

On Negative Constructions in Paiwan*

Chih-Chen Jane Tang

Academia Sinica

Paiwan has various kinds of negative elements; they exhibit very different morphological, syntactic and semantic behavior. It is shown in this paper that these negative elements are of different types of projections, each of which is lexically specified for distinct c-selection, m-selection and grammatical features. The surface variations in negative constructions between Paiwan and certain other languages are claimed to be derived from these lexical properties in combination with the general principles of universal grammar.

Key words: negator, phrase structure, predicate, nonpredicate, complementizer, Paiwan, Formosan languages

1. Introduction

Cross-linguistically, elements expressing 'negation' have been found to exhibit several kinds of syntactic and morphological differences. To capture these variations, distinct claims have been made in the literature. With respect to projection-types, for instance, nonpredicate negative elements have been argued to project as the head of lexical category Adv (as in Baker 1991, etc.) or as the head of functional category Neg (as in Pollock 1989, Ouhalla 1991, etc.). Furthermore, Ouhalla (1991) proposes that functional categories should be lexically specified for categorial selection (c-selection), morphological selection (m-selection) and grammatical features. According to Ouhalla, the c-selectional and m-selectional properties of Neg elements may be parametrized as in (1) and (2), respectively.¹

* Parts of this paper were presented in Tang (1998), the 1999 linguistics colloquium at Academia Sinica, and the 1999 syntax seminar at Tsing Hua University. For their comments, we are grateful to all the participants, in particular, Ya-yin Chang, Yung-li Chang, You-ming Chen, Su-ying Hsiao, Paul Jen-kuei Li, Dorinda T.-H. Liu, Jackson Sun, Ting-chi Tang, Pei-chuan Wei, Marie M. Yeh, and Elizabeth Zeitoun. The Paiwan investigated in the paper is the so-called Northern Paiwan. For the collection of the data, we are grateful to Yue-zhu Chen, Fu-xin Pan, Xian-hui Tang and Bi-yan Zhuang. Thanks are also due to the National Science Council for supporting this research.

¹ Among others, Cinque (1995) also posits that the order of the affixes in the resulting verb

- (1) a. Neg c-selects VP.
 b. Neg c-selects Agreement/Tense.
- (2) a. Neg is bound.
 b. Neg is free.

In Paiwan there are at least four elements that carry the meaning of ‘negation’.² They are *ini*, *inika*, *neka* and *maya*.³ As pointed out in Tang (1998), these four negative elements exhibit very different syntactic, morphological and semantic behavior. Thus, for example, while cases like (3) are grammatical, those like (4) are not.

Paiwan (Tang 1998)

- (3) a. *inika na-v-en-eLi ti kui tua saviki.*
 INIKA Past-buy-AF Nom Kui Acc beetlenut⁴
 ‘Kui did not buy beetlenut.’
- b. *neka nu ku-paisu.*
 NEKA Nom my-money
 ‘I do not have money.’
- c. *maya a d-em-ukuL tai kai.*⁵
 MAYA A beat-AF Acc Kai
 ‘Do not beat Kai.’
- (4) a. **ini na-v-en-eLi ti kui tua saviki.*
 INI Past-buy-AF Nom Kui Acc beetlenut

reveals the respective attachment in the tree diagram. In Chomsky’s (1995) Minimalist Program, however, clause structure is assumed to be uniform across languages. Elements are projected fully inflected from the lexicon and via head movement they check their features against those in the functional heads.

² Other elements with the meaning of ‘negation’ include *iniananka*, *iniangaka*, *iniangataka*, *sikuda*, *paLaingi*, etc. They will also be discussed in the paper.

³ *inika* has a free variant *ika*. As will be shown in section 2, *inika* is not specified for a tense or aspect feature, hence the impossibility of treating *inika* as the PF counterpart of *ika*. By contrast, a difference in temporal or aspectual interpretation is found between predicates like AF *aya* ‘say’ and those like PF *in-aya*, as discussed in Tang (1999). Another distinction between *inika* and *in-aya* is that for penultimate-stress languages like Paiwan, while the first *a*-vowel is stressed in *aya/in-aya*, both *i*-vowels seem to be stressed in *ini/inika*.

⁴ Abbreviations used in the paper are:

AF: Agent Focus, PF: Patient Focus, Nom: Nominative, Acc: Accusative, Gen: Genitive, Past: Past Tense/Aspect, Prog: Progressive Aspect, Perf: Perfective Aspect, Imp: Imperative.

⁵ For a discussion of nonfinite complementizers like *a* in Paiwan, see Tang (1999). Also, in Paiwan two adjacent *a*-sounds will be pronounced as one *a*-sound. But in syntax, as will be clear from the discussions in the paper, both *a*-markers are present.

- b. *inika nu ku-paisu.
 INIKA Nom my-money
- c. *neka a d-em-ukuL tai kai.
 NEKA A beat-AF Acc Kai

Taking into consideration these and other theoretical issues as well as empirical facts, one main purpose of this paper is to study the phrase structures of elements expressing ‘negation’ in Paiwan. It will be shown that *ini*, *inika*, *neka* and *maya* are of different kinds of projection, each of which is lexically specified for distinct c-selection, m-selection and grammatical features. In addition, the surface variations in negative clauses between Paiwan and certain other languages will be shown to be derived from these lexical properties in combination with the general principles of universal grammar (UG).

2. *ini* vs. *inika*

ini and *inika* differ from one another not only in form but also in distribution. That is, *ini* can be used as a negative answer only to a certain kind of yes-no question, as in (5b) and (5d); it cannot be used to negate a predicate, as in (6), to be compared with (7).

- Paiwan (Tang 1998)
- (5) a. ti-kai ti-madu?⁶
 TI-Kai she
 ‘Is she Kai?’
- b. ini, inika ti-kai.
 INI INIKA TI-Kai
 ‘No, (she is) not Kai.’
- c. izua a su-paisu?
 have Nom your-money
 ‘Do you have money?’
- d. *ini, neka nu ku-paisu.
 INI NEKA Nom my-money
- (6) a. *ini ti-kai ti-madu.
 INI TI-Kai she
- b. *ini na-vaik ti kui.
 INI Past-go(-AF) Nom Kui

⁶ For an analysis of Paiwan noun-class markers like *ti-*, see Tang et al. (1997).

- (7) a. *inika ti-kai ti-madu.*
 INIKA TI-Kai she
 ‘She is not Kai.’
 b. *inika na-vaik ti kui.*
 INIKA Past-go(-AF) Nom Kui
 ‘Kui did not go.’

By contrast, while *inika* can be used to negate a predicate, as in (7), it cannot be used as a negative answer to any yes-no question. Hence the ill-formedness of (8b) and (8d).

- Paiwan (Tang 1998)
- (8) a. *ti-kai ti-madu?*
 TI-Kai she
 ‘Is she Kai?’
 b. **inika, inika ti-kai.*
 INIKA INIKA TI-Kai
 c. *izua a su-paisu?*
 have Nom your-money
 ‘Do you have money?’
 d. **inika, neka nu ku-paisu.*
 INIKA NEKA Nom my-money

The grammaticality distinction between (5b) and (8b, d) thus seems to suggest that *ini* and *inika* may be of different structures. To properly account for this and other relevant observations, *ini/inika* would be treated first as nonpredicates in section 2.1 and then as predicates in section 2.2.

2.1 As nonpredicates

2.1.1 *ini*

It has been mentioned in section 1 that nonpredicate negative elements may project as Adv or Neg. Thus, in view of the facts about (5) and (6), one postulation would be that, like English *no*, *ini* is a free morpheme which may head the projection of Adv or Neg. And it does not c-select any head as its complement.⁷

⁷ It will be pointed out later in this section that the AdvP hypothesis seems to raise more problems than the NegP hypothesis.

2.1.2 *inika*

2.1.2.1 The NegP hypothesis

2.1.2.1.1 C-selection

Next, let us turn to the discussion of the syntactic behavior of *inika*. Examples like (3a) and (7b) indicate that *inika* may negate AF nonstative verbs with temporal or aspectual bound morphemes like *na-*;⁸ those like (5b) and (7a) show that it may also

Note also that, as shown in the English translations of (5a-d), repeated below as (ia-d), *no* can be used in either type of yes-no question.

English

- (i) a. Is she Kai?
- b. No, she is not Kai.
- c. Do you have money?
- d. No, I do not have money.

A discussion will be given later in section 5 as to this kind of variation between languages like English and those like Paiwan.

⁸ Certain other types of predicates may also take *na-*; below are such sentences.

Paiwan

- (i) *na-ti-kai ti-madu.*
Past-TI-Kai she
'She used to be called Kai.'
- (ii) *na-sa'etu ti-madu.*
Past-sick(-AF) he
'He got sick.'
- (iii) *na-nguangua ti kai.*
Past-pretty(-AF) Nom Kai
'She used to be pretty.'
- (iv) *na-i-maza ti kui.*
Past-in-here Nom Kui
'Kui was here.'

While we leave the question to future research whether elements like *na-* should be treated as affixes or clitics, several things need to be pointed out here concerning the generation of such bound morphemes. A first question is whether *na-*, for instance, should be treated as a tense/aspect marker or as a temporal/aspectual adverb. In the case of the latter, two other questions may arise. That is, where is *na-* located and how is *na-* combined with the predicate? Among others, Alexiadou (1997) proposes that UG provides the two types of adverb licensing, Spec(ifier)-Head and Incorporation. In addition, he claims that aspectual and temporal adverbs are licensed respectively as specifiers of Aspect Phrase and Tense Phrase as well as that non-complement-type adverbs which form compounds with verbs result from Incorporation by means of Head-Merge, not of Adv-movement.

negate predicates in the form of noun. In addition to AF nonstative verbs and nouns, predicates that may follow *inika* include NAF nonstative verbs, as in (9); AF/NAF stative verbs, as in (10); adjectives, as in (11); and locative prepositions, as in (12).⁹

Paiwan (Tang 1998)

- (9) *inika v-in-eLi ni kai a kun.*
 INIKA buy-PF Gen Kai Nom skirt
 'Kai did not buy the skirts.'

For ease of presentation, elements like *na-* are treated in the paper as tense/aspect markers, but we leave the issue open to future research. If they should be treated as temporal/aspectual adverbs, they exhibit certain properties of Incorporation stated in Alexiadou (1997). For example, nothing can intervene between *na-* and the predicate, as in (v), and *na-* cannot be left behind when the predicate moves to C (see Tang 1997 and the discussion in section 2.2), as in (vi).

Paiwan

- (v) a. *na-vaik-aken.*
 Past-go(-AF)-I
 'I went.'
 b. **na-aken vaik.*
 Past-I go(-AF)
- (vi) a. *k-em-elang ti kui [tu-na-vaik ti kai].*
 know-AF Nom Kui TU-Past-go(-AF) Nom Kai
 'Kui knows that Kai went.'
 b. **k-em-elang ti kui [tu-vaik na- ti kai].*
 know-AF Nom Kui TU-go(-AF) Past Nom Kai

Note, however, that in Paiwan not all adverb-like elements are bound morphemes. Compare, for instance, the grammaticality contrast between (vii) and (viii).

Paiwan

- (vii) a. **uri-vaik uta-sun/ nutiaw-sun?*
 will-go(-AF) also-you tomorrow-you
 b. *uri-vaik-sun uta/ nutiaw?*
 will-go(-AF)-you also tomorrow
 'Will you also go?/Will you go tomorrow?'

Bound morphemes like *-anga*, which may be treated as an aspect marker or an aspectual adverb, nevertheless, behave like *na-*, as (viii) illustrates.

Paiwan

- (viii) a. *na-vaik-anga-aken.*
 Past-go(-AF)-ANGA-I
 'I have gone.'
 b. **na-vaik-aken-anga.*
 Past-go(-AF)-I-ANGA

⁹ We are assuming Ho's (1978) classification of predicates in Paiwan. Further research will be done on how to classify predicates in Paiwan.

- (10) a. inika k-em-elang ti kai tua azua a sengsengan.¹⁰
 INIKA know-AF Nom Kai Acc that A matter
 ‘Kai does not know that matter.’
 b. inika k-in-elang ni kai a azua a sengsengan.
 INIKA know-PF Gen Kai Nom that A matter
 ‘Kai did not know that matter.’
- (11) inika nguangua ti kai.
 INIKA pretty(-AF) Nom Kai
 ‘Kai is not pretty.’
- (12) inika i-maza ti kui.
 INIKA in-here Nom Kui
 ‘Kui is not here.’

However, stative verbs expressing the meaning of ‘have’ cannot be negated by *inika*. Ungrammatical sentences like (13c-d) are of this kind.

Paiwan (Tang 1998)

- (13) a. izua a ku-paisu.
 have Nom my-money
 ‘I have money.’
 b. neka nu ku-paisu.
 NEKA Nom my-money
 ‘I do not have money.’
 c. *inika izua a ku-paisu.
 INIKA have Nom my-money
 d. *inika nu ku-paisu.
 INIKA Nom my-money

Also, verbal roots cannot be negated by *inika*. Examine, for instance, cases like (14) and (15).

Paiwan

- (14) a. inika t-em-aLem ti kui tua saviki.
 INIKA plant-AF Nom Kui Acc beetlenut
 ‘Kui does not plant beetlenut.’

¹⁰ See Tang et al. (1997) for a discussion of *a* in Paiwan noun phrases.

- b. inika t-in-aLem ni kui a saviki.
 INIKA plant-PF Gen Kui Nom beetlenut
 ‘Kui did not plant the beetlenut.’
- c. *inika taLem ti kui tua saviki.
 INIKA plant Nom Kui Acc beetlenut
- (15) a. inika ru-taLem ti Kui tua saviki.¹¹
 INIKA often-plant-AF Nom Kui Acc beetlenut
 ‘Kui does not often plant beetlenut.’
- b. *inika ru-t-em-aLem ti Kui tua saviki.
 INIKA often-plant-AF Nom Kui Acc beetlenut
- c. *inika taLem ti kui tua saviki.
 INIKA plant Nom Kui Acc beetlenut

¹¹ Markers expressing ‘often’ vary in accordance with the types of the following predicates. For instance, as opposed to verbs like *taLem* ‘plant’ and *veLi* ‘buy’, which appear with *ru-*, as in (15a) and (i), those like *pedeLi* ‘laugh’ and *sa’etu* ‘sick’ take *ru-ka-*, but not *ru-*, as in (ii) and (iii).

Paiwan

- (i) a. *ru-ka-veLi ti-madu tua kun.
 often-KA-buy she Acc skirt
 b. ru-veLi ti-madu tua kun.
 often-buy she Acc skirt
 ‘She often buys skirts.’
- (ii) a. ru-ka-pedeLi ti-madu.
 often-KA-laugh he
 ‘He often laughs.’
 b. *ru-pedeLi ti-madu.
 often-laugh he
- (iii) a. ru-ka-sa’etu ti kai.
 often-KA-sick Nom Kai
 ‘Kai often gets sick.’
 b. *ru-sa’etu ti kai.
 often-sick Nom Kai

Note also that, like *na-*, *ru-* is a bound morpheme, as demonstrated in (iv) below.

Paiwan

- (iv) a. ru-veLi-sun tua saviki?
 often-buy(-AF)-you Acc beetlenut
 ‘Do you often buy beetlenut?’
 b. *ru-sun veLi tua saviki?
 often-you buy(-AF) Acc beetlenut

We leave to future research the morphological and syntactic properties of *ru-*. As for a discussion of the [+stative] feature of *ka-* in cases like (ia)-(iia), see Tang (2002).

The grammaticality distinction between (14a-b) and (14c) suggests that verbal roots without focus markers cannot follow *inika*. Note that, as is the case in other Formosan languages, focus markers in Paiwan, in particular AF markers, may be in the form of a zero morpheme. Thus, by contrast, predicates formed by verbal roots with markers like *ru-* ‘often’ can, nevertheless, be negated by *inika*, as (15a) demonstrates.

As for predicate complexes that may be preceded by *inika*, consider, for example, the following sentences.

Paiwan (Tang 1998)

- (16) *inika* *uri-vaik* *ti* *kai*.¹²
 INIKA will-go(-AF) Nom Kai
 ‘Kai will not go.’
- (17) *inika* '-em-au-'aung *ti* *kai*.
 INIKA cry-AF-Prog Nom Kai
 ‘Kai is not crying.’

Cases like (16) and (17) illustrate that, in addition to *na-*, AF verbs with inflectional bound morphemes marking future tense and progressive aspect may also appear with *inika*. Such elements, however, can only follow *inika*, as the ungrammaticality of (18) and (19) exemplifies.

Paiwan (Tang 1998)

- (18) **na-* *inika* *vaik* *ti* *kui*.
 Past INIKA go(-AF) Nom Kui

¹² In Paiwan *uri* exhibits two distinct properties. On the one hand, like *na-*, it is a bound morpheme which acts like a future-tense marker or an epistemic adverb, as in (16). On the other hand, cases like (i), to be compared with (16), suggest that *uri* may also function as a matrix predicate with the meaning of ‘want’.

Paiwan (Tang 1998)

- (i) (*inika*) *uri* *ti* *kai* [*a* *vaik*].
 INIKA want(-AF) Nom Kai A go(-AF)
 ‘Kai wants/does not want to go.’

Note that, as argued in Tang (1999), in (i) *a* functions as a nonfinite complementizer given the grammaticality contrast between (iia) and (iib).

Paiwan

- (ii) a. *uri* *ti* *kui* [*a*/*i* *t-em-aLem* *tua* *saviki*].
 want(-AF) Nom Kui A plant-AF Acc beetlenut
 ‘Kui wants to plant beetlenut.’
- b. **uri* *ti* *kui* [*a*/*i* *t-in-aLem* *a* *saviki*].
 want(-AF) Nom Kui A plant-PF Nom beetlenut

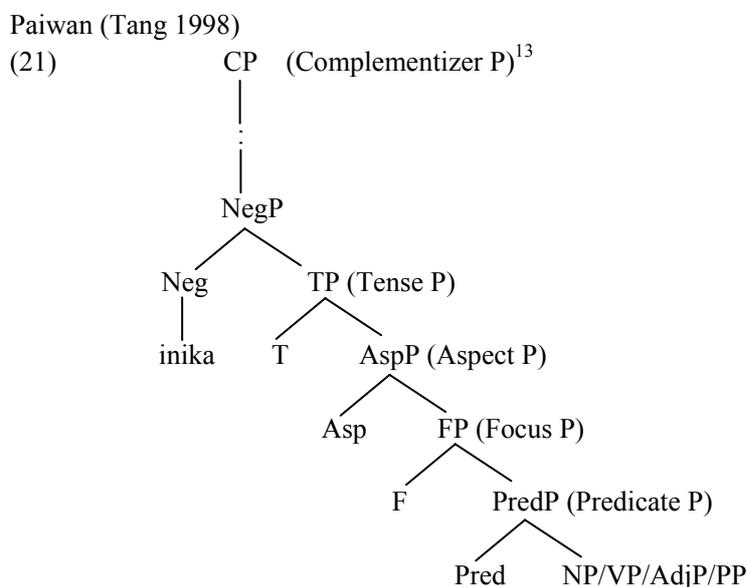
- (19) *uri- inika vaik ti kai.
will INIKA go(-AF) Nom Kai

On the basis of the data examined so far, the conditions on the distribution of *inika* are given in (20) below.

Paiwan

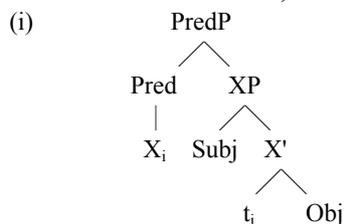
- (20) a. *inika* cannot be used as a negative answer.
b. *inika* may appear in sentence-initial position.
c. *inika* must precede the negated predicate.
d. *inika* cannot cooccur with *izua* 'have' or the verbal root.

To work out a phrase structure of *inika* that may capture (20) and other relevant facts, let us start by treating *inika* as heading functional category Neg. Given that in Paiwan *inika* must precede the verbal predicate with bound morphemes like *uri-* 'will', *na-* 'past tense/aspect', AF/NAF focus markers, etc., it follows that Neg element *inika* may c-select a head higher than the bare verbal predicate. A simplified phrase structure of Neg *inika* is given as in (21) below.



In (21) *inika* c-commands T, Asp, F, and Pred, thereby ruling out cases in which inflectional bound morphemes or predicates precede *inika* as well as those in which verbal roots are not marked with focus affixes. In addition, the functional projection of *inika* is head-initial, hence the possibility of appearing in sentence-initial position. With the c-selectional property of subcategorizing TP, it also follows that *inika* cannot be used as a negative answer to the yes-no question.

¹³ The so-called focus markers in Austronesian languages have been treated as topic markers, focus markers, voice markers, etc. Here we leave the issue open. Also, it has been proposed in Ouhalla (1991) and Bowers (1993), among others, that PredP is used as a cover term for maximal projections which function as predicate phrases. Ouhalla and Bowers, however, differ from one another in several ways. For instance, Ouhalla claims that the head of PredP is lexically instantiated by categories like N, V, Adj, and P. By contrast, Bowers posits that Pred c-selects N, V, Adj, or P, a proposal that is similar to Larson's (1988) VP-shell. In addition, like Larson, Bowers assumes the internal-subject hypothesis and head-movement of X to Pred, as shown in (i).



In this paper we assume the claims in (i) above.

Recall that ill-formed sentences like (13c-d), repeated here as (22c-d), show that *izua* ‘have’ cannot be negated by *inika*.

Paiwan (Tang 1998)

- (22) a. *izua* *a* *ku-paisu*.
 have Nom my-money
 ‘I have money.’
- b. *neka* *nu* *ku-paisu*.
 NEKA Nom my-money
 ‘I do not have money.’
- c. **inika* *izua* *a* *ku-paisu*.
 INIKA have Nom my-money
- d. **inika* *nu* *ku-paisu*.
 INIKA Nom my-money

A closer examination of grammatical possessive constructions like (22a-b) suggests three things. First, *izua* ‘have’ and *neka* ‘not-have’ act as one-argument verbal predicates. Second, the subjects of *izua* and *neka* are the noun phrase *ku-paisu* ‘my money’. In other words, the possessor appears as the modifier of the possessee, rather than the subject of the predicate. Third, the realization of nominative case changes in accordance with the types of the preceding predicates, which denote the referential properties of the subject noun phrases.¹⁴

In (21) *inika* heads functional projection NegP and thus it cannot act as a verbal predicate in cases like (22d). Why is it, however, that sentences like (22c) are ungrammatical, in which *izua* is the verbal predicate and thus *inika* does not project as V? There seem to be two different ways of accounting for this kind of ill-formedness. One way is to posit that the sequence ‘*inika* + *izua*’ needs to undergo a morphological rule by which *neka* is derived. Wang (1965), J. Huang (1988), and T. Tang (1994), among others, postulate an analysis of this sort to account for ill-formed Mandarin sentences like (23b).¹⁵ That is, in Chinese *bu* needs to be changed to *mei* when *bu* is adjacent to *you* ‘have’.

¹⁴ For a case account of *a* and *nu* in question, see Tang et al. (1997).

¹⁵ Among others, see Li (1971), Teng (1992), and T. Tang (1993) for an account of the relevant facts about Taiwanese negative elements.

Mandarin

- (23) a. wo you qian.
 I have money
 'I have money.'
 b. *wo bu you qian.
 I BU have money
 c. wo mei you qian.
 I MEI have money
 'I do not have money.'

Another way is to propose that, as opposed to English *not* in cases like (24), in which it is not specified for its temporal/aspectual property, those of *inika* are specified and are not compatible with those of *izua*, thereby ruling out (22c).

English

- (24) a. He is not a student.
 b. He was not in the store.
 c. You are not happy.
 d. I did not cry.
 e. She does not know you.
 f. You do not have money.

Huang (1993), for example, claims that in Wulai Atayal *ini?* is used to negate the performance of an event whereas *yat* is used to negate the presence of the opportunity/experience of an event.¹⁶ Hence the grammaticality contrast between sentences like (25) and (26) below.

Wulai Atayal (Huang 1993)¹⁷

- (25) a. ini? 9uray tali.
 Neg stupid Tali
 'Tali is not stupid.'
 b. yat 9uray tali.
 Neg stupid Tali
 'Tali is not stupid.'

¹⁶ Among others, a semantic approach to negative elements in languages like Seediq and those like Mandarin is also found respectively in G. Chen (1996) and in Wang (1964), J. Huang (1988), and T. Tang (1994). See also Li (1971), Teng (1992) and T. Tang (1993) for a discussion of the semantic behavior of the relevant facts in Taiwanese.

¹⁷ In this paper, all examples cited from other authors are given in their original form.

- (26) a. *ini? tayan tali.¹⁸
 Neg Atayal Tali
 b. yat tayan tali.
 Neg Atayal Tali
 ‘Tali is not Atayal.’

We shall discuss ungrammatical cases like Paiwan (22c) and (5d) again later in section 5.

The parametrization of the c-selection of Neg elements may capture the fact that languages tend to differ with respect to where they place the Neg element in the verbal complex. In languages like English and Turkish, for instance, Neg appears closer to the verb than Agr and T, as illustrated in (24) above and (27) below, respectively. By contrast, for languages like Berber, as (28) demonstrates, Neg appears outside T and Agr.

Turkish (Ouhalla 1991)

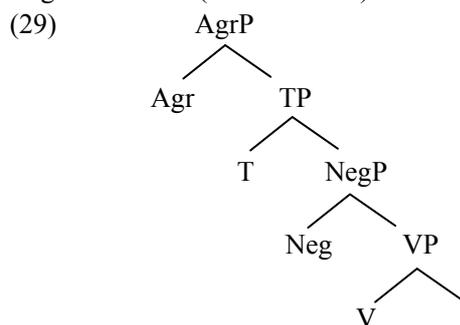
- (27) John mektubn gonder-me-di-O.
 John letter send-Neg-past (TNS)-3s (AGR)
 ‘John did not send a letter.’

Berber (Ouhalla 1991)

- (28) ur-ad-y-ugur zich.
 NEG-fut-3ms-go early
 ‘He will not leave early.’

To account for the above-given word order differences between these two kinds of languages, Ouhalla (1991) claims that Neg elements in English and Turkish have a simplified phrase structure as in (29) while those in Berber have a phrase structure as in (30).

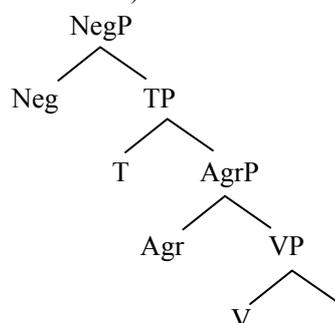
English/Turkish (Ouhalla 1991)



¹⁸ According to Huang (1993), in Wulai Atayal neither *ini?* nor *yat* may appear in negative possessive constructions, a fact that remains to be explained.

Berber (Ouhalla 1991)

(30)



Furthermore, as argued in Ouhalla, in languages like Turkish and Berber, where Neg, T, and Agr are all bound, the processes of successive cyclic head-movement of V to Agr and of V to Neg take place in (29) and (30), respectively. For languages like English, in which Neg is free, the verb cannot move to support the tense and agreement affixes because of the Head Movement Condition. Hence, the requirement of an operation of the language-specific *Do*-support.¹⁹

In addition to English/Turkish-type languages and Berber-type languages, Benmamoun (1989) points out that in the negative constructions of languages like Arabic the tense element is realized on the negative element while the agreement element is attached to the verb.

Arabic (Benmamoun 1989)

- (31) T-tullab-u lan y-adhab-uu.
 the-students-NOM NEG-fut (TNS) imp-go-3p (AGR)
 'The students will not go.'

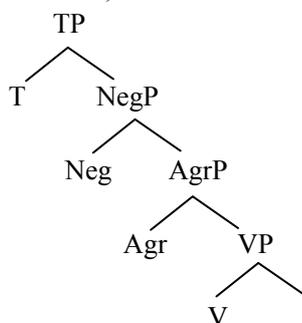
In view of observations like (31), Ouhalla (1991) posits a phrase structure as in (32) for Arabic-type languages. And the derivation of two separate complexes can be explained by means of the process of Neg-movement to T and V-movement to Agr.

¹⁹ By contrast, in the negative constructions of languages like Finnish, the negative element may bear tense and aspect markers, but the verb cannot.

Finnish (Bobaljik 1995)

- (i) a. mina ota-n tata.
 1SG take-1SG this-PAR
 'I will take some of this.'
 b. mina e-n ota mitaan.
 1SG NEG-1SG take what-PAR
 'I will not take any.'

Arabic (Ouhala 1991)
(32)



It should be clear from the discussions so far that, based on phrase structures like Paiwan (21), English/Turkish (29), Berber (30) and Arabic (32), the cross-linguistic variations in the word order between the Neg element and the predicate complex can be properly accounted for in terms of the c-selectional and m-selectional properties of lexical items which head the discussed functional and lexical projections.²⁰ For instance, a comparison of Paiwan (21) and Berber (30) suggests that Paiwan *inika* and Berber *ur-* may be both Neg elements projected higher than the tense elements. In other Formosan languages, there also seem to be negative elements that may be analyzed as heading Neg which in turn c-selects T. Consider, as an example, the following Atayal sentences.

Mayrinax Atayal (Huang 1995)

- (33) a. yakaat pa-qilaap ku' 'ulaqi'.
 Neg Fut.AF-sleep Nom.Rf child
 'The child will not sleep.'
- b. yakaat ta-tuting-un ni' ba'unay 'i' watan.
 Neg Red-beat-PF Gen Ba'unay Nom Watan
 'Ba'unay will not beat Watan.'
- (34) a. yakaat=cu m<in>aniq cku' qulih ka hani.
 Neg=1S.BN AF<Past>eat Acc.Rf fish Lin this
 'I have not eaten such kind of fish.'
- b. yakaat=mu t<in>uting 'i' ba'ay.
 Neg=1S.BG beat<Past.PF>beat Nom Ba'ay
 'I have never beaten Ba'ay.'

²⁰ For the m-selectional properties of Neg, T, Asp, and F in Paiwan, see footnotes 8 and 12 as well as the discussion in sections 2, 3, and 4.

Wulai Atayal (Huang 1995)

- (35) yat=ku' p-qaniq qulih.
 Neg=1S.BN Fut-eat fish
 'I will not eat fish.'

Wulai Atayal (Huang 1993)

- (36) yat m-in-kucu? tali.
 Neg M=Past=put.on.shoe Tali
 'Tali has not worn shoes.'

Sentences like (33)-(36) demonstrate that in Atayal verbs may be inflected by tense and focus markers. The resulting verbal complexes may in turn follow negative elements like *yakaat* in Mayrinax and *yat* in Wulai. Thus, it seems that Mayrinax *yakaat* and Wulai *yat* may be more of a phrase structure as in Paiwan (21).²¹

It is, however, not the case that in Formosan languages all negative elements c-selects T. For instance, Li et al. (1997) point out that in Maga Rukai future-tense prefix *n-* precedes negative prefix *i-*.

Maga Rukai (Li et al. 1997)

- (37) a. n-u-dali ma kusia.
 fut-realiz-rain fut tomorrow
 'It will rain tomorrow.'
 b. n-i-dalii (ma) kusia.
 fut-not-rain (fut) tomorrow
 'It will not rain tomorrow.'

Also, as given in Yeh et al. (1998), in Saisiyat negative element *?okik* follows tense element *?am*.

²¹ It has been stated in Huang (1995) that in Mayrinax Atayal nonfinite clauses are introduced by a linker *'i'*, while finite clauses are marked with a linker *cu'*. In addition, nonfinite clauses do not permit NAF verbs. Note, however, that in cases like (33a-b) and (34a-b), neither *'i'* nor *cu'* is found after *yakaat* and that the verbs can be inflected by NAF affixes. And, according to Huang, the focus markers in the negative *yakaat*-construction is the same as those in the affirmative declarative construction. Thus, it seems that *yakaat* may not be analyzed as a matrix verbal predicate (see also the discussion in section 2.2).

Similarly, Huang (1993) points out that in Wulai Atayal the verbs of nonfinite clauses cannot be marked with tense markers. In sentences like (35) and (36), nevertheless, the verbs following *yat* coöccur with tense affixes. Also, the same type of focus marker is found in the relevant affirmative construction. Hence, like *yakaat*, *yat* does not seem to act as a matrix verbal predicate (see also the discussion in section 2.2).

Saisiyat (Yeh et al. 1998)

- (38) βakiʔ rimʔan ʔam ʔokik ray tawʔan.
 grandpa tomorrow will Neg Loc house
 ‘Grandpa will not be home tomorrow.’

Furthermore, as illustrated in Maga Rukai (39) and Saisiyat (40), while tense elements precede *i-* and *ʔokik*, aspectual elements follow *i-* and *ʔokik*.

Maga Rukai (Li et al. 1997)

- (39) i-kanii la ki ali-ta.
 not-come imperf this-nom female-friend-1-pl-incl-b.g.
 ‘Our female friends have not yet come.’

Saisiyat (Yeh 1991)

- (40) a. ʔoyaʔ ʔokik maN Sebet ka korkoriN.
 mother Neg Asp beat Acc child
 ‘Mother is not beating the child.’
 b. sia k-om-oSaʔ “yako ʔokik ʔina S-om-ebet
 (s)he-Nom say-AF I-Nom Neg Asp beat-AF
 ka korkoriN.”
 Acc child
 ‘She/He said, “I have never beaten the child.”’
 c. yako ʔokik k-om-in-itaʔ hi-sia.
 I-Nom Neg see-AF-Asp Acc-(s)he
 ‘I have never seen him/her (before).’

Based on these limited sets of data, one postulation would be that while Maga Rukai *i-* and Saisiyat *ʔokik* may be projected lower than T, they may appear in a position higher than Asp, as (41) below demonstrates.²²

²² It should be noticed here that, unlike the presence of *inika* in Paiwan, that of *i-* in Maga Rukai will change the form of the following predicate, as illustrated in (37a-b). Below are some other relevant examples.

Maga Rukai (Li et al. 1997)

- (i) a. u-gia tutto.
 realis-leave Tutto-nom
 ‘Totto left.’
 b. i-giaa tutto.
 not-leave Tutto-nom
 ‘Totto does not leave.’

-
- (ii) a. u-rpingi nga qinee ki vakao.
realis-finish perf song this-nom Vakao-nom
'Vakao finished singing this song.'
- b. i-kanii la ki ali-ta.
not-come imperf this-nom female-friend-1-pl-incl-b.g.
'Our female friends have not yet come.'
- (iii) a. ma-curu kiki.
state-fat 1-sgl-nom
'I am fat.'
- b. i-klucuruu kiki.
not-fat 1-sgl-nom
'I am not fat.'
- (iv) a. amani kini kaka.
be 1-sgl-nom eldest
'I am the eldest.'
- b. i-kmanii kiki kaka.
not-be 1-sgl-nom eldest
'I am not the eldest.'

Cases like (37) and (i)-(ii) demonstrate the differences in the marking of aspect, whereas those like (iii)-(iv) exemplify the distinctions in the form of state predicates. In Li et al.'s analysis, *i-* is a prefix attached to the verb. See section 2.2 for a discussion of the (im)possibility of *i-* acting as a matrix predicate.

Note also that, according to Yeh (1991), *?okik* exhibits certain verbal properties. That is, as shown in (v) and (vi), it may take tense and aspect markers.

Saisiyat (Yeh 1991)

- (v) sia rim?an ?amkik ray taw?an.
(s)he-Nom tomorrow Neg Loc house
'She/He will not be at home tomorrow.'
- (vi) hini? ?aehae? taw?an ?-in-okik rasek-i noka ma?iLah.
this one house-Nom Neg-Asp live-PF Gen man
'This house was not lived in by anybody.'

A closer comparison of (40) and (vi), however, indicates two more things. First, in (40), not (vi), it is the verb following *?okik* that is inflected by aspectual elements. Second, as stated in Starosta et al. (1982), in Saisiyat, as opposed to other PF markers like *-in*, *-on*, *-oen*, and *-en*, *-i* is found only with verbs after negative elements like *?okik* and *?okay*. Instances like (vi) and (viii) are of this kind. Furthermore, AF markers after *?okay* must be in the form of zero morpheme, as demonstrated in (viii), to be compared with (vii) and (40).

Saisiyat (Yeh 1991)

- (vii) a. ?oya? S-om-ebet ka korkoriN.
mother-Nom beat-AF Acc child
'Mother beat the child.'

-
- b. ʔoyaʔ ʔokay Sebet ka korkoriN.
 mother-Nom Neg beat Acc child
 ‘Mother did not beat the child.’
- (viii) a. korkoriN Sebet-en ni-ʔoyaʔ.
 child-Nom beat-PF Gen-mother
 ‘The child was beaten by his/her mother.’
- b. korkoriN ʔokay Sebet-i ni-ʔoyaʔ.
 child-Nom Neg beat-PF Gen-mother
 ‘The child was not beaten by his/her mother.’

Two more relevant facts are worth mentioning here. One observation is that, according to Yeh (1991), in addition to state verbs, *ʔokik* may negate nonverbal predicates. *ʔokay*, by contrast, may co-occur only with action verbs.

Saisiyat (Yeh 1991)

- (ix) a. yako (ʔokik/*ʔokay) Saisiyat.
 I-Nom Neg Neg Saisiyat
 ‘I am (not) Saisiyat.’
- b. sia (ʔokik/*ʔokay) ray tawʔan.
 (s)he-Nom Neg Neg Loc house
 ‘She/He is (not) at home.’

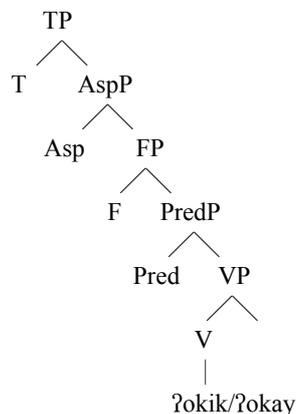
Another fact is that, as pointed out in Yeh (1991), the verbs after *ʔokay* cannot take tense or aspect markers.

Saisiyat (Yeh 1991)

- (x) a. yako kahiLaʔ m-in-oSaʔ ila hizaʔ.
 I-Nom yesterday AF-Asp-go to there
 ‘I went there yesterday.’
- b. yako kahiLaʔ ʔokay ʔoSaʔ ila hizaʔ.
 I-Nom yesterday Neg go to there
 ‘I did not go there yesterday.’
- (xi) a. pazay t-in-alek.
 rice-Nom cook-Asp
 ‘The rice has been cooked.’
- b. pazay ʔokay talek-i.
 rice-Nom Neg cook-PF
 ‘The rice has not been cooked.’

Thus, it seems that in Saisiyat *ʔokik* may project to two kinds of heads, one as Neg and the other as V, the latter of which may be represented in (xii) below (cf. Starosta et al. 1982). See section 2.2 for more discussion of the structures of *ʔokik* and *ʔokay*.

Saisiyat
(xii)



Yeh (1991) argues that in Saisiyat *?am* should not be treated as a verbal prefix and that it may express the meaning of ‘future tense’, ‘future possibility’ or ‘volition’. We leave the question to future research whether in Saisiyat verbal *?okik/?okay* may be analyzed as heading the functional projection of Mod(al) P.

In other Formosan languages there also appear negative elements with more than one type of projection. For example, in Chang (1996) and Li (1996a) it is pointed out that in Kavalan *mai* can take either verbal roots or inflected verbs, as illustrated in (xiiia) and (xiiib), (xiii), respectively.

Kavalan (Chang 1996a)

- (xiii) a. *mai=iku qan tu Raaq.*
 not want=1S.Nom eat Acc wine
 ‘I do not want to drink wine.’
- b. *mai=iku q-ɔ̄m-an tu Raaq.*
 not=1S.Nom eat-AV Acc wine
 ‘I did not drink wine.’

Kavalan (Li 1996a)

- (xiii) *mai tung-an-na si pamang, mai ya razat?*
 not kill-PF-3p not Nom man
 ‘If they were not killed, how come there appeared no one?’

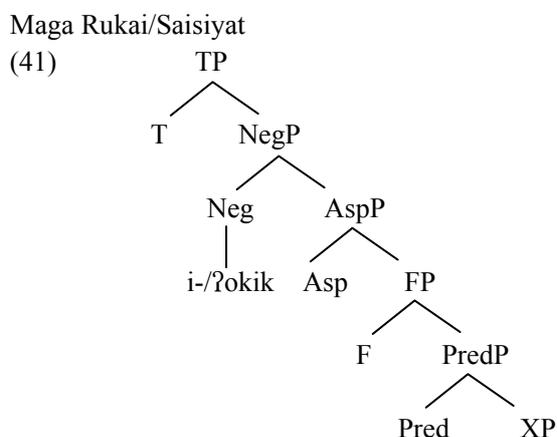
Chang (1998) thus posits phrase structures like (xv) and (xvi) for *mai* in (xiiia) and in (xiiib), (xiii), respectively.

Kavalan (Chang 1998)

- (xv)
-
- ```

 graph TD
 VP --> V
 VP --> NP_CP["NP/CP"]
 V --- mai

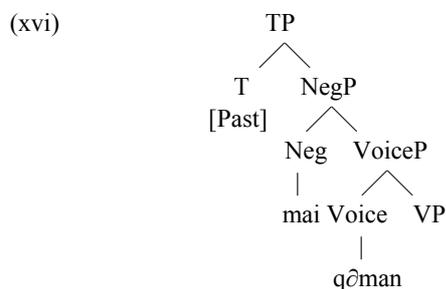
```



In other words, Maga Rukai and Saisiyat might pattern more like English than Paiwan with respect to the relationship between Neg and T, on the one hand, and between Neg and Asp, on the other. Note also that while Maga Rukai, Saisiyat, and English might have a similar phrase structure for the discussed negative elements, in each language T, Neg, and Asp may be lexically specified for distinct m-selection. Thus, the possibilities of head-movement of V and Neg may vary in accordance with these m-selectional properties.

#### 2.1.2.1.2 M-selection

On the basis of (21), let us now turn to the discussion of the m-selection of F, Asp, T, and Neg in Paiwan. As shown in footnotes 8 and 12 as well as the grammaticality contrasts between the (a) and (b-c) sentences of (42)-(44), no element can intervene between the verb and markers like *-em-*, *na-*, and *uri-*. And the same is found with *inika* in (45).



For a discussion of the dual functions of negative elements in other Formosan languages, see also the analysis of Paiwan *neka* in section 3.

Paiwan (Tang 1998)

- (42) a. t-em-aLem ti kui tua saviki.  
 plant-AF Nom Kui Acc beetlenut  
 'Kui plants beetlenut.'
- b. \*-em- ti kui taLem tua saviki.  
 AF Nom Kui plant Acc beetlenut
- c. \*-em- tucu taLem ti kui tua saviki.  
 AF today plant Nom Kui Acc beetlenut
- (43) a. na-vaik ti-madu.  
 Past-go(-AF) he  
 'He went.'
- b. \*na- ti-madu vaik.  
 Past he go(-AF)
- c. \*na- katiaw vaik ti-madu.  
 Past yesterday go(-AF) he
- (44) a. uri-v-en-eLi ti kai tua kun nutiaw.  
 will-buy-AF Nom Kai Acc skirt tomorrow  
 'Kai will buy skirts tomorrow.'
- b. \*uri- nutiaw v-en-eLi ti kai tua kun.  
 will tomorrow buy-AF Nom Kai Acc skirt
- c. \*uri- ti kai v-en-eLi tua kun nutiaw.  
 will Nom Kai buy-AF Acc skirt tomorrow
- (45) a. inika na-k-em-an katiaw ti kai tua vutu.  
 INIKA Past-eat-AF yesterday Nom Kai Acc meat  
 'Kai did not eat meat yesterday.'
- b. \*inika katiaw na-k-em-an ti kai tua vutu.  
 INIKA yesterday Past-eat-AF Nom Kai Acc meat
- c. \*inika ti kai na-k-em-an katiaw tua vutu.  
 INIKA Nom Kai Past-eat-AF yesterday Acc meat

In view of cases like (42)-(44) and other relevant data, Tang (1999) suggests that the verbal complexes may be derived by successive cyclic V-movement to T.<sup>23</sup> In other words, in Paiwan elements like *-em-*, *na-* and *uri-* may be lexically specified as bound morphemes.

It should be pointed out here that in addition to the just-given ungrammaticality facts about (45), with *inika*, substitution of the nominative noun phrases with bound

<sup>23</sup> For a discussion of other alternatives, see Tang (1999) and section 2.2.

pronouns like nominative *-aken* 'I' will not change the ill-formedness of sentences like (42b), (43b), (44c) and (45c).

Paiwan (Tang 1998)

- (46) \*-em-aken taLem tua saviki.  
AF-I plant Acc beetlenut
- (47) \*na-aken vaik.  
Past-I go(-AF)
- (48) \*uri-aken v-en-eLi tua kun nutiaw.  
will-I buy-AF Acc skirt tomorrow
- (49) \*inika-aken na-k-em-an katiaw tua vutu.  
INIKA-I Past-eat-AF yesterday Acc meat

Thus, it seems that, like *-em-*, *na-*, and *uri-*, *inika* may also act as a bound morpheme.

Notice, however, that the boundness property of functional categories need not prevent clitics from attaching to them. In Ouhalla (1991), for example, he states that in Berber both bound Neg and T elements can host clitics, as (50) and (51) illustrate, to be compared with (28).

Berber (Ouhalla 1991)

- (50) ur-t y-ufa Moha.  
NEG-it 3ms-found Moha  
'Moha did not find it.'
- (51) ad-asn y-ush tin'ashin g-u'shi.  
fut-them 3ms-give money in-evening  
'He will give them money in the morning.'

Note, furthermore, that in other Formosan languages negative elements have also been found with bound pronouns. Below are such examples in which the negative elements have been treated as Neg in the previous discussion.

Kavalan (Chang 1996)

- (52) mai=iku q- $\delta$ m-an tu Raaq.  
not=1S.Nom eat-AV Acc wine  
'I did not drink wine.'

- (53) taqa=iku m-etung tu t̄ɔraquq.<sup>24</sup>  
 not dare=1S.Nom AV-hit Acc hicken  
 'I do not dare to kill a chicken.'

Mayrinax Atayal (Huang 1995)

- (54) a. yakaat=cu m<in>aniq cku' qulih ka hani.  
 Neg=1S.BN AF<Past>eat Acc.Rf fish Lin this  
 'I have not eaten such kind of fish.'  
 b. yakaat=mu t<in>uting 'i ba'ay.  
 Neg=1S.BG beat<Past.PF>beat Nom Ba'ay  
 'I have never beaten Ba'ay.'

Wulai Atayal (Huang 1993)

- (55) yat=ku' p-qaniq qulih.  
 Neg=1S.BN Fut-eat fish  
 'I will not eat fish.'

As for tense and aspect markers in other Formosan languages, some may host clitics, but others cannot. The following examples are of this kind of contrast.

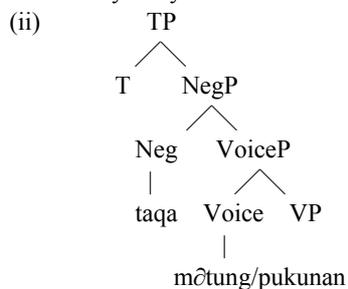
Mayrinax Atayal (Huang 1995)

- (56) pa-qaniq=cu.  
 AF.Fut-eat=1S.BN  
 'I will eat.'

<sup>24</sup> Based on sentences like (53) and (i) below, Chang (1998) posits a phrase structure like (ii) for *taqa* 'not dare'.

Kavalan (Chang 1998)

- (i) taqa pukun-na-su ya sunis.  
 not dare hit-PV-2S.Gen Nom child  
 'Why did you not dare to hit the child?'



Wulai Atayal (Huang 1993)

- (57) *musa'=saku' m-ihiy tali' suxan.*  
Asp=1S.BN AF-beat Tali' tomorrow  
'I will beat Tali' tomorrow.'

Mayrinax Atayal (Huang 1995)

- (58) *hani'an=ci' m-anig cu' iyok.*  
Asp=1S.BN AF-eat Acc.Nrf orange  
'I am eating an orange.'

Wulai Atayal (Huang 1995)

- (59) *nyux=ku' m-ima' tali'.*  
Asp=1S.BN AF-wash Tali'  
'I am washing Tali'.'

Taking into consideration all these cross-linguistic differences, let us reexamine the m-selectional property of *inika*. To begin with, consider first Mayrinax Atayal cases with bound pronouns attached to negative, tense, and aspect markers. In Huang's (1995) study of Mayrinax Atayal, *yakaat* is analyzed as a negator, *pa-* as a future-tense prefix, and *hani'an* as an aspectual auxiliary. After a closer examination of (54a) with *yakaat*, (56) with *pa-*, and (58) with *hani'an*, it is found that the first-person singular nominative bound pronoun is in the form of *-cu* in (54a) and (56), whereas it is written as *-ci'* in (58). Furthermore, according to Huang's data like (60a) below, there appears a linker *'i'* between the aspectual auxiliary and the verb, by which *-cu* is changed to *-ci'* in sentences like (58) and (60b).<sup>25</sup>

Mayrinax Atayal (Huang 1995)

- (60) a. *kia' 'i' ɿ-panaiq 'i' yaba'.*  
Asp Lin AF-fish Nom father  
'Father is fishing.'  
b. *kia'=ci' m-anig cu' iyok.*  
Asp=1S.BN AF-eat Acc.Nrf orange  
'I was eating an orange.'

However, as pointed out in footnote 21, such a marker is absent in (54a) and (56). It has also been mentioned in footnote 21 that in Mayrinax Atayal linkers are generally found

---

<sup>25</sup> For a discussion of the phonological conditions on the forms of bound pronouns in Mayrinax Atayal, see Huang (1995), among others. For a complementizer analysis of certain linkers in Mayrinax Atayal, see Tang (1999), among others.

in complex sentences. These observations thus seem to indicate that (54) and (56) may not be complex sentences.<sup>26</sup> In addition, a further comparison of (54) and (56) suggests that, while *pa-* is a bound morpheme, *yakaat* is not, for only the latter is found with bound pronouns.<sup>27</sup>

If our discussion of Mayrinax Atayal so far is on the right track, then it seems that for languages like Mayrinax Atayal, some of the rules governing the host of bound pronouns are as in (61).

---

<sup>26</sup> As mentioned in footnote 21, Huang (1995) points out that in Mayrinax Atayal nonfinite complements are marked with *'i'*, in which NAF verbs are not allowed. For sentences with aspectual auxiliaries like *hani'an*, NAF verbs are, however, observed, as (i) illustrates.

Mayrinax Atayal (Huang 1995)

- (i) a. hani'an 'i' tuting-un=nia' 'i' yumin.  
 Asp Lin beat-PF=3S.BG Nom Yumin  
 'He is beating Yumin here.'  
 b. hani'an=nia' tuting-un ku' 'ulaqi'.  
 Asp=3S.BG beat-PF Nom-Rf child  
 'He is beating the child.'

In Huang's (1995) study of Mayrinax Atayal the so-called linkers may be identical in form to some of the case markers and may be of various kinds of grammatical function. For instance, according to Huang, *'i'* in question may also act as nominative and accusative markers. Therefore, one may wonder which kind of role *'i'* plays in sentences like (60) and (i). Note that, with the assumptions that bound pronouns in Mayrinax Atayal are not agreement markers and that finite complementizers will block clitic-climbing, it does not seem to be the case that *'i'* acts as a case marker or a finite complementizer in (60) and (i). It is also unlikely that the considered *'i'* acts as a nonfinite complementizer, for the verbal predicate may assign nominative case. We leave to future research the analysis of the different kinds of *'i'* in Mayrinax Atayal.

<sup>27</sup> There seems to be a piece of evidence for a claim that in (55) *yat* is also a free morpheme. Based on the data from Huang (1993), Wulai Atayal has two distinct negative elements in declarative constructions, one is *yat*, as given in (55) above, and another is *ini?*, as illustrated in (i) below.

Wulai Atayal (Huang 1993)

- (i) ini?-ku? qbaq m-kucu? iqas kucu?.  
 Neg-1S.BN able M-put.on.shoe new shoe  
 'I cannot wear new shoes.'

As shown in (55) and (i), while *ini?* differs from *yat* in the form of the verbs following them, they both can take bound pronouns. In addition, according to Huang, unlike *inika*, both *yat* and *ini?* can be used as negative answers for certain types of yes-no questions.

Mayrinax Atayal-type

- (61) a. [a predicate]  
b. [a lexical]  
c. [+free]

By contrast, Berber-type languages observe the following rules.

Berber-type

- (62) a. [a predicate]  
b. [a lexical]  
c. [a free]

Before postulating the conditions on the host of bound pronouns in Paiwan, it should be noted that it is not the case that *inika* cannot precede a nonverbal element. Compare, for example, (45a-c), (49), repeated here as (63a-d), with (64) as well as with (7a), (11), (12), repeated as (65).

Paiwan (Tang 1998)

- (63) a. *inika na-k-em-an katiaw ti kai tua vutu.*  
INIKA Past-eat-AF yesterday Nom Kai Acc meat  
'Kai did not eat meat yesterday.'  
b. \**inika katiaw na-k-em-an ti kai tua vutu.*  
INIKA yesterday Past-eat-AF Nom Kai Acc meat  
c. \**inika ti kai na-k-em-an katiaw tua vutu.*  
INIKA Nom Kai Past-eat-AF yesterday Acc meat  
d. \**inika-aken na-k-em-an katiaw tua vutu.*  
INIKA-I Past-eat-AF yesterday Acc meat
- (64) a. \**inika katiaw a na-k-em-an ti kai tua vutu.*<sup>28</sup>  
INIKA yesterday A Past-eat-AF Nom Kai Acc meat  
b. *inika ti-kai a na-k-em-an katiaw tua vutu.*  
INIKA TI-Kai A Past-eat-AF yesterday Acc meat  
'The person that ate meat yesterday is not Kai.'  
c. *inika-aken a na-k-em-an katiaw tua vutu.*  
INIKA-I A Past-eat-AF yesterday Acc meat  
'The person that ate meat yesterday is not me.'

---

<sup>28</sup> For a case/complementizer analysis of *a* in Paiwan equational/pseudo-cleft constructions, see Tang et al. (1997).

- (65) a. *inika ti-kai ti-madu.*  
 INIKA TI-Kai she  
 ‘She is not Kai.’
- b. *inika nguangua ti kai.*  
 INIKA pretty(-AF) Nom Kai  
 ‘Kai is not pretty.’
- c. *inika i-maza ti kui.*  
 INIKA in-here Nom Kui  
 ‘Kui is not here.’

In ill-formed (63b-d), *inika* is adjacent to nonverbal elements which do not act as predicates. By contrast, in well-formed (64b-c), with the so-called equational constructions, *inika* is adjacent to nonverbal predicates.<sup>29</sup> The same predicate-adjacency condition is also found in (63a) and (65a-c). And, of (63a), (64b-c), and (65a-c), the presence of predicate-bound pronouns like nominative *-aken* ‘I’ does not result in the ungrammaticality of sentences like (64c). This predicate/nonpredicate asymmetry thus seems to further support the postulation that in Paiwan *inika* may be a bound morpheme (cf. the discussion in (79), (81) and section 2.2).<sup>30</sup> Such being the case, the distinction

<sup>29</sup> Yeh et al. (1998) state that a linker *a* is always found after bound pronouns when the latter follows *inika*. Our observations, however, suggest that *inika* must be adjacent to a predicate, regardless of whether it is in the form of a bound pronoun.

Note also that *a* is permitted only when bound pronouns are attached to negative element *inika*, as sentences like (i) and (ii) indicate.

Paiwan

- (i) *katiaw na-vaik-aken (\*a).*  
 yesterday Past-go(-AF)-I A  
 ‘I went yesterday.’
- (ii) *nutiaw uri-vaik-sun (\*a)?*  
 tomorrow will-go(-AF)-you A  
 ‘Will you go tomorrow?’

<sup>30</sup> As discussed in Chiu & Tang (1998) and Tang (1999), the ungrammaticality of cases like (64a) is due to a condition that in Paiwan temporal expressions like *katiaw* ‘yesterday’, not those like *si-tiaw-an* ‘yesterday’, cannot serve as predicates.

Note that one may suggest that the ill-formedness of cases like (63b-c) may be attributed to a condition that in Paiwan temporal and topic expressions are not licensed by heads like T, Asp, F, or Pred in (21). An analysis along this line of thought, nevertheless, cannot capture the fact that (63d), not (64c), is ungrammatical. See also Tang (1999) and section 2.2 for a discussion of other relevant data.

Note also that, as predicted by our analysis, cases like (i)-(iii), not (iv), are grammatical, to be compared with (63b-d).

in the possibility of bound-pronoun cliticization between Paiwan sentences like (63d) and those like (64c), on the one hand, as well as between Paiwan (63d) and non-Paiwan (50)-(55), (57)-(59), (60b), on the other, may be accounted for in a principled way. That is, with respect to the cliticization of bound pronouns, Paiwan seems to differ from Mayrinax Atayal-type languages in that it does not require the nonboundness of the host.<sup>31</sup> However, unlike Berber-type languages, Paiwan may have an additional rule

---

Paiwan (Tang 1998)

- (i) inika na-vaik-aken.  
INIKA Past-go(-AF)-I  
'I did not go.'
- (ii) katiaw inika na-k-em-an ti kai tua vutu.  
yesterday INIKA Past-eat-AF Nom Kai Acc meat  
'Kai did not eat meat yesterday.'
- (iii) ti-kai inika na-k-em-an katiaw tua vutu.  
TI-Kai INIKA Past-eat-AF yesterday Acc meat  
'Kai did not eat meat yesterday.'
- (iv) \*-aken inika na-k-em-an katiaw tua vutu.  
-I INIKA Past-eat-AF yesterday Acc meat

<sup>31</sup> Based on the data from Liu (1996) and Zeitoun (1996), it seems that in Tsou the negative element *oʔa* is generated in a position higher than tense and auxiliary elements.

Tsou (Liu 1996)

- (i) a. la-'u asNUcU mimo to emi.  
tense-1sg often drink -AF obl liquor  
'I often drink wine.'
- b. oʔa la-'u asNUcU mimo to emi.  
Neg tense-1sg often drink -AF obl liquor  
'I do not often drink wine.'

Tsou (Zeitoun 1996)

- (ii) a. mi-ta eobako ta oko.  
AF-3S.BN beat-AF Obl child  
'He is beating the child.'
- b. oʔa mi-ta (s'a) eobako ta oko.  
Neg AF-3S.BN beat-AF Obl child  
'He is not beating the child.'
- (iii) a. os-ʔo eobak-a ʔe yangui ho moʔo.  
NAF-1S.BG beat-PF Nom Yangui and Moʔo  
'I have (just) beaten Yungui and Moʔo.'
- b. oʔa os-ʔo (s'a) eobak-a ʔe yangui ho moʔo.  
Neg NAF-1S.BG beat-PF Nom Yangui and Moʔo  
'I have not (just) beaten Yungui and Moʔo.'

Also, as pointed out in Yeh et al. (1998) and shown in (ib), (iib) and (iiib) above, bound pronouns are attached to the tense and auxiliary elements rather than *oʔa*. We leave to future

which requires *inika* to be attached to the predicate, as in the case of inflectional bound morphemes.<sup>32</sup>

### 2.1.2.2 The ModP/AdvP hypothesis

Before discussing whether *inika* may head the projection of lexical category Adv, two more things need to be mentioned here. First, is there any evidence for a claim that *inika* heads the functional projection of Modal (Mod) rather than Neg? That is, should *inika* be represented as (66) below, to be compared with (21)?

---

research the c-selection, m-selection, and grammatical features of *o?a* in relation to bound pronouns.

<sup>32</sup> The conditions on the attachment of bound pronouns in Paiwan will be discussed and revised in the remaining sections of the paper. Notice that there have been claims about the locality of the raising of bound pronouns. For example, as argued in Kayne (1989) and Ouhalla (1988), clitics are not subject to the Head Movement Condition, and, more generally, Relativized Minimality (see, for instance, Baker & Hale 1990 for a different viewpoint). In Paiwan bound pronouns like *-aken* ‘I’ are clitics rather than agreement markers for the following two reasons. First, they cannot be coreferential with another clausemate noun phrase, as in (i) below.

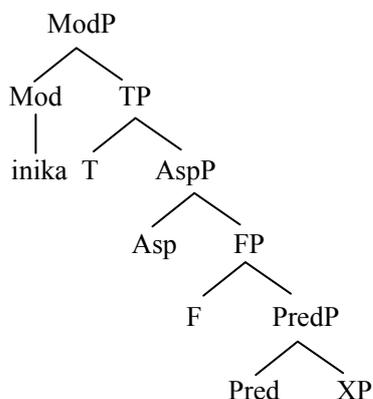
Paiwan

- (i) a. na-vaik-aken<sub>i</sub> (\*ti-aken<sub>i</sub>).  
 Past-go(-AF)-I I  
 ‘I went.’  
 b. uri-vaik-sun<sub>i</sub> (\*ti-sun<sub>i</sub>)?  
 will-go(-AF)-you you  
 ‘Will you go?’

Second, for penultimate-stress languages like Paiwan the attachment of monosyllabic bound pronouns like *-sun* will not change the stress pattern of the verb, as in (ii).

- (ii) na-v-en-eLi ti kui/-sun tua saviki?  
 Past-buy-AF Nom Kui you Acc beetlenut  
 ‘Did Kui/you buy beetlenut?’

Paiwan  
(66)



Second, is the attachment of bound negative *inika* to the predicate done by syntactic head movement? If it is via head movement at syntax, then the ill-formedness of (63b-c) may be attributed to the lack of the operation of head movement of the complex V to Neg, thereby leaving the bound *inika* unsupported. Or, alternatively, in Chomsky's (1995) Minimalist Program the feature of *inika* will be left unchecked. If it is not via syntactic head movement, then the observed ungrammaticality may result from the failure of satisfying the adjacency condition between *inika* and the host at PF.<sup>33</sup> Here we leave these two questions open and discuss them in section 2.2.

So far it has been pointed out that *inika* can be used to negate two kinds of predicates. Namely, predicates of equational constructions and predicates of nonequational constructions. In cases like (63a-d) and (65b-c), which are not equational sentences,<sup>34</sup> could *inika* be analyzed as Adv, the maximal projection of which is

<sup>33</sup> J. Huang (1988), for instance, posits that in Mandarin the negative morpheme *bu* needs to form an immediate construction with the first V element following it (cf. Chomsky 1995). In Paiwan temporal expressions like *katiaw* 'yesterday' may occur in several positions, as shown in (i).

Paiwan (Tang 1997)

- (i)    \_\_\_ na-k-em-an    \_\_\_ ti    kai \_\_\_ tua    vutu katiaw.  
       Past-eat-AF        Nom Kai    Acc    meat yesterday  
       'Kai ate meat yesterday.'

Thus, other kinds of Paiwan sentences are needed for the question under consideration. See also the discussion in section 2.2.

<sup>34</sup> Under Chomsky's feature analysis of lexical categories, N, V, Adj and P are analyzed as [+N, -V], [-N, +V], [+N, +V] and [-N, -V], respectively. The term 'equational sentences' has not been well defined in the study of Formosan languages; it is simply often used to refer to sentences in which the predicates are not verbs. If Chomsky's feature approach to lexical

generated in an adjunct position higher than T in (21)?<sup>35</sup>

The answer seems to be negative. Cases like (64) indicate that *inika* can host a predicate in the form of bound pronoun. The same, however, does not hold in those like (67), with a temporal expression generated also in an adjunct position.

Paiwan

(67) \*katiaw-aken (a) na-vaik.  
yesterday-I A Past-go(-AF)

If *inika* projects as the head of AdvP, then a generalization will be missed that in Paiwan bound pronouns are not attached to elements in adjunct positions. Also, it has been pointed out in the previous discussion that *ini* can be used as a negative answer to a certain type of yes-no question whereas *inika* cannot. If *inika* occurs in an adjunct position which is not relevant to c-selection, then the ill-formedness of sentences like (8d) will be attributed only to the boundness of *inika*. This will, however, make the previously discussed language variations in word order and clitic climbing unable to be accounted for in a principled way. Lastly, in Paiwan and many other Formosan languages the types of adverbs are very limited. For example, the so-called manner adverbs in English function as matrix verbs in Paiwan.

### 2.1.2.3 The split-*inika* hypothesis

Before turning to the internal structure of the projection of NegP headed by *inika*, it should be mentioned here that in languages like French the meaning of ‘negation’ is expressed by two elements *ne-* and *pas*. In finite clauses *ne-* is prefixed to the verbal complex while *pas* follows the verbal complex. Sentences like (68) are of this sort.

---

categories holds for languages like Paiwan, then cases like (65b) may also be regarded as of the equational construction.

<sup>35</sup> In fact, the real question is whether *inika* may be generated in an adjunct position higher than T; it does not matter whether it projects as the head of AdvP or NegP. But note that only AdvP, not NegP, needs to appear as an adjunct.

Note also that, as stated in footnote 8, Alexiadou (1997) claims that temporal and aspectual adverbs may be located respectively in the Spec of T and Asp as well as that they may undergo Incorporation via Head-Merge. Nevertheless, given that negative element *inika* cannot be analyzed as a temporal or an aspectual element and that it cannot be treated as the complement of a verb, the operation of Incorporation does not seem to be applicable to *inika*.

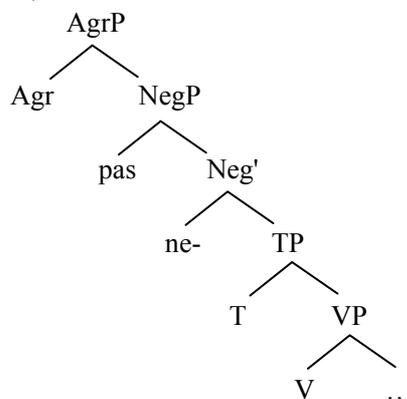
French (Ouhalla 1991)

- (68) Les invites n'arriv-er-ont pas demain.  
 the guests Neg-arrive-will-3p Neg tomorrow  
 'The guests will not arrive tomorrow.'

To account for such sentences, Ouhalla (1991) posits a phrase structure like (69), in which *ne-* and *pas* project respectively as the head and the specifier of NegP. And V will move successive cyclicly from T to Agr. Hence the just-mentioned ordering of *ne-* and *pas*.<sup>36</sup>

French (Ouhalla 1991)

(69)



Recall that *inika* and *ini* differ in form and distribution. Moreover, as shown in (70)-(73), both *ini* and *ka* have been found with the meaning of 'negation' in other Formosan languages.

Mayrinax Atayal (Huang 1995)

- (70) iniʔ=cu qaniq.  
 Neg=1S.BN eat  
 'I did not eat.'

Wulai Atayal (Huang 1993)

- (71) iniʔ=kuʔ qaniq qulih.  
 Neg=1S.BN eat fish  
 'I did not eat fish.'

---

<sup>36</sup> See Ouhalla (1991) for an account of the different ordering of *ne-* and *pas* in nonfinite clauses.

Mantauran Rukai (Yeh et al. 1998)

- (72) apece-kai ana ʃolai.<sup>37</sup>  
 sleep-Neg that baby  
 ‘The child is not sleeping/did not sleep.’

Budai Rukai (Yeh et al. 1998)

- (73) kai w-a-salatha ki la-vaalake ka tawpungu.  
 Neg Act-Real-chase Obl Pl-child Nom dog  
 ‘The dog did not chase the children.’

In fact, as pointed out in Li et al. (1997) and Yeh et al. (1998), they have also been found to coöccur with the predicate in a manner similar to the distribution of *ne-...pas* in finite clauses.

Mantauran Rukai (Yeh et al. 1998)<sup>38</sup>

- (74) a. ka ʔoponoho-ka-ʔo.  
 Neg Wanshan-Neg-2S.BG  
 ‘You are not Wanshanese.’  
 b. o-tipitipi-kai ka taoʃo.  
 Real-beat-Neg Neg dog  
 ‘He did not beat the dog./It was not the dog that he beat.’
- (75) ʔini ʔongolo-ka-ine tamatama.  
 Neg drink-Neg-3S.BO father  
 ‘Father does not want to drink.’

In view of all these data from other Formosan languages, let us now reëxamine the

---

<sup>37</sup> Note, however, that Zeitoun (1997a) argues that in cases like (72) *-ka* is a negative marker whereas *-i* is an agreement marker which needs to be coreferential with a clausemate noun phrase (cf. Li 1996b).

<sup>38</sup> According to Yeh et al. (1998), the so-called double negations like French is very common in Mantauran Rukai.

It should be pointed out here that, as opposed to *ka ka*, *kai ka* and *ini? ka* in Mantauran Rukai, in Paiwan *ini ka* must both precede the predicate.

Paiwan

- (i) \*ini na-vaik ka ti kui.  
 INI Past-go(-AF) KA Nom Kui  
 (ii) \*ini ti-madu ka a uri-mangetez nutiaw.  
 INI she KA A will-come tomorrow

We leave to future research the syntactic and morphological behavior of negative elements in Rukai.

internal structure of Neg *inika* in Paiwan. The first question has to do with the lexical instantiation of the Spec and the head of NegP in Paiwan. Given that both *ini* and *ka* may act alone as negative elements in certain Formosan languages, it seems that both are possible heads of NegP. In Paiwan *ini* seems to be able to head the projection of NegP for the following two reasons. First, in Paiwan *ini*, not *ka*, may function as a free morpheme expressing the meaning of ‘negation’. Second, as illustrated in (76)-(78), when suffixed by other elements, *ini* may carry other kinds of negative meanings.

Paiwan

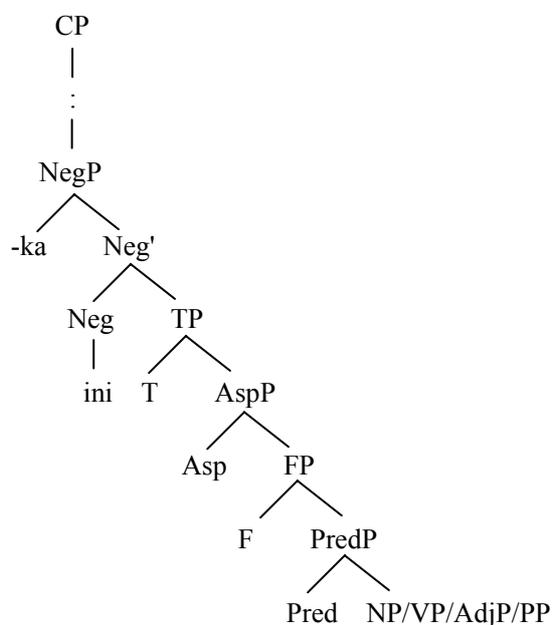
- (76) ini-anan-ka mangetez ti kai.  
 INI-ANAN-KA come-(AF) Nom Kai  
 ‘Kai have not yet come.’
- (77) ini-anga-ka t-em-aLem ti kui tua saviki.  
 INI-ANGA-KA plant-AF Nom Kui Acc beetlenut  
 ‘Kui no longer plants beetlenut.’
- (78) ini-anga-ta-ka vaik ti kai.  
 INI-ANGA-TA-KA go(-AF) Nom Kai  
 ‘Kai will never go.’

A second question is how the observed ordering of *inika* and the predicate complex may be derived in a phrase structure like (79) below, in which *ka* is a bound morpheme located in the Spec of NegP whereas *ini* is a free morpheme projected as the head of NegP.<sup>39</sup> Also, Neg *ini* c-selects T but Neg *ka* does not.

---

<sup>39</sup> Recall that, as pointed out in footnote 3, *ka* does not seem to affect the stress pattern of *inika*. Thus, if *ka* is indeed a bound morpheme, in (79) it acts more like an enclitic than a suffix. See also the discussion in section 2.2.

Paiwan  
(79)



Recall that in Ouhalla's (1991) analysis of English (29), *not* is a free morpheme which blocks the possibility of further V-movement. Such being the case, in Paiwan (79) the verbal complex, for instance, cannot move to support *ka*. One postulation would then be to assume with Ouhalla's (1991) account of the adjacent ordering of *ne-pas* in nonfinite clauses like (80), to be compared with (68), and to propose that *ini* will move to host *ka*.<sup>40</sup>

<sup>40</sup> It has been proposed in Laka (1990) and Progovac (1994), among others, that elements in the Spec of NegP function as operators. We leave this property of *ini* and *ka* in Paiwan to future research (see also the discussion in section 2.2).

Note that negative elements like *ini-anan-ka* may also appear in equational/pseudo-cleft constructions, as shown in (i)-(iii) below.

Paiwan

- (i) ini-anan-ka ti-kai a vaik .  
INI-ANAN-KA TI-Kai A go(-AF)  
'The one who goes is not yet Kai.'
- (ii) ini-anga-ka ti-kui a k-em-an tua vutu.  
INI-ANGA-KA TI-Kui A eat-AF Acc meat  
'The one who eats meat is no longer Kui.'
- (iii) ini-anga-ta-ka ti-madu a mangetez.  
INI-ANGA-TA-KA him A come(-AF)  
'The one who comes is never him.'

French (Ouhalla 1991)

- (80) Ne pas croire au destin ...  
 Neg Neg believe-to in destiny  
 'Not to believe in destiny ...'

On the other hand, if *ka* should head NegP in a phrase structure like (81), then it will be analyzed as a bound morpheme which triggers head movement of the predicate. In addition, while Neg *ka* c-selects T, Neg *ini* does not c-select any complement.

---

*ini-anan*, not *ini-anan-ka*, can also be used as a negative answer.

Paiwan

- (iv) a. na-vaik ti kai?  
 Past-go(-AF) Nom Kai  
 'Did Kai go?'  
 b. ini-anan(\*-ka).  
 INI-ANAN-KA  
 'not yet'

In Paiwan the host of bound morphemes like *-anan* and *-anga* need not be verbal, but they must be attached to the whole predicate complex. The grammaticality contrasts in (v) and (vi) are of this kind.

Paiwan

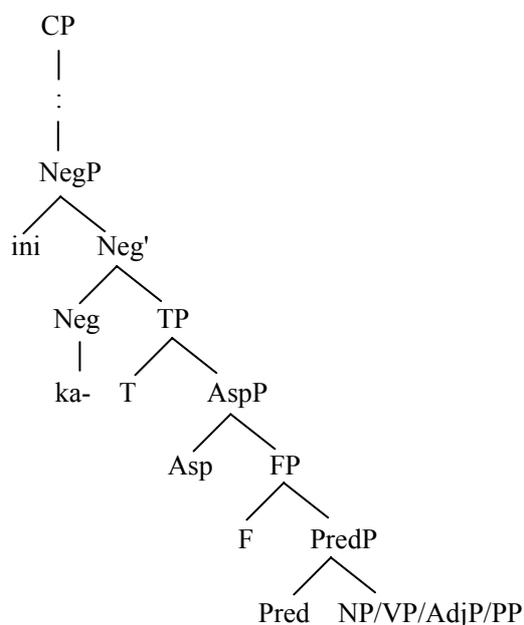
- (v) a. vaik-i-anan.  
 go-Imp-ANAN  
 'Go again.'  
 b. \*vaik-anan-i.  
 go-ANAN-Imp  
 (vi) a. kan-u-anga.  
 eat-Imp-ANGA  
 'Finish eating it.'  
 b. \*kan-anga-u.  
 eat-ANGA-Imp

Similarly, cases like (vii) are ill-formed, which seems to argue for a split-*inika* hypothesis (see also the discussion in section 2.2).

Paiwan

- (vii) a. \*ini-ka-anan mangetez ti kai.  
 INI-KA-ANAN come(-AF) Nom Kai  
 b. \*ini-ka-anga t-em-aLem ti kui tua saviki.  
 INI-KA-ANGA plant-AF Nom Kui Acc beetlenut  
 c. \*ini-ka-anga-ta vaik ti kai.  
 INI-KA-ANGA-TA go(-AF) Nom Kai

Paiwan  
(81)



A third possibility would be that, as shown in (21), *inika* altogether may function as a bound morpheme which heads the projection of NegP and c-selects T.

By contrast, *ini* is a free morpheme which also heads NegP and yet does not c-select T.

#### 2.1.2.4 Some problems

Before examining the predicate properties of *ini* and *inika*, we would like to point out some questions that may be raised for NegP structures like (21), (79), and (81). First, for (21) it remains a mystery why *ini* ‘no’ acts as a free morpheme, but *inika* ‘not’ functions as a bound morpheme. Is there any evidence that *inika* may act as an inflection-like element so that, like other inflectional morphemes in Paiwan, its m-selectional property is bound?<sup>41</sup> Also, is there any kind of lexicalization involved so that *ini*, *ini-anan*, *ini-anga* and *ini-anga-ta* can all head the projection of NegP?

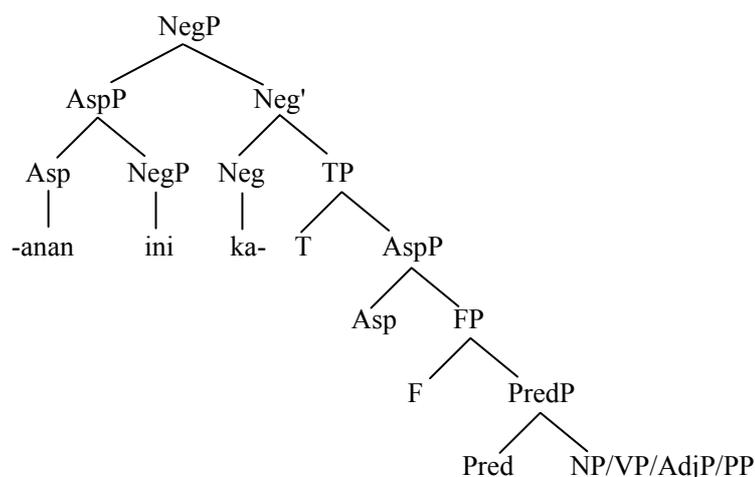
Second, in (79) *ini* takes *-ka* operator and c-selects T. These two requirements, nevertheless, will incorrectly predict that in Paiwan both *inika* and *ini* cannot be used as negative answers. In addition, given the fact that *inika* must be adjacent to the predicate,

<sup>41</sup> Within the INFL(ection)-analysis, as stated in Ouhalla (1991), INFL node has been assumed to contain Agr, T Mod, and Neg.

what is it that makes the derived *inika* altogether a bound morpheme that needs to be subject to the adjacency condition discussed before? And, like (21), (79) also faces the question whether lexicalization is involved for negative elements like *ini-anan*.

Third, an analysis along the lines of (81) will predict, for instance, that if there appears any bound morpheme/feature which projects higher than *ini* and needs to be supported/checked via head movement of the predicate in syntax, then *ini* will be separated from *ka* and occur after the *ka-* attached predicate complex as in the case of *ne- ... pas* in finite clauses like (68) and (69). As will be shown in section 2.2, Tang (1999) states that Paiwan seems to observe successive cyclic head movement of the predicate to C. The morphemes *ini* and *ka* have, however, not yet been found to be nonadjacent to one another. Also, (81) faces the same question as to how to account for the boundedness of the derived *inika* as a whole and the discussed adjacency requirement.<sup>42</sup> In addition, given that *ini* may bear bound morphemes like *-anan*, *-anga*, and *-anga-ta*, it seems that, *ini*, but not *ka*, may further have an internal structure as in (82) if markers like *-anan* should be treated as aspectual elements.

Paiwan  
(82)



While multi-projections of AspP have been proposed for languages like Mandarin in Chiu (1993), among others, it remains a mystery why in (82) the higher Asp c-selects

<sup>42</sup> Alternatively, one might suggest that while historically *inika* may have an internal structure like (79) or (81), synchronically it has already been lexicalized as one morpheme which is bound. Another postulation would be that in (79) and (81) *ka* functions as some kind of clitic that needs to be attached to the predicate at PF. See section 2.2 for more discussion of such possibilities.

*ini* rather than *ka*.<sup>43</sup>

With all the just-mentioned questions for a NegP/AdvP approach to nonpredicate *ini* and *inika*, we shall examine in the following section their predicate properties and see whether a VP analysis of *ini* may be free from such problems.

## 2.2 As predicates

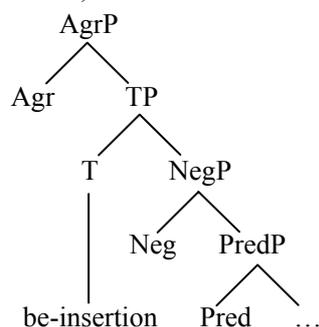
### 2.2.1 The copula hypothesis

To begin with, recall that, as illustrated in equational sentences like (64a-c) and (65a), *inika* can coöccur with a predicate in the form of noun. Could *inika*, then, be analyzed as a copula verb taking the predicate noun phrase as its object? In other words, are there two types of *inika* in Paiwan? One carries the meaning of ‘not’ and the other that of ‘be not’.

The answer seems to be negative. Ouhalla (1991) posits a phrase structure like (83) for English sentences like (84).

English (Ouhalla 1991)

(83)



- (84) a. Mary is not a linguist.  
 b. Bill is not happy with his job.  
 c. John is not in the garden.

According to Ouhalla, in English *be* is essentially an expletive element which, like *Do*-support, is inserted at S-structure for the support of tense elements. In Paiwan, as exemplified in sentences like (i)-(iv) of footnote 8, repeated below as (85), nonverbal predicates may, however, take past-tense/aspect marker *na*-.

<sup>43</sup> This problem may be solved if the aforementioned lexicalization is involved.

Paiwan

- (85) a. na-ti-kai ti-madu.  
Past-TI-Kai she  
'She used to be called Kai.'
- b. na-sa'etu ti-madu.  
Past-sick(-AF) he  
'He got sick.'
- c. na-nguangua ti kai.  
Past-pretty(-AF) Nom Kai  
'She used to be pretty.'
- d. na-i-maza ti kui.  
Past-in-here Nom Kui  
'Kui was here.'

In addition, the inflected nonverbal predicates in (85a-d) can all be negated by *inika*, as illustrated in (86).

Paiwan

- (86) a. inika na-ti-kai ti-madu.  
INIKA Past-TI-Kai she  
'She used not to be called Kai.'
- b. inika na-sa'etu ti-madu.  
INIKA Past-sick(-AF) he  
'He did not get sick.'
- c. inika na-nguangua ti kai.  
INIKA Past-pretty(-AF) Nom Kai  
'She used not to be pretty.'
- d. inika na-i-maza ti kui.  
INIKA Past-in-here Nom Kui  
'Kui was not here before.'

And from sentences like (5a), rewritten as (87), it should be clear by now that Paiwan does not have an overt counterpart of English *be*.

Paiwan

- (87) ti-kai ti-madu?  
TI-Kai she  
'Is she Kai?'

Thus, if there should exist two different kinds of *inika*, it remains a question as to why *be* is required only in negative equational sentences.<sup>44</sup>

<sup>44</sup> There seem to appear at least two factors which may determine whether the same negative element can be used in equational or nonequational constructions. One factor is the condition on the category-type of the host of the bound negative element. According to Li et al. (1997), for example, negative prefix *i-* in Maga Rukai cannot be used to negate a nonverbal element. Hence the requirement of *amani* 'be' in (ib), (iib) and the lack of *kmanii* in (iib).

Maga Rukai (Li et al. 1997)

- (i) a. kakaa kiki.  
 eldest 1-sgl-nom  
 'I am the eldest.'  
 b. \*i-kiki kakaa.  
 not-1-sgl-nom eldest
- (ii) a. (amani) kini kakaa.  
 be 1-sgl-nom eldest  
 'I am the eldest.'  
 b. i-(*\*kmanii*) kiki kakaa.  
 not-be 1-sgl-nom eldest  
 'I am not the eldest.'
- (iii) a. ma-curu kiki.  
 state-fat 1-SN  
 'I am fat.'  
 b. i-klucuruu kiki.  
 not-fat 1-SN  
 'I am not fat.'

Paiwan *inika*, by comparison, can be attached to any type of predicate. Hence the same form in negative equational and nonequational constructions.

A second condition is whether both types of constructions agree with the c-selection and grammatical features of the negative element in question. For instance, languages like Atayal and Saisiyat pattern with Paiwan in that the same negative element is found in equational and nonequational constructions, as shown in (iv)-(vi).

Mayrinax Atayal (Huang 1995)

- (iv) a. yakaat=cu ku' tawqi'.  
 Neg=1S.BN Nom-Rf chief  
 'I am not the chief.'  
 b. yakaat=cu pa-qaniq cu' qulih ka' hani.  
 Neg=1S.BN Fut.AF-eat Acc.Nrf fish Lin this  
 'I will not eat this fish.'

Wulai Atayal (Huang 1993)

- (v) a. yat tayan tali'.  
 Neg Atayal Tali'  
 'I am not Atayal.'

- b. yat=ku' p-qaniq qulih.  
 Neg=1S.BN Fut-eat fish  
 'I will not eat fish.'

Saisiyat (Yeh 1991)

- (vi) a. yako ?okik Sayasiyat.  
 I-Nom Neg Saisiyat  
 'I am not Saisiyat.'
- b. sia ?okik sarara? yakin.  
 s/he-Nom Neg like I-Acc  
 'She/He does not like me.'

In Kavalan, by contrast, the tense feature of negative element *mai* in nonequational constructions is lexically specified as [+past], as stated in Chang (1998). Hence the impossibility of appearing in equational constructions.

Kavalan (Li 1996a)

- (vii) mai t-m-anan ya sunis-ku.  
 not-have AF-come-back Nom child-my  
 'My child did not come back.'

Kavalan (Chang 1996)

- (viii) mai=iku qom-an tu Raaq.  
 not=1S.Nom eat-AV Acc wine  
 'I did not drink wine.'

Kavalan (Li 1996a)

- (ix) usa-iku kubarán.  
 be-not I-Nom Kavalan  
 'I am not Kavalan.'

Kavalan (Chang 1996)

- (x) usa sunis pukun-an-ku baqi.  
 not child hit-PV-1S.Gen old man  
 'The man I hit is not a child but an old man.'

Our observation seems to be further supported by the fact that English *not* and Chinese *bu* can also be used in either type of construction.

English

- (xi) a. He is not John.  
 b. I did not see you.

Chinese

- (xii) a. wo bu shi laoshi.  
 I BU be teacher  
 'I am not a teacher.'
- b. ta bu zhidao ni-de mingzi.  
 he BU know your name  
 'He does not know your name.'

Interestingly, languages like Tsou seem to exhibit the presence of an affirmative counterpart of negative element *o?a* in constructions like (xiii), to be compared with (xiiii) and (xv).

## 2.2.2 The VP hypothesis

### 2.2.2.1 V-CP<sub>[-finite]</sub>

Paiwan is a predicate-initial language, in which both VSO and VOS word orders are observed. Below are two such examples which involve nonfinite complements marked with nonfinite complementizer *a*.

Paiwan (Tang 1999)<sup>45</sup>

- (88) a. vaik ti kai a [v-en-eLi tua kun].  
 go(-AF) Nom Kai A buy-AF Acc skirt  
 'Kai goes to buy a skirt.'
- b. vaik a [v-en-eLi tua kun] ti kai.  
 go(-AF) A buy-AF Acc skirt Nom Kai  
 'Kai goes to buy a skirt.'

Though *inika* does not seem to have the meaning of 'be not', in view of sentences like (88), one may still wonder whether in cases like (3a), (7), and (9)-(12), for instance,

---

Tsou (Yeh et al. 1998)

- (xiii) a. ?a da-ta etamaku.  
 ?a Freq-3S.BN smoke  
 '(It is the case that) he (usually) smokes.'
- b. o?a da-ta etamaku.  
 Neg Freq-3S.BN smoke  
 'He does not smoke. /It is not the case that he smokes.'

Tsou (Zeitoun 1996)

- (xiii)a. mi-ta eobako ta oko.  
 AF-3S.BN beat-AF Obl child  
 'He is beating the child.'
- b. o?a mi-ta (s'a) eobako ta oko.  
 Neg AF-3S.BN beat-AF Obl child  
 'He is not beating the child.'

Tsou (Chen 1996)

- (xv) a. zou cou a'o.  
 indeed Tsou I  
 'I am Tsou.'
- b. o'a (s'a) cou a'o.  
 not-be indeed Tsou I  
 'I am not Tsou.'

<sup>45</sup> See Tang (1999) for a discussion of the various types of complementizers in Paiwan as well as the (im)possibility of the cooccurrence of complementizer and case marker in Paiwan.

*inika* may act as a matrix verb which takes a clausal complement or a clausal subject. In other words, could *inika* be treated as a verbal predicate which expresses the meaning of ‘not (the case)’ and heads the maximal projection of VP?

To examine this possibility, consider first sentences like (89), in which *inika* is analyzed as taking a null expletive as its subject and an *a*-marked nonfinite clause as its complement.

Paiwan

- (89) a. *inika* pro a [na-v-en-eLi ti kui tua saviki].  
 INIKA A Past-buy-AF Nom Kui Acc beetlenut  
 ‘Kui did not buy beetlenut.’
- b. *inika* a [ti-kai ti-madu] pro.  
 INIKA A TI-Kai she  
 ‘She is not Kai.’
- c. *inika* a pro [na-vaik ti kui].  
 INIKA A Past-go(-AF) Nom Kui  
 ‘Kui did not go.’
- d. *inika* a [v-in-eLi ni kai a kun] pro.  
 INIKA A buy-PF Gen Kai Nom skirt  
 ‘Kai did not buy skirts.’
- e. *inika* pro a [k-em-elang ti kai tua azua a sengsengan].  
 INIKA A know-AF Nom Kai Acc that A matter  
 ‘Kai does not know that matter.’
- f. *inika* a [k-in-elang ni kai a azua a sengsengan] pro.  
 INIKA A know-PF Gen Kai Nom that A matter  
 ‘Kai did not know that matter.’
- g. *inika* pro a [nguangua ti kai].  
 INIKA A pretty(-AF) Nom Kai  
 ‘Kai is not pretty.’
- h. *inika* a [i-maza ti kui] pro.  
 INIKA A in-here Nom Kui  
 ‘Kui is not here.’

Cases like (89) are, however, problematic. For example, as discussed in Tang (1999), markers like *na-* and *-in-* are not permitted in Paiwan nonfinite clauses. Also, the relationship between *ini* and *ka* remains unexplained.

### 2.2.2.2 V-CP<sub>[+finite]</sub>

A second postulation would be that, instead of c-selecting a nonfinite clausal complement, *inika* may be treated as taking a finite clausal subject introduced by marker *a*.

Paiwan

- (90) *inika a* [na-v-en-eLi ti kui tua saviki].  
 INIKA A Past-buy-AF Nom Kui Acc beetlenut  
 ‘Kui did not buy beetlenut.’

This kind of approach is, again, problematic. For instance, as Tang (1999) points out, in Paiwan one-argument predicates like *pa'uLid* ‘true’ may appear with a subject or object finite clause marked with *a* or *tu*, respectively.

Paiwan (Tang 1999)

- (91) a. *pa'uLid a/tu* [na-k-em-elang ti kai tua azua a sengsengan].  
 true A TU Past-know-AF Nom Kai Acc that A matter  
 ‘It is true that Kai knew that matter.’  
 b. *pa'uLid a/tu* [k-in-elang ni kai a azua a sengsengan].  
 true A TU know-PF Gen Kai Nom that A matter  
 ‘It is true that Kai knew that matter.’

Substitution of *a* by *tu* in (90) will, nevertheless, make the resulting sentence ungrammatical. And, like (89), (90) faces the same question about the mysterious relationship between *ini* and *ka*.

### 2.2.2.3 The split-*inika* hypothesis

A third possibility would be to posit that, as demonstrated in (92a) below, the complementizer in question may be finite *ka*, not finite *tu*, nor nonfinite *a*.

Paiwan

- (92) a. *ini pro ka* [na-v-en-eLi ti kui tua saviki].  
 INI KA Past-buy-AF Nom Kui Acc beetlenut  
 ‘Kui did not buy beetlenut.’  
 b. *ini ka* [na-v-en-eLi ti kui tua saviki].  
 INI KA Past-buy-AF Nom Kui Acc beetlenut  
 ‘Kui did not buy beetlenut.’

That is, in (92a) *ini* is analyzed as taking a null expletive subject and a finite complement, the latter of which is introduced by *ka* with the features [+finite, +negative]. Alternatively, it may also have the structure as in (92b), in which the *ka*-marked finite clause appears in subject position. In other words, *inika* may, in fact, carry the meaning of ‘it is not the case that ...’ or ‘that ... is not the case’.

Before going into the analysis of negative complementizer *ka* in sentences like (92) and others, two things need to be mentioned here. The first thing is concerned with the claims about negative complementizers. Progovac (1988) notes that while cases like (93) are well-formed, those like (94) are not, both of which contain the so-called Negative Polarity Items like *anybody*.

English (Progovac 1988)

- (93) The witnesses denied [that anybody left the room before dinner].  
(94) \*The witnesses denied anything.

To account for the grammaticality contrast between (93) and (94), Laka (1990, 1994) proposes that in (93) complementizer *that* is marked with the feature [Neg].

One piece of evidence for such a claim is that, as argued in Laka (1994), for languages like Basque there appears a phonologically distinct [Neg] complementizer *enik* as in (95), to be compared with declarative complementizer *ela* in (96) and [Wh] complementizer *en* in (97).

Basque (Laka 1994)

- (95) amaia [inork gorrotoa dionik] ukatu du.  
Amaia anyone hatred has-her-that denied has  
‘Amaia denied that anybody hated her.’  
(96) [galapagoak muskerrez beterik daudela] diote.  
Galapagos lizards-of full are-that say-they  
‘They say that the Galapagos are full of lizards.’  
(97) [juanek erosi duen] kotxea 'mazda miata' bat da.  
Juan bought has-that car-the Mazda Miata one is  
‘The car that Juan has bought is a ‘Mazda Miata’.’

The second thing has to do with claims about (bound) pronouns. Among others, Baker & Hale (1990) point out that while nouns are projected as Ns and pronouns as Ds, noun and pronoun incorporations are both subject to the locality and the object-orientation requirements. Furthermore, they argue that the Relativized Minimality Condition should be refined to be sensitive to the lexical-functional

distinction. Thus, for example, noun incorporation can strand functional categories and pick up intervening lexical categories, but it cannot strand lexical categories or pick up functional categories. And the reverse is found with pronoun incorporation. They also distinguish pronoun incorporation from agreement, where the latter is compatible with a matching noun phrase in the relevant argument position, as well as pronoun incorporation from true cliticization, in which a pronoun is simply attached to the verb at PF.

To give an example of the just-given movement constraint on pronoun incorporation/clitic climbing in syntax, consider the following Italian sentences from Kayne (1989).

Italian (Kayne 1989)

- (98) a. Gianni li vuole vedere.  
 Gianni them wants to see  
 ‘Gianni wants to see them.’  
 b. \*Gianni li vuole non vedere.  
 Gianni them wants not to see  
 c. Gianni vuole non vederle  
 Gianni wants not to see-them  
 ‘Gianni wants not to see them.’

As stated in Kayne (1989), the presence of negative element *non* in the embedded clause seems to prevent clitics from moving from the embedded clause to the matrix clause.

Now, let us turn to the discussion of analyzing *ini* as a matrix verb and *ka* as a bound complementizer marked with the features [+finite, +negative] (see also Tang 1998). First, this verbal analysis of split-*inika* can account for the fact that *ka* is required only when *ini* is followed by a finite clause. And it also follows that inflectional elements like *-anan*, *-anga*, and *-anga-ta* may be attached to *ini*.

Second, it has been pointed out in footnote 33 that in Paiwan temporal expressions may appear in several positions. They cannot, however, occur between the complementizer and the embedded predicate, as discussed in Tang (1999).

Paiwan (Tang 1999)

- (99) k-em-elang ti kui tu [(*\*katiaw*) na-v-en-eLi (*katiaw*) ti  
 know-AF Nom Kui TU yesterday Past-buy-AF yesterday Nom  
 kai (*katiaw*) tua kun (*katiaw*).  
 Kai yesterday Acc skirt yesterday  
 ‘Kui knows that yesterday Kai bought a skirt.’

To explain this and other related facts, we posit that the embedded predicate needs to move to C to check the relevant features and to support the complementizer.<sup>46</sup> In ill-formed cases like (63b-d) the same kind of non-intervening constraint has also been observed. We thus propose that, like other complementizers, *ka* may also trigger head movement of the predicate. An account along this line of thought, then, may properly explain the grammaticality distinction between sentences like (63a), (64b-c), (65a-c), and (63b-d).

Third, for cases like (91a), repeated below as (100a), sentences like (100b-c) are also well-formed.

Paiwan

- (100) a. pa'uLid a/ tu [na-k-em-elang ti kai tua azua a sengsengan].  
 true A TU Past-know-AF Nom Kai Acc that A matter  
 'It is true that Kai knew that matter.'
- b. pa'uLid ti kai a/ tu [na-k-em-elang tua azua a sengsengan].  
 true Nom Kai A TU Past-know-AF Acc that A matter  
 'It is true that Kai knew that matter.'
- c. ti kai pa'uLid a/ tu [na-k-em-elang tua azua a sengsengan].  
 Nom Kai true A TU Past-know-AF Acc that A matter  
 'It is true that Kai knew that matter.'

By comparison, while the *ini* counterpart of (100c) is grammatical, as already given in (iii) of footnote 30, that of (100b) is not.

Paiwan

- (101) a. ini ka na-k-em-an ti kai tua vutu.  
 INI KA Past-eat-AF Nom Kai Acc meat  
 'Kai did not eat meat.'
- b. \*ini ti kai ka na-k-em-an tua vutu.  
 INIK Nom Kai KA Past-eat-AF Acc meat
- c. ti kai ini ka na-k-em-an tua vutu.  
 Nom Kai INI KA Past-eat-AF Acc meat  
 'Kai did not eat meat.'

In view of the well-formedness contrast between (100b) and (101b), it seems that, unlike other complementizers in Paiwan, *ka* acts as a kind of clitic that needs to be

---

<sup>46</sup> See Tang (1999) for arguments against a nonembedded-topic kind of analysis and evidence from languages like Tsou.

attached to the matrix predicate complexes. While we leave to later research the issue of whether this operation of cliticization should apply at syntax or PF, as pointed out in footnote 3, it is correctly predicted that attachment of *ka* to *ini* does not seem to affect the stress pattern of *ini* in Paiwan, which is a penultimate-stress language.

To summarize, so far it has been suggested that while a split-*inika* analysis seems to be on the right track, *ini* should be treated as a V rather than a Neg. In addition, *ini* is a free morpheme whereas *ka* is a clitic that is marked with the features [+finite, +negative] and needs to be attached to the matrix predicate complexes.

It should be noticed here that, as stated in footnote 11 and Tang (2002), in addition to acting as a complementizer, *ka* in Paiwan may also play several other kinds of roles. Such a fact has also been observed in many other Formosan languages. See, for instance, Li (1973), Starosta (1974) and J. Chen (1996), among others.

### 3. *neka*

We have mentioned in section 2 that in possessive constructions *neka* may function as an one-argument verbal predicate, the subject of which is marked with nominative case. Consider again cases like (22a-b), repeated below as (102a-b).

Paiwan (Tang 1998)

- (102) a. *izua a ku-paisu.*  
           have Nom my-money  
           ‘I have money.’
- b. *neka nu ku-paisu.*  
           NEKA Nom my-money  
           ‘I do not have money.’

There are three pieces of evidence for a verbal analysis of *izua* and *neka* in possessive constructions like (102). First, they may coöccur with tense and aspect markers like *uri-*, *na-* and *-anga*.<sup>47</sup>

---

<sup>47</sup> Like *ini* in cases like (76)-(78), the possessive *izua/neka* may also appear with *-anan* and *-anga(-ta)*. Due to the inherent aspectual properties of *ini*, by comparison, it cannot coöccur with *uri-*, nor with *na-*. It should be mentioned here that, as pointed out in Section 2.1 and footnotes 8 and 40, the distribution of *ini*, *-anan*, *-anga(-ta)*, and *na-* is not subject to the contrasts between verbal/nonverbal and stative/nonstative.

Paiwan

- (103) a. uri-izua a ku-paisu.  
will-have Nom my-money  
'I will have money.'  
b. na-izua a ku-paisu.  
Past-have Nom my-money  
'I used to have money.'  
c. izua-anga a ku-paisu.  
have-Perf Nom my-money  
'I already have money.'
- (104) a. na-neka nu ku-paisu.  
Past-NEKA Nom my-money  
'I used to have no money.'  
b. neka-anga nu ku-paisu.  
NEKA-Perf Nom my-money  
'I already have no money.'

Second, they exhibit the same distribution of temporal adjuncts as other one-argument verbs.

Paiwan (Tang 1999)

- (105) \_\_\_ na-vaik \_\_\_ ti kai katiaw.  
Past-go(-AF) Nom Kai yesterday  
'Kai went yesterday.'
- (106) \_\_\_ izua \_\_\_ a ku-paisu tucu.  
have Nom my-money today  
'I have money today.'
- (107) \_\_\_ neka \_\_\_ nu ku-paisu tucu.  
NEKA Nom my-money today  
'I have no money today.'

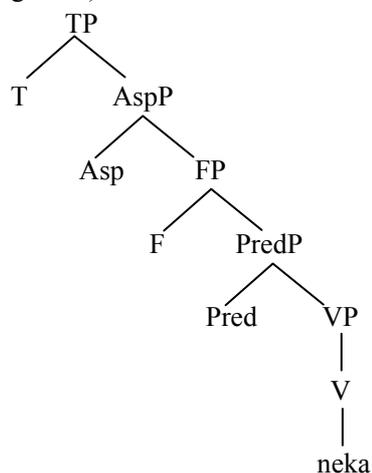
Third, like other case markers, deletion of *a* and *nu* in (102)-(104) and (106)-(107) will result in ill-formedness.

We thus propose that possessive *neka* is an intransitive verb with the meaning of 'not have' or 'not exist', which may be represented in a simplified phrase structure like (108) below.<sup>48</sup>

---

<sup>48</sup> In Formosan languages, not all possessive/existential predicates function as intransitive verbs. Li (1996a) and Chang (1996), for instance, point out that in Kavalan *mai* is a transitive verb,

Paiwan (Tang 1998)  
(108)



In addition to possessive constructions, the same type of verbal *izua* and *neka* as in (108) is also found in existential constructions.<sup>49</sup>

Paiwan (Tang 1998)

(109) *izua* \*(a) *kun* *imaza*.  
 have Nom skirt here  
 ‘There is a skirt here.’

(110) *neka* \*(nu) *paisu* *i-siubay*.  
 NEKA Nom money in-store  
 ‘There is no money in the store.’

By contrast, *izua* and *neka* in locative constructions behave very differently in that *a* and *nu* cannot be present.

---

as given in (i).

Kavalan (Chang 1996)

(i) *mai=iku* *tu* *sunis*.  
 not have=1S.Nom Acc child  
 ‘I do not have child.’

For a discussion of the typological classification of possessive/existential predicates in Formosan languages, see Yeh et al. (1998).

<sup>49</sup> The projection type of the subjects of possessive *neka* and existential *neka* are, nevertheless, distinct. The subject of possessive *neka* is an NP and that of existential *neka* is in the form of a small clause.

Paiwan (Tang 1998)

(111) *izua* (\*a) *ti-kai* *i-maza*.  
have Nom TI-Kai in-here  
'Kai is here.'

(112) *neka* (\*nu) *i-maza* *ti* *kai*.  
NEKA Nom in-here Nom Kai  
'Kai was not here.'

They, however, can still appear with tense and aspect markers.

Paiwan

(113) *uri-izua/neka* *ti-kai* *i-maza*.  
will-have/NEKA TI-Kai in-here  
'Kai will/will not be here.'

Unlike ungrammatical possessive constructions like (22c), rewritten as (114), *inika* can appear in locative constructions. Compare, for example, (112) with (115a).

Paiwan (Tang 1998)

(114) \**inika* *izua* *a* *ku-paisu*.  
INIKA have Nom my-money

(115) a. *inika* *i-maza* *ti* *kai*.  
INIKA in-here Nom Kai  
'Kai is not here.'

b. *inika* *ti-kai* \*(a) *i-siubay*.  
INIKA TI-Kai A in-store  
'The person that in the store is not Kai.'

Also, as opposed to *inika*, *neka* need not be adjacent to the predicate, as in (116)-(117). It, however, cannot appear in equational constructions, as in (116) and (118).<sup>50</sup>

Paiwan (Tang 1998)

(116) *neka-aken* (\*a) *i-maza*.  
NEKA-I A in-here  
'I was not here.'

---

<sup>50</sup> For the discussion of the constraints on negative elements in equational constructions, see footnote 44.

- (117) neka katiaw i-siubay ti-madu.  
 NEKA yesterday in-store she  
 ‘She was not in the store yesterday.’
- (118) neka ti-madu (\*a) i-maza.  
 NEKA he A in-here  
 ‘I was not here.’

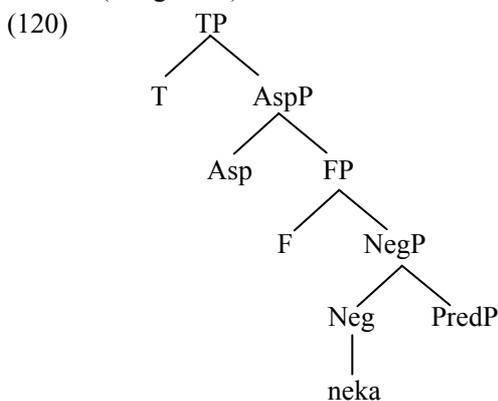
Nor can *ne* appear by itself.

Paiwan (Tang 1998)

- (119) a. \*ne i-maza ti kui.  
 NE in-here Nom Kui  
 b. \*ne.  
 ne  
 c. \*ka ti-kai i-gadu.  
 KA TI-Kai in-mountain

On the basis of sentences like (111)-(119), we suggest that there exists another kind of maximal projection of locative *neka* as in (120), in which *neka* projects to NegP but not VP.

Paiwan (Tang 1998)



In (120) Neg *neka* c-selects PredP and acts as a free morpheme. In addition, *ka* is an integral part of *neka*. Thus, like English *not* in (29), it will block head-movement of Pred to F, Asp, and T. Nevertheless, languages like Paiwan do not have the language-specific rule of *Do*-support. As a result, like the Arabic negative element in

(32), *neka* moves to support inflectional affixes.<sup>51</sup>

Being a free morpheme, it also follows that Neg *neka* need not be adjacent to the predicate. Hence the above-mentioned possibility of intervening bound pronouns, temporal expressions, and topic elements.

To sum up, if our discussion so far is plausible, then the c-selectional and m-selectional properties of *inika* and *neka* are as in (121)-(123) below.

Paiwan (Tang 1998)

*inika*

- (121) a. *ini* projects to VP and c-selects CP.  
b. *ka* projects to CP.  
c. *ini* functions as a free morpheme and *ka* as a bound (clitic) morpheme.

*neka* in possessive/existential constructions

- (122) a. It projects to VP.  
b. It c-selects NP.  
c. It functions as a free morpheme.

*neka* in locative constructions

- (123) a. It projects to NegP.  
b. It c-selects PredP.  
c. It functions as a free morpheme.

And the host of bound pronouns in Paiwan needs to satisfy (124), among other conditions.

---

<sup>51</sup> Based on the observations like (i) and (ii), Zeitoun (1997b), however, claims that *izua/neka* acts as a verb in locative as well as possessive/existential constructions.

Paiwan (Zeitoun 1997b)

- (i) uri izua I tjuma? ti palang nutiaw  
will exist Prep house Nom Palang tomorrow  
'Palang will be home tomorrow.'  
(ii) izua-aken i tjuma?  
exist-1S.Nom Prep home  
'I am at home.'

An analysis along this line of thought will, nevertheless, fail to capture all the discussed asymmetries between locative *neka* and possessive/existential *neka* as well as between *neka* and *inika*.

Note also that Laka (1990) proposes a maximal projection of  $\Sigma P$ , the head of which is instantiated by affirmative and negative elements. With the postulation of  $\Sigma P$ , we assume that locative *izua* is generated in the same position as locative *neka*.

- Paiwan  
 (124) a. [a predicate]  
       b. [a lexical]  
       c. [a free]

In view of (124), it is not surprising that Mayrinax Atayal and Paiwan exhibit different clitic-climbing behavior.

Before turning to the discussion of negative elements in Paiwan imperative constructions, recall that both *ini* and *neka* may be used in the sense of English *no* as a negative reply and that Paiwan and many other Formosan languages have a very limited number of the so-called adverbs. Thus, one might propose that the ‘reply’-kind of *ini/neka* projects to Neg, which does not c-select anything. Or, alternatively, one might posit that, given that *ini/neka* may project as Vt and Vi, respectively, and that Paiwan is a pro-drop language, sentences with the so-called ‘reply’-type of *ini/neka* might involve pro-drop. Note, however, that the Paiwan counterpart of English *yes* is *uwi*, which cannot be treated as Neg and cannot act as verb. Thus, under these two approaches the category of *uwi* needs to be different from those of *ini/neka*. As pointed out in footnote 51, Laka (1990) proposes a maximal projection of  $\Sigma P$ , the head of which is instantiated by affirmative and negative elements. With the postulation of  $\Sigma P$ , a third possibility would be that in Paiwan ‘reply’ elements like *uwi*, *ini* and *neka* are all free morphemes, which may project as  $\Sigma$  and do not c-select anything. And while *uwi* is not marked with any inherent aspectual properties, *ini* and *neka* are. We leave this issue open to future research.

#### 4. *maya* and *paLaingi*

In Paiwan there appear two kinds of negative elements in imperative constructions: *maya*, with the meaning of ‘do not’, and *paLaingi*, with the meaning of ‘no need to’. Consider first affirmative AF and NAF imperatives as given in (125) and (126) respectively.

- Paiwan (Tang 1998)  
 (125) taLem-u tua saviki.  
       plant-Imp Acc beetlenut  
       ‘Plant beetlenut.’  
 (126) taLem-u a saviki.  
       plant-Imp Nom beetlenut  
       ‘Plant beetlenut.’

In both AF (125) and NAF (126) the predicates are in the form of verbal root suffixed by imperative marker *-u*.<sup>52</sup> The only way to distinguish the type of focus marker involved is by the case realization of the theme argument.

In the negative counterparts of (125) and (126), as (127) and (128) illustrate, marker *a* is present before the verbal predicates, which must coöccur with AF markers.

Paiwan (Tang 1998)

(127) *maya a [t-\*(em)-aLem-(\*u) tua saviki].*  
MAYA A plant-AF-Imp Acc beetlenut  
'Do not plant beetlenut.'

(128) *maya a [t-\*(em)-aLem-(\*u)] a saviki.*  
MAYA A plant-AF-Imp Nom beetlenut  
'Do not plant beetlenut.'

In addition, other kinds of inflectional affixes are disallowed in the clauses following *a*.

Paiwan (Tang 1998)

(129) *\*maya a [na-t-em-aLem tua saviki].*  
MAYA A Past-plant-AF Acc beetlenut

(130) *\*maya a [t-in-aLem a saviki].*  
MAYA A plant-PF Nom beetlenut

Thus, as stated in footnotes 5 and 12, we assume with Tang (1999) that in (127)-(130) *a* is to be analyzed as a nonfinite complementizer.<sup>53</sup>

As in the case of *ini ka*, bound pronouns may be attached to *maya*, as exemplified in (131).

Paiwan (Tang 1998)

(131) *maya-aken \*(a) [d-em-ukuL].*  
MAYA-I A beat-AF  
'Do not beat me.'

Again, as pointed out in footnotes 5 and 12, the obligatory presence of *a* provides further support for the nonfinite analysis under consideration.

---

<sup>52</sup> We leave to future research the issues concerning the marking of tense and the location of *-u* in imperative constructions.

<sup>53</sup> In view of the requirement of an AF predicate in the negative imperative construction, Yeh et al. (1998) suggest that Paiwan negative imperatives may be of serial verb construction.

In addition, like cases (64b) and (88a), repeated here as (132)-(133), sentences like (134) are also well-formed.

Paiwan

(132) inika ti-kai a [na-k-em-an katiaw tua vutu].  
 INIKA TI-Kai A Past-eat-AF yesterday Acc meat

‘It is not Kai that ate the meat yesterday.’

(133) vaik ti kai a [v-en-eLi tua kun].  
 go-AF Nom Kai A buy-AF Acc skirt

‘Kai goes to buy a skirt.’

(134) maya ti-madu a d-em-ukuL.  
 MAYA TI-he A beat-AF

‘Do not beat him.’

In view of all these facts, a simplified phrase structure of *maya* is given in (135), with its c-selectional and m-selectional properties in (136).<sup>54</sup>

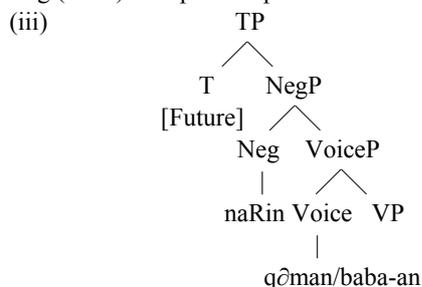
<sup>54</sup> In Formosan languages negative imperative elements may project to distinct maximal projections. Li (1996a) and Chang (1996), for instance, point out that in Kavalan such elements like *naRin*  $\mu\alpha\psi$   $\alpha\pi\pi\epsilon\alpha\rho$   $\omega\iota\tau\eta$   $A\Phi$   $\alpha\nu\delta$   $NA\Phi$   $\pi\epsilon\rho\beta\sigma$ .

*Kαπαλαν* (Li 1996)

(i)  $\nu\alpha P\iota\nu$   $\theta\theta\text{man}$   $tu$   $?\text{may}$ .  
 do-not AF-eat Acc rice  
 ‘Do not eat rice.’

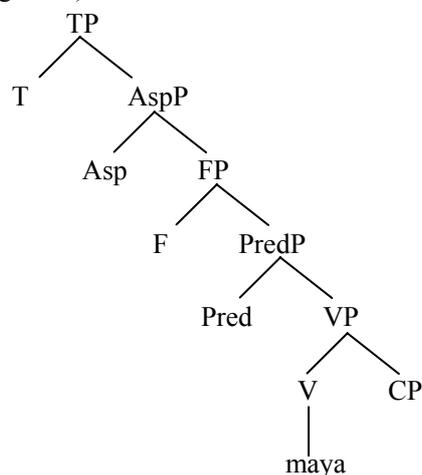
(ii) *naRin-iku* *baba-an*.  
 do-not-I.Nom beat-PF  
 ‘Do not beat me.’

Chang (1998) thus posits a phrase structure as in (iii) for *naRin*.



Paiwan (Tang 1998)

(135)



- (136) a. *maya* projects to VP.  
 b. *maya* c-selects a nonfinite CP.  
 c. *maya* functions as a free morpheme.

As illustrated in the following sentences, except for the difference in meaning, another imperative negative *palaingi* patterns like *maya*. We thus assume (135) and (136) for *palaingi* as well.

Paiwan (Tang 1998)

- (137) *palaingi* a [t-\*(em)-aLem-(\*u) tua saviki].  
 PALAINGI A plant-AF-Imp Acc beetlenut  
 ‘There is no need to plant beetlenut.’
- (138) *palaingi* a [t-\*(em)-aLem-(\*u)] a saviki.  
 PALAINGI A plant-AF-Imp Nom beetlenut  
 ‘There is no need to plant beetlenut.’
- (139) \**palaingi* a [na-t-em-aLem tua saviki].  
 PALAINGI A Past-plant-AF Acc beetlenut
- (140) \**palaingi* a [t-in-aLem a saviki].  
 PALAINGI A plant-PF Nom beetlenut
- (141) *palaingi-aken* a [d-em-ukuL].  
 PALAINGI-I A beat-AF  
 ‘There is no need to beat me.’
- (142) *palaingi* ti-madu a [d-em-ukuL].  
 PALAINGI TI-he A beat-AF  
 ‘There is no need to beat him.’

Note that it has been pointed out that in both AF and NAF affirmative imperatives the predicates are in the form of verbal root suffixed by imperative marker *-u*, and thus the only way to distinguish the type of focus marker involved is by the case realization of the theme argument. The same observation has also been found with imperative negatives *maya* and *palaingi*, as shown in accusative/nominative distinction between (127), (137) and (128), (138).

## 5. Conclusion

It has been shown in this paper that language variations concerning negative elements may be attributed to the parametrization of c-selection and m-selection of functional and lexical categories. In our future research, more types of data from Paiwan and other types of languages will be examined in order to capture in a principled way cross-linguistic similarities and differences.

A remaining issue to study is concerned with the parametrization of the grammatical features of functional and lexical categories, in particular that of negative elements. For instance, in view of the grammaticality contrasts exhibited in sentences like (5), (i) of footnote 7 and (23)-(24), repeated below as (143)-(146), it is rather clear that while English *no* and *not* do not denote inherent temporal/aspectual or other type of meaning, Paiwan and Chinese negative elements do.

Paiwan (Tang 1998)

- (143) a. ti-kai ti-madu?  
 TI-Kai she  
 'Is she Kai?'
- b. ini, inika ti-kai.  
 INI INIKA TI-Kai  
 'No, (she is) not Kai.'
- c. izua a su-paisu?  
 have Nom your-money  
 'Do you have money?'
- d. \*ini, neka nu ku-paisu.  
 INI NEKA Nom my-money

English

- (144) a. Is she Kai?  
 b. No, she is not Kai.  
 c. Do you have money?  
 d. No, I do not have money.

Mandarin

- (145) a. wo you qian.  
I have money  
'I have money.'  
b. \*wo bu you qian.  
I BU have money  
c. wo mei you qian.  
I MEI have money  
'I do not have money.'

English

- (146) a. He is not a student.  
b. He was not in the store.  
c. You are not happy.  
d. I did not cry.  
e. She does not know you.  
f. You do not have money.

Could this cross-linguistic difference in inherent semantic marking of negative elements be derived from, for instance, some typological variations among languages? We leave this issue for further study.

## References

- Alexiadou, A. 1997. *Adverb Placement*. Amsterdam: John Benjamins.
- Baker, C. L. 1991. The syntax of English *not*: The limits of core grammar. *Linguistic Inquiry* 22.3:387-429.
- Baker, M.C., and K. Hale. 1990. Relativized minimality and pronoun incorporation. *Linguistic Inquiry* 21.2:289-297.
- Benmamoun, E. 1989. *Negation, Minimality and Inflectional Morphology*. Manuscript.
- Bobaljik, J. 1995. *Morphosyntax: The Syntax of Verbal Inflection*. Cambridge: MIT dissertation.
- Bowers, J. 1993. The syntax of predication. *Linguistic Inquiry* 24.4:591-656.
- Chang, H.-C. 1992. *Causative Constructions in Paiwan*. Hsinchu: Tsing Hua University MA thesis.
- Chang, Y.-L. 1996. *Gemalanyu Cankaoyufa*. Manuscript.
- Chang, Y.-L. 1998. The phrase structure of negation in Kavalan. *Report for the National Science Council*.
- Chen, G.-M. 1996. *Zouyu Foudingju de Yanjiu*. Manuscript.
- Chen, J.-H. 1996. *A Preliminary Study of Tkdaya Seediq Negators*. Hsinchu: Tsing Hua University MA thesis.
- Cinque, G. 1995. Adverbs and the universal hierarchy of functional projections. *Glow Newsletter* 34:14-15.
- Chiu, B. H.-C. 1993. *The Inflectional Structure of Mandarin Chinese*. Los Angeles: UCLA dissertation.
- Chiu, B. H.-C., and C.-C. J. Tang. 1998. Paiwan focus markers refocused. Paper presented at the Sixth International Symposium on Chinese Languages and Linguistics. Taipei: Academia Sinica.
- Chomsky, N. 1995. *The Minimalist Program*. Cambridge: MIT Press.
- Ho, D.-A. 1978. *Paiwanyu Yufa Gaishu*. Manuscript.
- Huang, J. C.-T. 1988. *Wo pao de kuai* and Chinese phrase structure. *Language* 64.2:274-311.
- Huang, L. M. 1993. *A Study of Atayal Syntax*. Taipei: The Crane Publishing Co.
- Huang, L. M. 1995. *A Study of Mayrinax Syntax*. Taipei: The Crane Publishing Co.
- Kayne, R. 1989. Null subjects and clitic climbing. *The Null Subject Parameter*, ed. by O. Jaeggli and K. Safir. Dordrecht: Kluwer Academic Publishers.
- Laka, I. 1990. *Negation in Syntax: On the Nature of Functional Categories and Projections*. Cambridge: MIT dissertation.
- Laka, I. 1994. *On the Syntax of Negation*. New York: Garland Publishing.
- Larson, R. 1988. On double object constructions. *Linguistic Inquiry* 19.3:335-391.

- Li, P. J.-K. 1971. Two negative markers in Taiwanese. *Bulletin of the Institute of History and Philology* 43:201-220.
- Li, P. J.-K. 1973. *Rukai Structure*. Taipei: Institute of History and Philology, Academia Sinica.
- Li, P. J.-K. 1996a. *Yilanxian Nandao Minzu Yu Yuyan*. Yilan: Yilan Xianzhengfu.
- Li, P. J.-K. 1996b. The pronominal systems in Rukai. *Reconstruction, Classification, Description; Festschrift in Honor of Professor Isidore Dyen*, ed. by B. Nothofer, 209-230. Hamburg: Abera Verlag.
- Li, P. J.-K., D.-A. Ho, L. M. Huang, E. Zeitoun, and C. Saillard. 1997. *Gaoxiongxian Nandaoyu*. Gaoxiong: Gaoxiong Xianzhengfu.
- Liu, S.-S. 1996. *Zouyu de Foudingci*. Manuscript.
- Ouhalla, J. 1988. *A Syntax of Head Movement: A Study of Berber*. London: University of College London dissertation.
- Ouhalla, J. 1991. *Functional Categories and Parametric Variation*. London: Routledge.
- Pollock, J. Y. 1989. Verb movement, universal grammar and the structure of IP. *Linguistic Inquiry* 20.3:365-424.
- Progova, L. 1988. *A Binding Approach to Polarity Sensitivity*. San Diego: University of California at San Diego dissertation.
- Progovac, L. 1994. *Negative and Positive Polarity*. Cambridge: Cambridge University Press.
- Starosta, S., A. K. Pawley and L. A. Reid. 1982. The evolution of focus in Austronesian languages. *Papers from the Third International Conference on Austronesian Linguistics*, vol. 2: *Tracking the Travellers*, ed. by A. Halim, L. Carrington and S. A. Wurm, 145-170. Pacific Linguistics C-75. Canberra: Pacific Linguistics.
- Starosta, S. 1974. Causative verbs in Formosan languages. *Oceanic Linguistics* 13:279-360.
- Tang, C.-C. J., Y.-L. Chang and D.-A. Ho. 1997. On noun phrase structures in Paiwan. *Tsing Hua Journal of Chinese Studies*, New Series 27:239-256.
- Tang, C.-C. J. 1998. Negators in Paiwan. *Report for the National Science Council*.
- Tang, C.-C. J. 1999. On clausal complements in Paiwan. *Selected Papers from the Eighth International Conference on Austronesian Linguistics*, ed. by E. Zeitoun and P. J.-K. Li, 529-578. Taipei: Institute of Linguistics (Preparatory Office), Academia Sinica.
- Tang, C.-C. J. 2002. On nominalizations in Paiwan. *Language and Linguistics* 3.2:283-333.
- Tang, T.-C. 1993. A semantic and syntactic study of negation in Taiwanese. *Publications in the National Science Council* 1993.3.2.
- Tang, T.-C. 1994. Hanyu foudingci de yuyineihan yu chuxian fenbu. *Hanyu Cifa Jufa*,

- Diwuji*. Taipei: Student Book Co.
- Teng, S.-H. 1992. Diversification and unification of negation in Taiwanese. *Chinese Languages and Linguistics I: Chinese Dialects*, 609-629. Taipei: Institute of History and Philology, Academia Sinica.
- Wang, W. S.-Y. 1965. Two aspect markers in Mandarin. *Language* 41.3:457-470.
- Yeh, M. M. 1991. *Saisyat Structure*. Hsinchu: Tsing Hua University MA thesis.
- Yeh, M. M., L. M. Huang, E. Zeitoun, A. H. Chang and J. J. Wu. 1998. A preliminary study on negative constructions in some Formosan language. *Proceedings of the Second International Symposium on Languages in Taiwan*, ed. by F.-F. Tsao and M.-H. Tsai. Taipei: The Crane Publishing Co.
- Zeitou, E. 1996. The Tsou temporal, aspectual and modal system revisited. *Bulletin of the Institute of History and Philology* 67:503-532.
- Zeitoun, E. 1997a. The pronominal system of Mantaoran (Rukai). *Oceanic Linguistics* 36:312-346.
- Zeitoun, E. 1997b. Existential, locative and possessive constructions in the Formosan languages. Manuscript.

[Received 16 July 2001; revised 29 March 2002; accepted 15 April 2002]

Institute of Linguistics, Preparatory Office  
Academia Sinica  
130, Sec. 2, Academia Road  
Nankang, Taipei 115, Taiwan  
hsjatang@gate.sinica.edu.tw

## 排灣語的否定結構

湯志真

中央研究院

排灣語有許多具有不同的詞彙、句法及語意行爲的否定詞。本篇文章除了提出不同的詞組結構來說明這些否定成份的相同點和相異點，並對排灣語類和非排灣語類的相關否定現象做對比分析。

關鍵詞：否定詞，詞組結構，述語，非述語，補語標記，排灣語，台灣南島語