u (na) eni.*
 NIA HAB house-1SG.GEN ABS this
 lit. 'This is my former/old house.'
 'This house used to be mine.'
- b. *tonoi 'o nia av'u-'u.*
 that ABS NIA dog-1SG.GEN
 lit. 'That is my former/old dog.'
 'That dog used to be mine.'

Semantically, *nia* in this function is roughly equivalent to the English adjectives *former* and/or *old*. Tung's glosses ('ancient/'passed-away') fall short in accounting for this function. The *nia*-phrase does not refer to an ancient building in (7a); neither does it denote a dead dog in (7b).

2.4 Discontinuous appearance (DA)

In this usage, *nia* refers to an entity that used to be in good shape but broke down before the utterance time. I label this function as discontinuous appearance (DA). Note that the DA function usually applies to artifacts and natural kinds, as illustrated in (8a–c) and (9), respectively.

(8) Artifacts

- a. *mi=cu aemo'ʔ si nia ca'hʔ.*
 INTR.REAL=COS fall.apart[INTR] ABS NIA chair
 'The chair already fell apart.'
 Or 'The broken chair fell apart.'

⁶ There is a family name called *niahosa* in Tsou, which is arguably derived from *nia* plus *hosa* 'village'. In this case, *nia* seems to be in its COP function, meaning literally 'old'—*niahosa* means 'old village'. This analysis receives empirical support from the following examples. In (i), the two words *nia hosa* are kept separate and intended for the reading 'old village'. In contrast, in (ii), they are fused together into a compound and intended for a family name.

- (i) *oh la yon-i no nia takupuyanʔ 'o nia*
 TR.REAL HAB stay-LA GEN NIA PN ABS NIA
hosa ne sinvi.
 village LOC PLN
 'The Takupuyanʔ family used to live at the Sinvi's old village.'
- (ii) *na nia atuhcu mameoi ta niahosa zou bania*
 D NIA mainly elderly GEN PN EMP PN
na ongko-si.
 ABS name-3SG.GEN
 'As for the Niahosa's main ancestor, his name was Bania.'

According to my language consultants, the Niahosa family was the early settlers of the old village and hence named after it.

- b. *i-ta* *tuapuz-a* *si* *mi=cu* *kuzo ci*
 TR.REAL-3SG.ERG burn-TR ABS INTR.REAL=COS bad REL
nia *ca'h#*.
 NIA chair
 'He burned the broken chair.'

- c. *mi=cu* *k#htos#* *si* *nia* *ufi*.
 INTR.REAL=COS harden[INTR] ABS NIA rice cake
 'The rice cake has become stiff.'

(9) Natural kinds

- mi=cu* *tmuchumu* *si* *nia* *yuho*.
 INTR.REAL=COS turn.into.water[INTR] ABS NIA snow
 The snow has turned into water.'

Unlike the other functions discussed above, *nia* in this function finds no lexical equivalents in familiar languages like English. In the contexts comparable to those like (8)–(9), English normally does not employ any nominal temporal modifier. It is more natural for English speakers to refer to the artifact in (8a) as 'the chair' instead of 'the former chair' ('the late/ex- chair' is even worse). The same comment also applies to (8b–c). Likewise, English typically refers to the natural object in (9) as 'the snow' rather than 'the former snow'. Another two potential translations, 'the late snow' and 'the ex-snow', are utterly nonsense.

As an anonymous reviewer points out, *nia* may not contribute any semantic import to the sentence it patterns with in this function. The example in (9) is a good case in point. The DA reading may derive from the achievement verb *tmuchumu* 'turn into water' plus the marker of change of state *cu* rather than from *nia*. The function of *nia* may be to resonate with, rather than to convey, the DA sense here. This is exactly the reason why I use the term 'function' rather than 'meaning' in the cross-class description of *nia* and why I adopt a grammatical instead of a lexical approach to *nia*, as will become clearer in the subsequent sections. In the meantime, it should be noted that *nia* is not always "meaningless" in this function. Otherwise, we cannot explain why the *nia*-phrase in (8a) is ambiguous between 'a chair' and 'a broken chair'. On the second reading, *nia* does indeed express a DA sense.

2.5 Discontinuous function (DF)

As in its DA function, *nia* in a discontinuous function (DF) also applies to artifacts and natural kinds. In (10a), the bed is not broken down; instead, it has ceased to function as a bed prior to the speech time; in (10b), the place has changed its function from a tea garden to something else. Likewise, in (10c), the tree may not change its appearance, but it must involve a change of function—a change from a natural object to a building material.

(10) Artifacts, locations, and natural kinds

- a. *os-'o* *si-i* *to* *macucuma* *'o* *nia* *hopo-'u*.
 TR.REAL-1SG.ERG put-LA OBL things ABS NIA bed-1SG.GEN
 'I put things on my (former) bed.'

- b. *te-'o* *uh* *to* ***nia*** *'o~'ochia-'u*.
 IRR-1SG.ERG get.to[INTR] OBL NIA RED~tea-1SG.GEN
 'I will go to a place which used to be my tea garden.'
- c. *os-'o* *teai* *teova 'o* ***nia***
 TR.REAL-1SG.ERG make.TR hut ABS NIA
evi *to* *voyu*.
 wood GEN PN
 'I built a hut from Voyu's wood.'

A similar DF also applies to parts of animal. In (11a), the bearskin has ceased to be the fur-covered skin of a bear, instead, it has been used for a fur coat; in (11b), there is a change from goat flesh to roasted meat/food.

(11) Parts of animals

- a. *mi-ta* *maceof#* *to* ***nia*** *feo'u no* *cmoi*.
 INTR.REAL-3SG.ABS wear.INTR OBL NIA skin GEN bear
 'He wears a fur coat made of bearskin.'
- b. *i-ta=cu* *chu-a* *'o* ***nia*** *fou-moat#n#*.
 TR.REAL-3SG.ERG=COS roast-TR ABS NIA meat-goat
 'He has roasted the goat meat.'

In this function, *nia* indicates that something used to have a typical function but has lost it prior to the utterance time. As in its DA function, *nia* in this function is typologically rare. It does not have a lexical equivalent in familiar languages like English.

2.6 Summary

We have shown that *nia* can involve various states of affairs, including existence, identity, possession, appearance, and function, as summarised in Table 4 below.

Table 4: The functions of *nia*

Function	Reference	Application	English analogs
DE	an entity that used to exist but ceases to be so prior to the speech time	people (proper name), animal parts, artifacts	<i>late</i> (for people only), <i>old</i> (for artifacts), <i>last</i> (for time/event), <i>former</i> (for animal parts)
DI	an entity that used to hold a certain identity/post but loses it prior to the speech time	terms of relation/occupation	<i>ex-</i> , <i>former</i>
DPoss	an entity that used to belong to an individual but ceases to be so prior to the speech time	artifacts, animals	<i>former</i> , <i>old</i>
DA	an entity that used to be in good shape but ceases to be so prior to the speech time	artifacts, natural kinds	(Unattested)
DF	an entity that used to hold a typical function but loses it prior to the speech time	artifacts, natural kinds, parts of animal	(Unattested)

Despite their apparent interpretive diversity, the above-mentioned five functions of *nia* should have something in common. Among the five functions, the DI is most straightforward. As is well known, a nominal is semantically a predicate indicating its identity. For instance, a wife is a female partner of a male individual. The DI function of *nia* is arguably to terminate the identity of the female partner or her partnership with the male individual prior to the speech time. Similarly, the DPoss function is also predictable. Note that a possessive relation between an owner and an entity must involve the identity of the entity. For example, a dog of mine refers to a dog that bears the identity of being possessed by me. The DPoss function of *nia* is presumably to discontinue the identity of being possessed by me prior to the speech time. In contrast, the DE, DA, and DF functions of *nia* are less obvious. A nominal does not assert existence by itself, though it may implicate it. Neither does a nominal assert appearance nor function by itself. It is likely that like the DPoss function, the DE, DA, and DF functions are derived from the DI function, in conjunction with other elements in the discourse. Specifically, a reading like ‘my deceased/late father’, as observed with the expression *nia amo’u* in (4a), may involve the following derivations: (i) the nominal *amo* ‘father’ asserts its identity of being a father of some individual; (ii) the genitive pronoun ‘*u*’ ‘my’ introduces a possessor, relating it to the nominal; (iii) *nia* is responsible for disrupting the identity of the nominal prior to the speech time, and by transitivity, the disruption of the identity gives rise to that of the possessive relation; (iv) the disruption of the identity/relation leads to an inference of the entity described by the nominal as being deceased, as the reading ‘he is not my father any more at the present time’ is perceived as ‘he (my father) is no longer alive’. The same logic may carry easily over to the derivations of the DA and DF functions as well.

It appears that the above five functions have a shared grand function of disrupting the identity of an entity that has held during some time leading up to the speech time, taking the DI function as their common denominator. Taken analytically, the shared grand function can be schematised by two functional features in the grammar, namely, [+discontinuous] and [+past], with the understanding that the speech time is the present time in relation to an entity, hence the qualification ‘prior to the speech time’ equals to the past. These two functional features are both temporal in nature, thereby pointing to the conclusion that *nia* must be identified as a temporal marking particle. Important questions immediately arise: Does *nia* represent a lexical item, as suggested in the above English translations, or a functional category? If it is a functional category, does it encode aspect or tense? In the next section, I address these questions from a cross-linguistic perspective.

3 The categorical status of *nia*

3.1 *nia* as nominal

In addition to being temporal, *nia* should be nominal. As in the above examples (4)–(11), *nia* occurs exclusively in noun phrases. This is particularly evident in those

examples where the *nia*-phrases are led by case markers.⁷ The presence of case markers indicates that *nia* indeed falls within a nominal phrase. Note also that the *nia*-phrase and the head noun cannot be intervened by the relativiser *ci*. Take (8a) and (9a) as examples. The insertion of *ci* between *nia* and the head noun in these examples yields ungrammaticality, as shown in (12a–b).

(12) Artifacts

- a. * *mi=cu* *aemo'ʰ* *si* *nia* *ci* *ca'hʰ*.
 INTR.REAL=COS fall.apart[INTR] ABS NIA REL chair
- b. * *mi=cu* *tmuchumu* *si* *nia* *ci* *yuho*.
 INTR.REAL=COS turn.into.water[INTR] ABS NIA REL snow

This rules out the possibility that *nia* occurs either as a verb or an adverbial and the possibility that the *nia*-phrase functions as a relative clause. What it suggests is that the *nia*-phrase is a simple rather than a complex nominal phrase.

Negative evidence also lends support to the nominal analysis. On the one hand, *nia* differs significantly from a lexical verb or an adverbial verb in its distribution. A lexical verb or an adverbial verb can pattern with a clausal temporal/mood auxiliary, as in (13a) and (14a), but *nia* cannot, as in (13b) and (14b).

(13) *nia* vs a lexical verb/an adverbial verb

- a. *mi-ta* *i'vaho* *m-imo* *to* *emi*.
 INTR.REAL-3SG.ABS again[INTR] INTR-drink OBL wine
 'He drinks wine again.' (H.Y. Chang 2009:447)
- b. * *mi-ta* *nia* *m-imo* *to* *emi*.
 INTR.REAL-3SG.ABS NIA INTR-drink OBL wine

(14) *nia* vs an adverbial verb

- a. *la-ta* *asngʰcʰ* *baito* *to* *tposʰ*.
 HAB-3SG.ABS often[INTR] see.INTR OBL book
 'He reads books often.' (H.Y. Chang 2009:449)
- b. * *la-ta* *nia* *baito* *to* *tposʰ*.
 HAB-3SG.ABS NIA see.INTR OBL book

⁷ In (6a–b), repeated below as (ia)–(ib), the *nia*-phrases are not case-marked; instead, *nia* occurs in a phrase that looks like a verbal projection. Nonetheless, a closer look at the structure indicates that the phrase in question functions as a nominal predicate of the sentence.

- (i) a. *'a* *nia* *(la)* *(*ci)* *vcongʰ* *to* *mo'o* *(na)* *taini*.
 EVI NIA HAB REL spouse GEN PN ABS 3SG.ABS
 'She is indeed Mo'o's ex-wife.'
- b. *'a* *nia* *(la)* *(*ci)* *ngocoo* *(na)* *taini*.
 EVI NIA HAB REL township.chief ABS 3SG.ABS
 'He is indeed an ex-township chief.'

If *nia* serves as an adverbial or adjectival expression modifying the head noun in these sentences, it would be expected that a relativiser *ci* can come between them. This expectation is, however, not borne out. This indirectly supports the nominal predicate analysis.

On the other hand, *nia* cannot be replaced by a clausal auxiliary that performs a similar temporal function. Among the clausal auxiliaries, *moso* is the auxiliary that has the closest function to *nia*. However, *moso* cannot be in the place of *nia*. Compare:

(15) *nia* vs *moso*

- a. 'a ***nia***/**moso* (la) *vcong#* to mo'o (na) *taini*.
 EVI NIA/INTR.REAL HAB spouse GEN PN ABS 3SG.ABS
 'She is indeed Mo'o's ex-wife.'
- b. 'a ***nia***/**moso* (la) *ngocoo* (na) *taini*.
 EVI NIA/INTR.REAL HAB township.chief ABS 3SG.ABS
 'He is indeed an ex-township chief.'

It is evident that despite their shared functional property, *nia* and *moso* play a different grammatical role: the former is used for a past discontinuous property/relation in the nominal domain, whereas the latter serves to locate a remote past event/state in the verbal domain.

Another piece of evidence comes from the fact that a verb should be nominalised when it co-occurs with *nia*. As in (16a–b), the verb *mayasvi* 'to perform a war rite' and *esv#t#t#* 'decide' must take the syntactic nominaliser *hia* once it patterns with *nia*.

(16) *nia* and nominalisation

- a. 'o ***nia*** *(*hia*) *mayasvi* *ne-noaa'o* o'a *mo*
 D NIA NMLZ perform.rite long.time.ago NEG INTR.REAL
totiski ta hia mayasvi maitan'e.
 same OBL NMLZ perform.rite today
 'The way Mayasvi (war rite) was performed long time ago is not the same as the way it was performed nowadays.'
- b. 'o ***nia*** *(*hia*) *esv#t#t#* *ne* *moso* *auyu*
 D NIA NMLZ decide[INTR] SUB.PST INTR.REAL first
to#sv#sv#t#t#, o'a i-to hioa.
 discuss[INTR] NEG TR.REAL-1PL.ERG work.TR
 'As for the decision made at the last discussion, we did not implement it.'

This follows straightforwardly from the nominal analysis—as a nominal temporal marker, *nia* categorically selects (c-selects) a nominal complement.

Moreover, the nominal analysis accounts for a particular restriction on the distribution of *nia*. As in (17), *nia* cannot go with a temporal expression like *taseona* 'morning' if led by the particle *ne*.

(17) *nia* incompatible with a subordinate clause

- * 'a *mo-'u=cu* *bon#* *ne* ***nia*** *taseona*.
 EVI INTR.REAL-1SG.GEN=COS eat.INTR SUB.PST NIA morning
 Intended for 'I have eaten this morning.'

It is not the case that *nia* is incompatible with *taseona*. It was illustrated in (5), repeated below as (18), that *nia* has no difficulty in patterning with *taseona*.

(18) Temporal expressions

<i>mi-'o</i>	<i>maine'e</i>	<i>to</i>	<i>nia</i>	<i>taseona-si</i>
INTR.REAL-1SG.ABS	return[INTR]	OBL	NIA	morning-3SG.GEN
<i>ne</i>	<i>moso</i>	<i>meesi.</i>		
SUB.PST	INTR.REAL	rite.INTR		

'I went home in the morning on the day of rite.'

What is wrong in (17) should be a conflict between the grammatical status of *ne* and that of *taseona*. In Tsou, temporal expressions like *taseona* might surface as a verbal predicate.⁸ Thus, they are eligible for taking a clausal temporal/modal auxiliary without any lexical support and heading a subordinate clause, as in (19).

(19) *nia* replaced by *mo*

- a. *'a* *mo-'u=cu* *bon#* *ne* *mo*
 EVI INTR.REAL-1SG.ABS=COS eat.INTR SUB.PST INTR.REAL
taseona maitan'e.
 morning today
 'I have eaten this morning.'
- b. *mi-'o* *uh* *ne* *tfuya* *ne* *mo* *taseona.*
 INTR.REAL-1SG.ABS get.to[INTR] LOC PLN SUB.PST INTR.REAL morning
 'I went to Tfuya in the morning.'

As a verbal predicate, *taseona* is ineligible for patterning with the nominal *nia*. This is presumably the reason why (17) is ungrammatical. Note, however, that (18) is different from (17) in that in (18), *taseona* is nominalised, as evidenced by the fact that *taseona* is marked for the impersonal genitive *-si* in this case and the fact that the whole constituent is led by an oblique case marker *to*. Accordingly, *nia* is allowed to appear in this construction. In (17) and (19), the particle *ne* is treated as a subordinator rather than as a locative case marker on grounds that (i) in this function, *ne* heads a clausal modifier instead of a noun phrase (witness the presence of the clausal temporal/modal auxiliary *mo* and the absence of the relativiser *ci* in (19)); (ii) *ne* bears a past reading here, a property missing in its locative function; (iii) unlike its locative function, the subordinate *ne* contrasts with *ho* in temporal interpretation, as in (20), but *ho* does not occur as a case marker at all (see Table 3 for more details).

(20) *ne* vs *ho* =past vs nonpast

- a. *'a* *mo-'u=cu* *bon#* *ne* *mo*
 EVI INTR.REAL-1SG.ABS=COS eat.INTR SUB.PST INTR.REAL
taseona maitan'e.
 morning today
 'I have eaten this morning.'
- b. *te-to* *e'oh#* *ho* *taseona.*
 IRR-1PL.ABS leave[INTR] SUB.NPST morning
 'We shall leave tomorrow morning.'

⁸ Readers are referred to Pan (2010) for a more comprehensive description of temporal expressions in Tsou.

- c. *la muni 'o teo'ua ho mo taseona.*
 HAB crow[INTR] ABS chicken SUB.NPST INTR.REAL morning
 'Cocks crow in the morning.'

Based on the above observations, it is concluded that *nia* is a nominal temporal marker, signalling a past discontinuous property/relation in the nominal domain. The next question to ask is: Is *nia* an adjectival/adverbial modifier or a marker of tense/aspect?

3.2 Adjectival/adverbial or tense/aspectual?

In familiar languages like English, there are three ways to encode a past discontinuous property/relation within a nominal. The first way is through a temporal adjectival such as the English *late* in (21a). Alternatively, this notion can be represented by a relative clause that contains either a temporal adverbial such as the English *formerly* in (21b) or a past habitual perfect auxiliary such as the English *used to* in (21c).

- (21) Ways of encoding a past change of property/relation
 a. the late president (adjectival)
 b. the person who was formerly a president (adverbial)
 c. the person who used to be a president (tense/aspectual)

In this section, I argue that *nia* is a particle of tense/aspect but not exactly of the third option.

In section 1, I have demonstrated that in Tsou an adjectival modification is done through relativising the adjectival verb, as already shown in (2b), repeated below as (22). In (22), the concept 'a handsome young man' literally means 'a young man who is handsome', as evidenced by the presence of the relativiser *ci* coming between the modifier and the head noun.

- (22) Adjectival modifier as a relative clause
zou muululu ci yaefuefa 'o mo'o.
 EMP handsome REL young.man ABS PN
 'Mo'o is a handsome young man.'

Unlike an adjectival modifier, *nia* and the head noun cannot be intervened by *ci*, as in (23).

- (23) *nia* incompatible with *ci*
 a. * *kuhcu to nia ci amo-'u (na) eni.*
 fur.clothing GEN NIA REL father-1SG.GEN ABS this
 Intended for 'This is my deceased father's fur clothing.'
 b. * *'a nia (la) ci vcong# to mo'o (na) taini.*
 EVI NIA HAB REL spouse GEN PN ABS 3SG.ABS
 Intended for 'She is indeed Mo'o's ex-wife.'

This suggests that *nia* does not occur as an adjectival modifier like the English *late* and that *nia* is not an expression of the first means.

Meanwhile, *nia* does not surface as an adverbial modifier either. In Tsou, adverbial modifiers that express semantic notions such as frequency, manner, degree, and the like typically surface as verbs—they are inflected for transitivity and occur right after the temporal/modal auxiliary, as in (24).

(24) *nia* not as an adverbial modifier

- a. *mi-ta* *i'vaho* *m-imo* *to* *emi*.
 INTR-REAL-3SG.ABS again[INTR] INTR-drink OBL wine
 'He drinks wine again.' (H.Y. Chang 2009:447)
- b. *la-ta* *asnguc#* *baito* *to* *tpos#*.
 HAB-3SG.ABS often[INTR] see.INTR OBL book
 'He reads books often.' (H.Y. Chang 2009:449)

However, *nia* is morphologically invariant and cannot pattern with a clausal temporal/modal auxiliary, as already discussed in section 3.1. Furthermore, unlike an adverbial modifier, *nia* precedes rather than follows the habitual particle *la*, as already shown in (6), repeated below as (25) (see (24b) for a comparison).

(25) *nia* preceding *la*

- a. 'a ***nia*** *la* *vcong#* *to* *mo'o* (*na*) *taini*.
 EVI NIA HAB spouse GEN PN ABS 3SG.ABS
 'She is indeed Mo'o's ex-wife.'
- b. 'a ***nia*** *la* *ngocoo* (*na*) *taini*.
 EVI NIA HAB township.chief ABS 3SG.ABS
 'He is indeed an ex-township chief.'

Obviously, *nia* does not serve as an adverbial modifier like the English *formerly* and is thus not of the second option.

On the other hand, there are reasons to believe that *nia* encodes tense or aspect. As summed up in section 2, *nia* instantiates two functional features, namely, [+discontinuous] and [+past]. These two functional features are canonical features of tense/aspect. Recall also that *nia* precedes a habitual aspect particle, which suggests that it is situated above an outer/viewpoint aspectual projection. As will become clearer in section 4, this is a position of tense/aspect projection.

In what follows, I shall first determine whether *nia* represents nominal tense or nominal aspect and then return to the issue of its syntactic relation.

3.3 Nominal tense or aspect?

Given the past denotation of *nia*, it is very tempting to analyse it as a marker of past tense. However, the tense analysis leaves the other key functional feature of *nia* [+discontinuous] unaccounted for. A past tense does not assert discontinuity, as evidenced by the fact that a past state of affairs can extend over to the present (Tonhauser 2007:839; Lin 2007:248). Compare:

- (26) Arthur was sick, but he is still sick today. (Tonhauser, 2007:839)
- (27) John was swimming one hour ago and is still swimming now. (Lin, 2007:248)

In this regard, *nia* does not behave like a past tense marker at all.

Conceptually speaking, a tense analysis is disfavoured as well. As pointed out in Zeitoun (1996), Tsou is not a grammatical tense language. It is by no means reasonable to argue for a nominal tense analysis in a language without a verbal tense. After all, nominal tense is grammatically more marked than its verbal counterpart.⁹

Further evidence from the grammatical behaviour of *nia* also casts doubt on the past-tense analysis. Note that *nia* is not always obligatory. In its DA function, *nia* can be left out without affecting the meaning and grammaticality of the sentences, as in (28a–c).

(28) Optional *nia*

- a. *mi=cu* *aemo'ʔ* *si* (*nia*) *ca'hʔ*.
 INTR.REAL=COS fall.apart[INTR] ABS NIA chair
 'The chair already fell apart.'
- b. *i-ta* *tuapuz-a* *si* *mi=cu* *kuzo*
 TR.REAL-3SG.ERG burn-TR ABS INTR.REAL=COS bad[INTR]
ci (*nia*) *ca'hʔ*.
 REL NIA chair
 'He burned the broken chair.'
- c. *mi=cu* *kʰhtosʔ* *si* (*nia*) *ufi*.
 INTR.REAL=COS harden[INTR] ABS NIA rice.cake
 'The rice cake has become stiff.'

This differentiates *nia* from a marker of grammatical tense. As noted in Dahl (1985:24), Dahl & Velupillai (2005:266), and Haude (2011:17), a grammatical tense marking is normally obligatory. Take English, a tense language, as an example. As an uncompromising rule, every English sentence is required to make a grammatical tense distinction. Thus, even a nominal predicate requires an expletive linking verb to carry the tense-marking, as in (29):

(29) Obligatory tense-marking in English

Mary *(was) a good teacher.

From a grammatical system perspective, a nominal tense analysis is also doubtful. Note that the non-past counterpart of *nia* is *tena*, which has been proven to be a marker of irrealis mood instead of tense in the literature (Zeitoun 1996, Weng 2000) (See also Table 2). Compare:¹⁰

(30) *nia* vs *tena*=Past vs Irrealis

- a. *'a* *nia* *la* *ʋcongʔ-u* (*na*) *taini*. (Past)
 EVI NIA HAB spouse-1SG.GEN ABS 3SG.ABS
 'She/he indeed is my ex-wife/-husband.'

⁹ As a matter of fact, it is questionable whether nominal tense really exists in natural language, as addressed in Tonhauser (2007, 2008).

¹⁰ In the meantime, note that *nia* can co-occur with an irrealis auxiliary in the clausal domain, as will be exemplified in (49) in section 5. This also dismisses the analysis of *nia* as a past tense marker.

- b. *zou taini 'o tena-'u vcong#* (Irrealis)
 EMP 3SG ABS IRR-1SG.GEN spouse
 'He/She is my fiancé/fiancée.'

(31) *nia* vs *tena*=Past vs Irrealis

- a. *'o nia la kingatu zou mo'o.* (Past)
 D NIA HAB chief EMP PN
 'Mo'o is the ex-chief.'
- b. *'o tena la kingatu zou mo'o.* (Irrealis)
 D IRR HAB chief EMP PN
 'Mo'o is the chief-to-be.'

Besides, a tense marker typically occurs as a bound morpheme (Bybee et al. 1994). However, *nia* is a free particle. This is evidenced by the fact that *nia* and the head noun can be intervened by a free habitual particle *la*, as already illustrated in (30a) and (31a) above.

Accordingly, it is concluded that *nia* does not encode nominal tense. We are now left with the last option—*nia* as a marker of nominal aspect. In what follows, I shall argue that an aspect analysis is indeed on the right track.

Let's first examine one by one how an aspect analysis copes with the challenges that trouble a tense analysis. First, an aspect analysis faces no conceptual problem. As in other Formosan languages, aspect is attested in the Tsou verbal domain (Zeitoun 1996, Weng 2000). The realisation of nominal aspect in the language would be no surprise.

Second, an aspect analysis correctly predicts the [+discontinuous] feature of *nia*. It has been observed in the literature that continuity/discontinuity is an essential property of aspect (Comrie 1976; Dahl 1985; Chung & Timberlake 1985; Yeh 1996; Lin 2007, among others).

Also, an aspect analysis evades the obligatory requirement problem. Unlike a grammatical tense, a grammatical aspect is not always required in the surface syntax.¹¹ A well-known contrast is that in English, a completive aspect can be left unmarked, as in the a-example of (32), whereas its tense counterpart is obligatory throughout (32a–c).

- (32) a. Eva **closed** the door. (Klein 2009:40)
 b. Eva **has closed** the door.
 c. Eva **had closed** the door.

The aspect analysis is consistent with the fact that *nia* can be optional.

Finally, let's look at the challenge of morphological reduction. Unlike a grammatical tense marker, a grammatical aspect marker can be either free or bound. In English, for instance, the progressive aspect form is periphrastic, while the past tense form is suffixal. The aspect analysis is compatible with the fact that *nia* is morphologically free.

Readers may ask how the aspect analysis copes the problem concerning the past denotation of *nia*, a property which is generally believed to be associated with tense

¹¹ This contrasts with a lexical aspect, which in some languages such as Russian may be obligatory, as pointed out by an anonymous reviewer.

rather than aspect. In the next section, I propose an experiential perfect analysis, which I believe can tackle the problem nicely.

3.4 Perfect *nia*

Perfect is of the aspect category, not of the tense category, as indicated by the fact that a perfect can be further specified by a tense, hence the name past, present, and future perfect. While a perfect aspect is composed of several subtypes, what concerns us here is the experiential perfect aspect, as defined in (33) and illustrated in (34) below.¹²

(33) Experiential perfect (Based on Comrie 1976:58)

The experiential perfect indicates that a given situation has held at least once during some time leading up to a reference time.

(34) Bill has been to America. (Comrie 1976:59)

In this view, an experiential perfect must refer to a state of affairs holding prior to a reference time but discontinuing from it. If the reference time is the present, the state of affairs asserted by an experiential perfect will be anchored in the past. This is exactly the situation with (34). In uttering (34) *Bill has been to America*, the speaker asserts that (i) Bill visited America some time in the past; (ii) Bill is not in America at the present time.

The same observation holds of the experiential perfect aspect *guo* in Mandarin Chinese. As noted in Iljic (1990), Yeh (1996), and Lin (2007), *guo* indicates that the situation it associates with must take place prior to a reference time but does not hold up to it. Accordingly, sentences like (35) are infelicitous since there arises a semantic contradiction: The continuation of the swimming event throughout the present asserted by the progressive aspect marker *zai* in the second proposition contradicts the discontinuity from the present asserted by the experiential perfect *guo* in the first proposition.

(35) Mandarin (Lin 2007:248; glosses mine)

*	約翰	一個	小時	前	就	游過	泳
*	Yuehan	yi-ge	xiaoshi	qian	jiu	you-guo	yong,
	John	one-CLF	hour	ago	JIU	swim-EXP	swim
	現在	還	在	游.			
	xianzai	hai	zai	you.			
	now	still	PROG	swim			
	'John swam one hour ago and now is still swimming.'						

In other words, an experiential perfect carry two functional features at a time, namely, [+discontinuous] and [+anterior].

The first functional feature of *nia* matches that of an experiential perfect. The other functional feature [+past] of *nia* can be subsumed under the functional feature [+anterior]

¹² Despite its reference to the past, a past perfect is irrelevant here. According to Comrie (1976: 53), a past perfect, as in *She had fell asleep when the phone rang last night*, relates a past state (*she fell asleep*) to an earlier situation (*the phone rang*); in other words, both situations in a past perfect are temporally located in the past. Note, however, that *nia* has a relevance at the present time.

of an experiential perfect in that [+past] must be [+anterior]: A past state of affairs must hold prior to a specific reference time—the present time. In light of the shared properties, I propose that *nia* be analysed as a marker of experiential perfect in the nominal domain, as analogous to the English *has been* and the Mandarin *-guo* in the verbal domain (with their morphological difference aside). Just like its verbal counterparts, the nominal experiential *nia* asserts a discontinuity of state of affairs from the present in the nominal domain. Note, however, that unlike an experiential aspect marker in the verbal domain, *nia* always sets its reference time at the present. Thus, *nia* realises a present perfect but not a past or future perfect.

4 The syntax of *nia*

This section discusses the syntactic status/position of *nia* and its relation to the head noun.

4.1 *nia* as a syntactic head

We have established in the foregoing sections that *nia* represents an experiential perfect aspect. In this section, I argue that *nia* occurs as a syntactic head of an experiential perfect project (abbreviated as ExpP).

Evidence for the head analysis of *nia* comes from the fact that *nia* can attract the aspectual down-toning clitic =*n'a*, as in (36).¹³

(36) *nia* as a clitic host

<i>mi=cu</i>	<i>aemo'ɰ</i>	<i>'o</i>	<i>nia=n'a</i>	<i>imucu.</i>
INTR.REAL=COS	fall.apart[INTR]	ABS	EXP=DT	PLN

‘The Imucu people with a small population have scattered around.’

In this respect, *nia* behaves like a typical syntactic head such as a temporal/modal auxiliary (arguably representing T), as in (37a) or a causative verb (representing *v*), as in (37b).

(37) =*n'a* and its syntactic heads

a. ***te-ko=n'a*** *tuocos-neni* *a'o* *no*
 IRR-2SG.ERG=DT ask-IA 1SG.ABS OBL
huphina-si *pohe-taini.*
 price-3SG.GEN corn-3SG.GEN
 ‘Would you please ask the price of his corn for me?’

b. ***poa=n'a*** *peteonav'-eni* *to* *av'u* *'o* *fuzu.*
 CAUS=DT chase.for a long time-IA OBL dog ABS wild.pig
 ‘They kind of sent dogs to chase the wild pig for a long time.’

Therefore, I argue that *nia* occurs as a syntactic head. Taking its functions into the picture, I further argue that *nia* heads an experiential perfect projection (written as ExpP).

¹³ The aspectual downtoner =*n'a*, which originates as an aspectual adverbial meaning ‘still’, serves to decrease the quantity of the people here.

4.2 *nia* above HabP

In terms of linear word order, *nia* precedes the habitual aspect particle *la*, which in turn precedes the head noun, as already exemplified in (25a–b), repeated below as (38a–b).

- (38) *nia* preceding *la*
- a. 'a ***nia*** *la* *vcong#* *to* *mo'o (na)* *taini*.
EVI EXP HAB spouse GEN PN ABS 3SG.ABS
'She is indeed Mo'o's ex-wife.'
- b. 'a ***nia*** *la* *ngocoo* *(na)* *taini*.
EVI EXP HAB township.chief ABS 3SG.ABS
'He is indeed an ex-township chief.'

This means that *nia* is merged above *la* and the head noun syntactically, given that Tsou is predicate-initial and that it is a configurational language. On the assumption that *la* heads a habitual aspect projection (labelled as HabP) and that *nia* heads an ExpP, the *nia*-phrases in sentences like (38a–b) can be graphically represented as follows:

- (39) [_{ExpP} *nia* [_{HabP} *la* [_{NP} *vcongu/ngooco*]]]

Note that *nia* and *la* combine directly with the head nouns without any relativiser in (40). This brings us back to the observation made in section 3.2 that the relation of *nia* to its head noun is neither of adjectival modification nor of relativisation. It seems that like a perfect auxiliary in the verbal domain (e.g., *have*-perfect in English), *nia* specifies the temporal aspect of the head noun in a c-commanding configuration. This amounts to the conclusion that *nia* is periphrastic.

Incidentally, the syntactic representation in (40) accords with what has been known as the T/A/A-architecture, where a perfect aspect tops all of the other viewpoint aspects (including a habitual aspect), as diagrammed below (Alexiadou et al. 2003:x) (the symbol '>' indicates 'dominate').

- (40) Tense > Perfect > Aspect > VP

4.3 *nia* under D

Attentive readers might have noticed that *nia*-phrases can be marked by case markers of various kinds, as summed up in the following examples:

- (41) *nia* and case markers
- | | | | | | | | |
|----|---------------------------------|--|--------------|--|-----------|-------------------|-----------------------|
| a. | <i>i-ta=cu</i> | | <i>chu-a</i> | | 'o | <i>nia</i> | <i>fou-moat# 'n#.</i> |
| | TR.REAL-3SG.ERG=COS | | roast-TR | | ABS | EXP | meat-goat |
| | 'He has roasted the goat meat.' | | | | | | |
-
- | | | | | | | | |
|----|--|------------------|-------------------|----------------|--|---------------|-------------|
| b. | <i>kuhcu</i> | <i>to</i> | <i>nia</i> | <i>amo-'u</i> | | (<i>na</i>) | <i>eni.</i> |
| | fur.clothing | GEN | EXP | father-1SG.GEN | | ABS | this |
| | 'This is my deceased father's fur clothing.' | | | | | | |
-
- | | | | | | | | |
|----|-------------------------------|----------------|------------------|-------------------|--------------|-----------|--------------|
| c. | <i>mi-ta</i> | <i>maceof#</i> | <i>to</i> | <i>nia</i> | <i>feo'u</i> | <i>no</i> | <i>cmoi.</i> |
| | INTR.REAL-3SG.ABS | wear[INTR] | OBL | EXP | fur | GEN | bear |
| | 'He wears bearskin clothing.' | | | | | | |

Given that Tsou case markers are deictic in nature, indicating the visibility, proximity, and perceptibility of the noun phrase they mark with respect to the spatial/cognitive deixis of the speaker (see Table 3), it is very likely that they contain a deictic ingredient, which heads a deictic phrase (DP).¹⁴ Apart from the semantic argument, there is an additional piece of syntactic evidence in favour of the DP-analysis. A case-marked noun phrase can be replaced by a demonstrative pronoun, with or without the case-marking by a particular case marker *na*, as in (42).

(42) Demonstratives' replacement of case-marked NPs

- a. *i-he=n'a* *nookai* *ne hucma* 'e ***emoo*** ***eni***.
 TR.REAL-3PL.ERG=DT move.into[INTR] yesterday ABS house this
 'They just moved into this house yesterday.'
- a'. *i-he=n'a* *nookai* *ne hucma* **(na)** **eni**.
 TR.REAL-3PL.ERG=DT move.into[INTR] yesterday ABS this
 'They just moved into this yesterday.'
- b. *os-'o* *toveuc-i* *si* ~~*bunvhu*~~ ***sico***.
 TR.REAL-1SG.ERG pick-LA ABS plum that
 'I picked up plums from that tree.'
- b'. *os-'o* *toveuc-i* **(na)** **sico**.
 TR.REAL-1SG.ERG pick-LA ABS that
 'I picked up plums from that.'

If a demonstrative pronoun represents a DP, the constituent it substitutes for should be a DP as well.

In the DP-analysis, *nia* should be situated under the D head, since *nia* follows, rather than precedes the case marker. Under this view, a DP containing *nia* can be schematised as follows.

(43) [_{DP} D [_{PerP} *nia* ...

This syntactic representation becomes more graphic in constructions where the DP containing *nia* occurs as a topic and is led by a deictic particle homophonous to a case marker. As in (44a–b), *nia* follows the deictic particle 'o and *na*, which presumably originate as an absolutive case marker (compare Table 3).

(44) *nia*-phrase as a Topic

- a. 'o *nia* *la* *kingatu* *zou* *mo'o*. (Past)
 D EXP HAB chief EMP PN
 'Mo'o is the ex-chief.'
- b. ***na*** *nia* *atuhcu* *mameoi* *ta* *niahosa* *zou*
 D EXP mainly elderly GEN PN EMP
bania *na* *ongko-si*.
 PN ABS name-3SG.GEN
 'As for the Niahosa's main ancestor, his name was Bania.'

¹⁴ It should be noted that the *D* stands for *deictic* rather than the usual *determiner* here.

It is noteworthy that *nia* has nothing to do with referentiality and hence does not occupy a determiner position. This is evidenced by the fact that in addition to definite DPs, *nia* can also appear in indefinite ones, as in (45a–b).

(45) *nia* and indefinites

- a. *pan to nia la huyu no fuzu tan'e.*
 there OBL EXP HAB trail GEN wild.pig here
 'There used to be trails of wild pigs here.'
- b. *pan to nia ca'h# tan'e.*
 there OBL EXP chair here
 'There used to be a(n) old/broken chair here.'

It becomes obvious that the experiential perfect *nia* is merged above a habitual projection and under a deictic phrase.

5 Conclusion

We have shown that *nia* occurs as a periphrastic auxiliary of experiential perfect aspect in the nominal domain, indicating a discontinuous identity of a nominal from the present time within a simple nominal phrase and that *nia* heads an ExpP, which is merged above a HabP and an NP but in the complement of a deictic head D. These findings have far-reaching typological and theoretical implications.

First, the findings lead to the conclusion that Tsou is a language with nominal aspect. In this regard, Tsou differs typologically from familiar languages like English. English does also have expressions of experiential perfect aspect in the nominal domain. Throughout the paper, we have seen a bunch of English adjectival temporal expressions (e.g., *former*, *late*, *old*, *last*, etc.) which translate Tsou *nia*-phrases. From a cartographic viewpoint (Cinque 1999, 2006), these adjectival modifiers may project a nominal ExpP. But what really distinguishes English from Tsou lies in the grammatical realisation of their nominal experiential perfect. In Tsou, *nia* has developed into an all-purpose grammatical auxiliary of experiential perfect in the nominal domain, whereas no such element is attested in English. This explains (i) why *nia* may appear as a dummy like expletive, e.g., in its DA function, where its appearance makes no semantic contribution, and (ii) why *nia* finds no comparable equivalents in English in some cases (e.g., in its DA and DF functions). In the Formosan literature, there has been no report of nominal aspect thus far. This article thus represents the very first attempt of its kind. It is desirable to investigate other Formosan languages and look into the question of whether they behave like Tsou in exhibiting nominal aspect.

Second, there has been a heated debate in the literature on whether nominal tense is attested in natural languages. Nordlinger & Sadler (2004, 2008) argue for a positive answer, while Tonhauser (2007, 2008) argues for a negative response. Our findings seem to be in favour of Tonhauser's position. With its past denotation, *nia* looks like a nominal marker of past tense at first glance. However, along with other facts, its discontinuous property renders the past-tense analysis untenable.

The existence of nominal aspect may revolutionise our understanding of grammatical aspect. It challenges the generally held view that grammatical aspect applies only to

verbal categories. As a matter of fact, a nominal can entertain grammatical aspect as well. More specifically, the periphrastic *nia* specifies the perfect aspect of the head noun in much the same way as the periphrastic perfect *have* specifies the temporal aspect of the head verb in English. In addition, recall that the temporal auxiliaries *tena* and *la* that apply to verbs are also realised in the nominal domain in a periphrastic manner, a fact that further confirms the existence of nominal aspect. An anonymous reviewer raised an important question whether *nia* is really discontinuous. He gave a comparable English sentence to illustrate his concern. As in (46), it seems that the *nia*-like experiential perfect modifier *former* may be continuous.

(46) His former wife is actually his current wife.

Note, however, that as the anonymous reviewer admits himself, there must be a disruption of the previous relation, i.e., a divorce, occurring between the two times of a husband-and-wife relation in (47). This amounts to saying that the first state of affairs asserted by *former* turns out to be still discontinuous. The same observation holds true of *nia* as well. Meanwhile, the same observation can carry over to sentences of paradox where a nominal indicating a future state co-occurs with another nominal indicating a past state. For instance:

(47) Her fiancé is actually her ex-husband.

Again, there are two times of a husband-and-wife relation involving here and there occurs a discontinuity of the relation in between. In this sense, the effect of a nominal experiential perfect particle under discussion is restricted to the nominal phrase where it appears—its scope of modification does not go beyond the nominal domain. Borrowing Nordlinger & Sadler's (2004) classification of nominal tense, the experiential perfect aspect in question can be labelled as an independent nominal aspect in the sense that it is independent either of the clausal aspect or the aspect specified in another nominal. This characterisation accounts for an additional fact in connection with *nia*: apart from a realis auxiliary, a *nia*-phrase can also go either with an irrealis auxiliary in the clausal domain. Compare:

(48) *nia* as an independent nominal aspect

- | | | | | | |
|----|-----------------------------------|------------------|-----------|-------------------|----------------|
| a. | <i>mi=cu</i> | <i>aemo'ʰ</i> | <i>si</i> | <i>nia</i> | <i>ca'hʰ</i> . |
| | INTR.REAL=COS | fall.apart[INTR] | ABS | EXP | chair |
| | 'The chair already fell apart.' | | | | |
| b. | <i>mi=cu</i> | <i>kʰhtosʰ</i> | <i>si</i> | <i>nia</i> | <i>ufi</i> . |
| | INTR.REAL=COS | harden[INTR] | ABS | EXP | rice.cake |
| | 'The rice cake has become stiff.' | | | | |

(49) *nia* as an independent nominal aspect

- | | | | | | | |
|----|--|----------------|-----------|-------------------|-------------|-----------------------|
| a. | <i>teav'a</i> | <i>payo'-a</i> | <i>'o</i> | <i>nia</i> | <i>hia</i> | <i>toʰsvʰsvʰtʰ</i> . |
| | NEG.IMP[TR] | forget-TR | ABS | EXP | NMLZ | discuss |
| | 'Don't forget the resolution of the last meeting.' | | | | | |
| b. | <i>ta-'u</i> | <i>tupuz-a</i> | <i>si</i> | <i>mi=cu</i> | <i>kuzo</i> | <i>ci nia ca'hʰ</i> . |
| | IRR-1SG.ERG | burn-TR | ABS | INTR.REAL=COS | bad[INTR] | REL EXP chair |
| | 'I will burn the broken chair.' | | | | | |

In this respect, *nia* contrasts significantly with the subordinators *ne/ho*. As noted in Pan (2010), *ne* encodes past but *ho* nonpast, as exemplified in (50a–b):

(50) *ne* vs *ho* = past vs nonpast

- a. *mi-'o* *uh* *ne* *maibay#* *ne* (mo) *taseona*.
 INTR.REAL-1SG.ABS get.to[INTR] LOC PLN SUB.PST INTR.REAL morning
 'I went to Chiayi this morning.'
- b. *ta-'u* *uh* *ne* *maibay#* *ho* (mo) *taseona*.
 IRR-1SG.ABS get.to[INTR] LOC PLN SUB.NPST INTR.REAL morning
 'I will go to Chiayi in the morning.'

In the spirit of Nordlinger & Sadler (2004), *ne/ho* can be treated as markers of propositional tense/aspect in the sense that they are interpreted in the propositional level. Compare the ungrammatical (51a–b) indicated below with their grammatical counterparts in (50a–b). It is evident that *ne* is required to co-occur with a realis auxiliary but *ho* with an irrealis auxiliary.

(51) Temporal concord constraint

- a. * *ta-'u* *uh* *ne* *maibay#* *ne* (mo) *taseona*.
 IRR-1SG.ABS get.to[INTR] LOC PLN SUB.PST INTR.REAL morning
- b. * *mi-'o* *uh* *ne* *maibay#* *ho*
 INTR.REAL-1SG.ABS get.to[INTR] LOC PLN SUB.NPST
 (mo) *taseona*.
 INTR.REAL morning

The independent-propositional temporal distinction is an important issue and deserves a more in-depth investigation. I leave it for future study.

Another issue I leave open is concerned with the diachronic source of *nia*. Paul Li (pers. comm., 21 January 2015) suggests that *nia* can be decomposed into *ni-* plus *-a*, with *ni-* as a reflex of the proto-Austronesian perfective marker **<in>*. This is an interesting suggestion, but short of direct empirical support. On the one hand, *ni-* is not attested elsewhere in the language, although it is indeed found in the so-called Tsouic languages Kananavu and Saaroa (H.Y. Chang 2006). On the other hand, there is no reasonable account for the occurrence of *-a*, which sounds like the transitive suffix in the language, in this context.

References

- Alexiadou, Artemis, Monika Rathert and Arnim von Stechow (eds.). 2003. *Perfect explorations*. Interface Explorations 2. Berlin: Mouton de Gruyter.
- Bybee, Joan, Revere Perkins and William Pagliuca. 1994. *The evolution of grammar: Tense, aspect, and modality in the languages of the world*. Chicago: University of Chicago Press.
- Chang, Henry Y. 2009. Adverbial verbs and adverbial compounds in Tsou: A syntactic analysis. *Oceanic Linguistics* 48.2:439–476.
- Chang, Henry Y. 2011. Tsou case marker revisited: Visibility, proximity and beyond. *Diversity of languages: Papers in honor of Professor Feng-fu Tsao on the occasion of his retirement*, eds. by Raung-fu Chung et al., 91–123. Taipei: Crane Publishing Co., Ltd.
- Chang, Henry Y. 2012a. A phase-based account of extraction asymmetries in Tsou and Chinese. Paper presented at the 20th Annual Conference of the International Association on Chinese Linguistics (IACL-20). 29–31 August. Hong Kong: The Hong Kong Polytechnic University.
- Chang, Henry Y. 2012b. Nominal tense in Tsou: *Nia* and its syntax/semantics. *UCLA working papers in linguistics* 17:43–58, ed. by Thomas Graf, Denis Paperno, Anna Szabolcsi, and Jos Tellings (also available at semanticsarchive.net).
- Chang, Henry Y. Forthcoming. Tsou. *Encyclopedia of Chinese language and linguistics*. Leiden: Brill.
- Chang, Melody Ya-yin. 2002. Nominalization in Tsou. *Language and Linguistics* 3.2:335–348.
- Chung, Sandra and Alan Timberlake. 1985. Tense, aspect, and mood. *Language typology and syntactic description, Vol. 3: Grammatical categories and the lexicon*, ed. by Timothy Shopen, 202–258. Cambridge: Cambridge University Press.
- Cinque, Guglielmo. 1999. *Adverbs and functional heads: A cross-linguistic perspective*. Oxford Studies in Comparative Syntax. New York: Oxford University Press.
- Cinque, Guglielmo. 2005. Deriving Greenberg's universal 20 and its exceptions. *Linguistic Inquiry* 36:315–332.
- Cinque, Guglielmo. 2006. *The cartography of syntactic structures, volume 4: Restructuring and functional heads*. Oxford studies in comparative syntax. Oxford; New York: Oxford University Press.
- Cinque, Guglielmo. 2011. A (partial) map of nominal functional structure. Invited talk at the Mini-workshop on Syntax. Hsinchu: National Tsing Hua University.
- Comrie, Bernard. 1976. *Aspect: An introduction to the study of verbal aspect and related problems*. Cambridge Textbooks in Linguistics. Cambridge: Cambridge University Press.

- Comrie, Bernard. 1985. *Tense*. Cambridge Textbooks in Linguistics. Cambridge: Cambridge University Press.
- Dahl, Östen. 1985. *Tense and aspect systems*. Oxford: Basil Blackwell.
- Dahl, Östen and Viveka Velupillai. 2005. Tense and Aspect. *The world atlas of language structures*, eds. by Martin Haspelmath, Matthew S. Dryer, David Gil, Bernard Comrie, 266–281. Oxford: Oxford University Press.
- Huang, Huei-ju. 2010. The syntax and pragmatics of clausal constituents in Tsou discourse. PhD dissertation. Taipei: National Taiwan University.
- Huang, Lillian M. 2002. Nominalization in Mayrinax Atayal. *Language and Linguistics* 3.2:197–225.
- Haude, Katharina. 2011. Tense marking on dependent nominals in Movima. *Tense across languages*, eds. by Renate Musan and Monika Rathert, 189–206. *Linguistische Arbeiten* 541. Berlin and Boston: Mouton de Gruyter.
- Huang, Shuanfan and Huei-ju Huang. 2003. On the status of reality marking in Tsou. *Taiwan Journal of Linguistics* 1.2:1–33.
- Iljic, Robert. 1990. The verbal suffix *-guo* in Mandarin Chinese and the notion of recurrence. *Lingua* 81.4:301–326.
- Klein, Wolfgang. 1994. *Time in language*. London: Routledge.
- Klein, Wolfgang. 2009. How time is encoded. *The expression of time*, eds. by Wolfgang Klein and Ping Li, 39–81. Berlin and New York: Mouton de Gruyter.
- Lin, Jo-Wang. 2007. Predicate restriction, discontinuity property, and the meaning of the perfective marker *guo* in Mandarin Chinese. *Journal of East Asian Linguistics* 16.3:237–257.
- Nordlinger, Rachel and Louisa Sadler. 2004. Nominal tense in crosslinguistic perspective. *Language* 80.4:776–806.
- Nordlinger, Rachel and Louisa Sadler. 2008. When is a temporal marker not a tense? Reply to Tonhauser 2007. *Language* 84.2:325–331.
- Pan, Chia-jung. 2010. *The grammatical realization of temporal expressions in Tsou*. LINCOM Studies in Austronesian Linguistics 7. Muenchen: Lincom Europa.
- Tonhauser, Judith. 2007. Nominal tense? The meaning of Guaraní nominal temporal markers. *Language* 83.4:831–869.
- Tonhauser, Judith. 2008. Defining crosslinguistic categories: The case of nominal tense (Reply to Nordlinger and Sadler). *Language* 84.2:332–342.
- Tung, T'ung-ho, with the assistance of S.H. Wang, T.K. Kuan, T.F. Cheng, and Margaret M. Yan. 1964. *A descriptive study of the Tsou language, Formosa*. Institute of History and Philology, Academia Sinica, Special Publications 48. Taipei: Academia Sinica. Reprinted in 1991 with notes and errata prepared by Paul Jen-kuei Li.
- Weng, Cui-xia. 2000. *zouyu he shaoyu de shi, tai, mao xitong zhi bijiao yu yanjiu* [A contrastive study of tense, mood and aspect systems in Tsou and Thao]. MA thesis. Chiayi: National Chung University. [In Chinese]

- Yeh, Meng. 1996. An analysis of the experiential *guo*_{exp} in Mandarin: A temporal quantifier. *Journal of East Asian Linguistics* 5.2:151–182.
- Zeitoun, Elizabeth. 1996. The Tsou temporal, aspectual and modal system revisited. *Bulletin of the Institute of History and Philology, Academia Sinica* 67.3:503–532.
- Zeitoun, Elizabeth. 2005. Tsou. *The Austronesian languages of Asia and Madagascar*, ed. by Alexander Adelaar and Nikolaus P. Himmelmann, 259–290. London and New York: Routledge.
- Zeitoun, Elizabeth, Lillian M. Huang, Marie M. Yeh, Anna H. Chang and Joy J. Wu. 1996. The temporal, aspectual, and modal systems of some Formosan languages: A typological perspective. *Oceanic linguistics* 35.1:21–56.