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The Amis Left Periphery

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This paper aims to examine two elements, *u* and *a*, in the Amis left periphery, showing that *u* and *a* are highly relevant to finiteness and to the tense, aspect, and mood (TAM) of the embedded clause, and are influenced by their other functions. Specifically, Amis *u* is originally a noun marker, and as a complementizer it tends to occur with other deverbalized devices. Amis *a* is reported as the future marker in another dialect, and this function may influence the embedded clause that it introduces to very often be an irrealis one. This paper proposes that *u* is a Finite Head (Fin), while *a* is either an irrealis Fin or a defective Modal-Aspectual (Mod-Asp). This study also concludes that, in Amis, there are only two levels of complementation: finite Complement Phrase (CP) and infinite Mod-AspP, which is less diverse than in English. This explains why different types of Amis complement clauses are often structured similarly.

1. INTRODUCTION: THEORETICAL ORIENTATION. The diversity of surface structures in complementation results from different degrees of clausal integration between the matrix and the embedded clauses. That is, complementation is a matter of the extent to which the embedded clause is reduced and incorporated into the matrix one. This issue is relevant to the complementizer and the projection of the left periphery. Rizzi (1997) proposes that the essence of the CP is the Force-Finite (Force-Fin) system, in which Fin specifies the mood and finiteness, while a complementizer occupies Force. In fact, the elements specified in the Force-Fin system determine the degree of CP reduction. For instance, the appearance of English *that* in the complement clause blocks the reduction of CP and specifies the finiteness of embedded clause (1a). English *for*, on the other hand, is spelled out if [+irrealis] is specified in the embedded Force selected by a nonfactive matrix verb (van Gelderen 2004). If *for* is present, CP is prohibited from being completely truncated but still is reduced to some extent, as in (1b). In such a case, the verb is nonfinite and it does not require a nominative subject.

- (1) a. I expect (that) he will behave well.
- b. I expect *for* him *to* behave well.

Complement (C) and Tense (T) are bound either via T-C feature-sharing (Pesetsky and Torrego 2004) or via endowment from C to T (Chomsky 1995). This bound relationship means the reduction of CP, either completely or partially, inevitably influences the finiteness of Tense Phrase (TP). TP is also relevant to complementation with respect to the

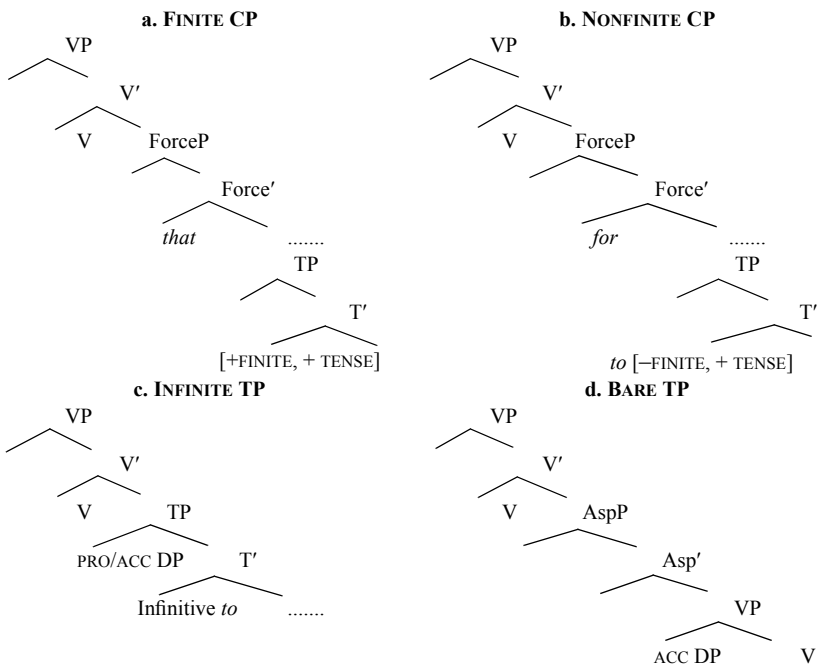
tense criterion (Rizzi 1991, 1997; Haegeman 1995) that “all relations of predication need a temporal interpretation” (Castillo 2001:121).

If T is infinitive, or if TP is not projected, the subject of the embedded clause still must be temporally interpreted (cf. Castillo 2001). How the subject satisfies the tense criterion affects the syntactic representation of complementation. For instance, the licensing of PRO is relevant to $[\pm\text{tense}]$. Control predicates, such as *try*, *persuade*, *force*, and so on, are argued to s-select irrealis complements (Martin 1996, Bošković 1997), while epistemic verbs s-select the state of affairs, which is $[-\text{tense}]$.

For researchers who advocate the null case theory of PRO, $[\text{+tense}, -\text{finite}]$ is relevant to the appearance of PRO. The direct perception construction is one example of non-projection of embedded TP. In direct-perception verbs, the simultaneity of perception and perceived event forces the TP of the embedded clause to be reduced, since the tenses of two clauses are anchored simultaneously on the matrix clause or verb. Tense, finiteness, complementation, and types of complement clauses go hand in hand with one another. To clearly show their interaction, let us take English as an illustration. Figures 1a–d are cartographies of English complementation.

Figure 1 represents the English complementation system, from the nonreduced one (figure 1a) to the highly integrated one (figure 1d). Nevertheless, although all languages follow the principles of Universal Grammar, syntactic representation of a language is also regulated by language-specific mechanisms, which makes languages differ from one another. This study will attempt to show how Amis complementation is presented. This

FIGURE 1. CARTOGRAPHIES OF ENGLISH COMPLEMENTATION



issue is inevitably relevant to the Force-Fin system. Thus, the next section begins with the investigation of Amis complementizers.

This paper is organized as follows. Section 2 briefly summarizes some assumptions about Amis made in this paper. Section 3 reviews previous studies on Amis complementizers, including their grammaticalization process and other functions. The current analysis of *u* and *a* in the Force-Fin system is also outlined in this section. Section 4 proposes some Amis complementation strategies, based on the syntactic behavior of elements in the left periphery. Conclusions are presented in section 5.

2. AMIS. This section provides a minimalist account of the inflectional and lexical layers of Amis that are relevant to complementation.

Amis is a Formosan language, spoken by approximately 140,000 people, or nearly 38 percent of the total indigenous population of Taiwan, making it the largest and perhaps the best documented of Formosan languages.¹ Extensive research into Amis leads this study to make the following assumptions.

First, voice markers are formed prior to the inflectional layer. According to Wu, these voice markers “seem to have their own semantic content” (Wu 2007:103). This effect is relevant to the lexical or functional projection, instead of an inflectional one. In addition, verbs of control complements are already marked by voice markers.² These verbs cannot stand alone without any voice marker, nor can they be affixed by the other TAM markers; compare (2a–c). If finiteness does not influence the occurrence of voice markers, the form of the voice markers is not determined by the inflectional layer.³

- (2) a. Mi-lingatu Ø-ci Kacaw mi-naman t-u caciyaw n-u
 AV-begin NOM-PPN Kacaw AV-learn DAT-CN language GEN-CN
 Amis anumamiheca.
 Amis next.year
 ‘Kacaw will begin to learn Amis next year.’
- b. *Mi-lingatu Ø-ci Kacaw naman t-u caciyaw n-u
 AV-begin NOM-PPN Kacaw learn DAT-CN language GEN-CN
 Amis anumamiheca.
 Amis next.year

1. The dialect this study investigates is Hai-an Amis, which belongs to central Amis. I owe a deep debt of gratitude to my two language consultants, Maluta Shun (in his fifties) and Kacaw Chen (in his sixties), who currently reside in Kaohsiung. Without their time and patience, this paper would not have eventuated. I am also indebted to two anonymous reviewers for their valuable and constructive comments. Any errors and flaws are mine and mine alone.
2. Even though the forms of voice markers are not decided by the inflectional layer, voice markers do carry an agreement function. This is explained later in this section.
3. Because the two elements that this paper concentrates on, *a* and *u*, have multiple functions, I will gloss them simply as A and U, respectively. The following abbreviations are used in addition to those of the Leipzig Glossing Rules: AG, agentive; ASP, aspectual marker; AT, actor topic; AV, actor voice; CN, common noun; FACT, factual marker; GOAL, goal; IV, invisible; LINK, linker; PPN, personal proper noun; PREP, preposition; TT, theme topic; UV, undergoer voice. KA and KU represent the Amis morphemes *ka* and *ku*, respectively, and AY represents the Tagalog morpheme *ay*, none of which can be easily glossed. This study glosses Amis sentences mainly by following Wu (2006, 2007). Thus, there are some changes on the gloss in sentences that appear in work by other authors. However, this study makes no changes on glosses in sentences from other languages.

- c. Ma-mi-lingatu Ø-ci Kacaw (*ma)-mi-naman t-u cacyaw
 IRR-AV-begin NOM-CN Kacaw IRR-AV-learn DAT-CN language
 n-u Amis.
 GEN-CN Amis
 ‘Kacaw will begin to learn Amis.’

Another point needing attention with respect to the syntactic position of voice markers is the alternating form of voice markers. For instance, *ka-* alternates with *ma-* and *pi-* alternates with *mi-* in imperatives, causatives, and sometimes simple sentences. According to Wu, *pa-pi-* causative verbs “involve weaker causation (i.e., jussive reading), compared with the plain *pa-* counterpart. This weaker causation of *pa-pi-* verbs is related to the semantics of *pi-*, the morphological variant of *mi-* The semantics of *pi-* intensifies the volition of the cause in the derived causative verbs and thus weakens the causing power from the causer” (Wu 2006:253). What Wu’s proposal implies is that variations in *mi-* and *pi-* are determined by the event, not by any inflectional operation.

The other significant finding by Wu (2006, 2007) is that Amis voice markers are relevant to Aktionsart, especially the telic feature. In terms of a generative account, this [\pm telic] feature is computed in the inner aspect projection, sandwiched between the upper vP and lower VP (see, for example, Travis forthcoming). Following Travis (2005), Pearson (2005), and others, this paper assumes that the upper vP is selected by the Event Phrase (EP) in which it “introduces or licenses the event argument of the verb, converting it into an event-denoting constituent” (Pearson 2005:402). In addition, there is a [\pm actor] feature in the Event (E) head for which an argument with the matching feature must move up covertly to check off this feature. In other words, the feature is not checked until Logic Form (LF), and this procedure does not change the original order in which arguments are introduced into the structure. According to the generalized Doubly-Filled Comp Filter (Sportiche 1995, Koopman 1996), the head is realized once the argument in its specifier position is moved. For example, following Chen (2009), undergoer voice markers, such as *ma-*, are realized once the nonagent/actor argument (for example, that in the specifier position of Inner AspP or VP) raises up. Once the argument moves to the specifier position of EP, it becomes the closest goal for a probe for agreement and nominative case assignment. In the other words, this *covert* movement contributes to the realization of the voice marker and also the theta-agreement between the voice marker and the nominative NP. Then, the verb along with the voice marker moves to the inflectional domain to check off the Extended Projection Principle (EPP) feature, by which the predicate-initial structure is formed.

Another assumption in this paper is that Amis may not have any distinct tense inflection. The first piece of evidence is that, even though Amis voice markers are encoded with default TAM information, there is no clear-cut difference between past, present, and future. Table 1 (based on Y. Huang 1988, Tseng 1991, Tsukida 1993, Zeitoun et al. 1996, and T. Huang 2006) shows that only the voice marker *-en* carries one TAM reading; the others either carry aspectual information or carry two or more TAM readings.

Second, unlike English, in which verb inflection varies as the temporal interpretation changes, the introduction of temporal adverbs does not alter the forms of the verb or the voice marker, as shown in (3).

TABLE 1. DEFAULT TAM IN AMIS VOICE MARKERS

VOICE	VOICE MARKER	DEFAULT TAM INFORMATION
	mi-	Imperfective (on-going) (Immediate) future Habitual
AV	ma-	On-going at ST
	-um-	On-going at ST
	Ø	On-going Immediate future
	ma-	Past
UV		Perfective
	-en	Immediate future

- (3) Mi-palu Ø-ci Kilang ci Canglah-an anini/ anudafak / inacila.
 AV-beat NOM-PPN Kilang PPN Canglah-DAT now / tomorrow / yesterday
 ‘Kilang is beating Canglah now.’, ‘Kilang will beat Canglah tomorrow.’, ‘Kilang beat Canglah yesterday.’

Thus Amis does respond to changes of aspectual or mood information. According to Zeitoun et al. (1996), aspectual and habitual information is lexically marked in Amis, and Amis *tu*, the perfective marker, is a lexical item. It is not required to follow the verb immediately: it can occur after verbal suffixes, for example.

Several studies (for example, Y. Huang 1988, Zeitoun et al. 1996, Wu, 2000) indicate that future can be expressed by reduplicating the first consonant of the verb or voice marker (VM) followed by the vowel /a/, thereby forming a pattern *Ca-V/VM*. However, in addition to future tense, *Ca*-reduplication also expresses the irrealis interpretation of a “non-happening event/state in the past” (Wu 2006:127). Thus, Wu (2007) categories *Ca*-reduplication as an expression of irrealis mood, instead of a future marker. From this evidence, this study would suggest that Amis tense is weak and mood and aspect are more prominent in this language.

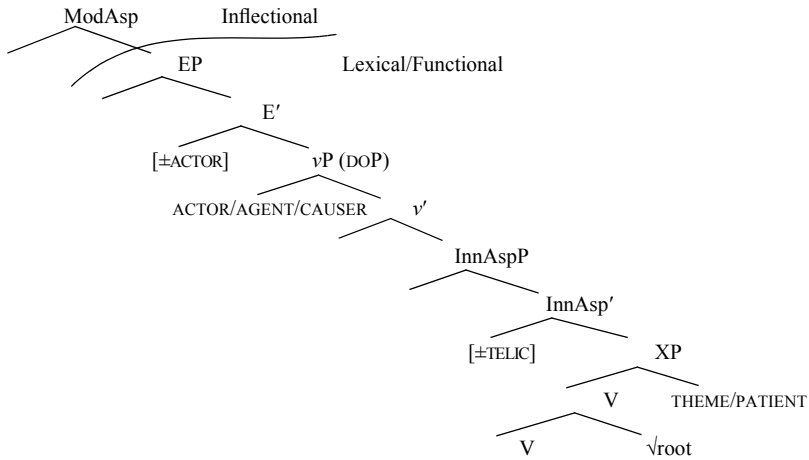
This paper adopts Ya-yin Chang’s (2004) position and assumes that, in Amis, verbs move to Mod-AspP to check the mood and aspectual information. The default TAM information carried by voice markers is mostly associated with mood and aspect and is zero spelled out. Figure 2 shows the basic Amis cartography assumed in this study.

3. THE AMIS COMPLEMENTIZER

3.1 PREVIOUS STUDIES AND CURRENT PROPOSAL. The earliest study on Amis complement construction is Wu (1995), which analyzed serial verb, pivotal cognition, and utterance constructions named by verb types and the participant role of the argument. The primary focus of Wu’s study is to rank all possible structures in a tight-loose continuum correlated by the semantic bond of the matrix verb and the event in the complement clause, and by the sentential integration of matrix and complement clauses. In her study, no complementizer is mentioned, since Amis complementizers, such as *a*, are optional.

A is reported as an Amis complementizer in E. Liu (2003) and Tsai (2007) and has been analyzed from the angle of grammaticalization. Liu argues that *a* is originally the conjunctive ‘and’, and its grammaticalization process is multidirectional. According to

FIGURE 2. THE BASIC CARTOGRAPHY OF AMIS



her, *a* loses its ability to link two VPs. Through grammaticalization, *a* can, today, head subordination, control adjunct, and control argument. This study is more concerned with the latter, the control construction, as an instance of complementation.

Another of Liu's arguments pertains to the syntactic environment where *a* is allowed to occur. She hypothesizes that *a* is a complementizer and optionally appears in complement clauses where embedded verbs are nonfinite, unmarked by any tense or aspect markers. Her argument comes from the fact that *a* is not allowed to introduce complement clauses with either *na*, the past marker, or *tu*, the perfective marker, as shown in (4) and (5). Tsai also makes a similar observation, arguing that Amis *a* has "been grammaticalized as *infinite* complementizer" (Tsai 2007:598) from one track of conjunction reduction.⁴

- (4) Mi-lalang kaku ci Aki-an (a) [(**na*) mi-palu (**tu*) ci Kacaw-an].
 AV-dissuade 1SG.NOM PPN Aki-DAT A PST AV-beat ASP PPN Kacaw-DAT
 'I dissuaded Aki from hitting Kacaw.'
 (E. Liu 2003:179)

- (5) Ma-fana' kaku (**a*) [na mi-qaca' tu Ø-ci Aki t-u-ra uhong].
 AV-know 1SG.NOM A PST AV-buy ASP NOM-PPN Aki DAT-CN-that book
 'I know that Aki bought that book.'
 (E. Liu 2003:179)

This study agrees with E. Liu (2003) and Tsai (2007) regarding the grammaticalization of Amis *a* from a conjunction to various other functions. In addition to their proposals, this study suggests that Amis *a* is restricted to certain TAMs, not merely finiteness. As shown below, the occurrence of *a* is not limited to infinite clauses; *a* can appear in a complement clause whose verb is finite and is marked for TAM. Take (6), for instance: the embedded clause is finite with a nominative NP and is marked with the irrealis marker, *Ca*-reduplication.

4. These two examples are adapted from E. Liu (2003:179), with slight changes in the forms and glosses. For example, *N*, as in *lalaN* in E. Liu (2003), is replaced by *ng* for consistency.

(6) Ma-fana' kaku (a) ta-tayni Ø-ci Aki anudafak.
 AV-know ISG.NOM A IRR-come NOM-PPN Aki tomorrow
 'I know that Aki will come tomorrow.'

(7) Ma-tawal aku (*a) mi-edef kaku t-u fawahan.
 UV-forget ISG.GEN A AV-close ISG.NOM DAT-CN door
 'I forgot that I have closed the door.'

In finite complements, *a* is not allowed in the complement clause whose event is either past tense or perfective. As shown in (7), the event 'I closed the door' has occurred; *a* cannot occur. On the other hand, in (6), a future/irrealis sentence, the optional occurrence of *a* does not cause the ungrammaticality, as it does in (7). This argument also accommodates the phenomenon found in Liu's study (2003). Since *a* is connected to nonpast, it is not compatible with the past and perfective markers, as in examples (4) and (5).

Additional supporting evidence is that (8a) becomes ungrammatical if *a* appears before the complement clause that indicates a perfective event. On the other hand, *a* is perfectly compatible with a complement clause indicating a future event as in (8b).

(8) a. Pa-ka-so'elin kami cingraan (*a) ma-luwid-ay
 CAUS-KA-real 1PL.EXCL.NOM 3SG.DAT A UV-win-FACT
 k-u cacikayen.
 NOM-CN contest

'We believe him to have won the contest.'

b. Pa-ka-so'elin kami cingraan a ma-luwid
 CAUS-KA-real 1PL.EXCL.NOM 3SG.DAT A UV-win
 k-u cacikayen.
 NOM-CNcontest

'We believe that he will win the contest.'

In some cases, the occurrence of *a* can also alter the temporal, modal, and aspectual status of sentences. In example (9a), the action "watching TV" has not yet begun, whereas in (9b), the action has already taken place or is progressing.

(9) a. Mi-hai Ø-ci ina i takuwanan a mi-araw t-u tilifi.
 AV-allow NOM-PPN mother PREP ISG.DAT A AV-see DAT-CN TV
 'Mother allowed me to watch TV.'

b. Mi-hai Ø-ci ina i takuwanan mi-araw t-u tilifi.
 AV-allow NOM-PPN mother PREP ISG.DAT AV-see DAT-CN TV
 'Mother allowed me to watch TV.'

In short, this study suggests that *a* interacts with the TAM information of the embedded clauses, and further proposes that *a* cannot introduce a complement clause whose event is measured as either a past or a past perfective.

3.2 A VERSUS U. In addition to *a*, another marker, *u*, can occur in the position immediately preceding the embedded verb, just like its counterpart *a*. Consider the following examples:

(10) Pa-ka-so'elin kami u fancel(-ay) a mitiliday cingra.
 CAUS-KA-real 1PL.EXCL.NOM U excellent-FACT LINK student 3SG.NOM
 'We believe that he/she is a good student.'

- (11) Pa-ka-so'elin kami cingraan u ma-luwud-ay tu
 CAUS-KA-real IPL.EXCL.NOM 3SG.DAT U UV-win-FACT ASP
 k-u cacikayen.
 NOM-CN contest
 'We believe him to have won the contest.'

However, the position of preceding an embedded verb is probably the only common property shared by *u* and *a*. In some cases, *u* and *a* occur with opposite conditions. First, *u* seems to appear in sentences whose TAM information is complementary to *a*. Comparing (8a) with (11), it is observed that *u* can cooccur with *-ay tu* but that *a* cannot.

However, although *u* and *a* very often occur in sentences with opposite TAM marking, there are some exceptions, such as (12a), whose embedded event is either future or irrealis. Interestingly, although *u* and *a* may mark the same TAM, their occurrence is still differentiated by a few restrictions about which this study is uncertain. As shown in (12a-c), *u* can precede the irrealis complement marked by *ma-mi-V* (12a), but the other template *ma-ma-V* in (12c) is compatible with *a*.

- (12) a. Ma-fana' kaku u ma-mi-palu Ø-ci Aki ci Panay-an.
 AV-know 1SG.NOM U IRR-AV-beat NOM-PPN Aki PPN Panay-DAT
 'I know that Aki is going to beat Panay.'
- b. *Ma-fana' kaku u ma-ma-palu n-i Aki ci Panay-an.
 AV-know 1SG.NOM U IRR-UV-beat GEN-PPN Aki PPN Panay-DAT
 Intended: 'I know that Panay will be beaten by Aki.'
- c. Ma-fana' kaku a ma-ma-palu n-i Aki ci Panay-an.
 AV-know 1SG.NOM A IRR-UV-beat GEN-PPN Aki PPN Panay-DAT
 'I know that Panay will be beaten by Aki.'

Second, *u* can occur in sentence-initial position, preceding the verb in noncomplement clauses. This is not true of *a*, since *a* seems to introduce complement clauses only.⁵ As shown below, the placement of *a* in sentence-initial position makes (13) ungrammatical. Sentence (14) is an instance from real text in which *u* seems to naturally introduce the sentence with other TAM markers.

- (13) U / *a ma-mi-pa-hanhan Ø-ci Aki a mi-tilid.
 U A IRR-AV-CAUS-stop NOM-PPN Aki A AV-study
 'Aki is going to drop out of school.'
- (14) "So'elin-ay? U ma-mi-'afas cangra t-u fafahian n-u
 really? U IRR-AV-rob 3PL.NOM DAT-CN wife GEN-CN
 mita haw?" a saan a mi-pa-licay.
 IPL.POSS Q LINK so.said LINK AV-CAUS-question
 "‘Really? Are they going to rob our women?’ so they asked."
 (Sing 1997:46)

5. In naturally occurring data, it *seems* that *a* is able to occur in sentence-initial position; however, in elicited data, it seems that the language consultants dislike *a* to be in sentence-initial position. For instance, both language consultants find it awkward to say *A ma-ma-palu ni Aki ci Panay* 'Panay is going to be beaten by Aki', judging it "incomplete" or "lacking something." Because of these discrepancies, no convincing case can be made that *a* can freely introduce an independent clause in the Hai-an dialect. (I am grateful to an anonymous reviewer for drawing my attention to this.)

Another observation regarding *u* is its inability to introduce a predicate that comes without any other markers. Consider the following examples: (15) and (16) contain indicative complements, (17) control, and (18) *believe*-type.

- (15) *Ma-fana' kaku u mi-palu Ø-ci Aki ci Panay-an.
 AV-know 1SG.NOM U AV-beat NOM-PPN Aki PPN Panay-DAT
 Intended: 'I know that Aki (will) beat Panay.'
- (16) Ma-fana' kaku u ma-mi-palu Ø-ci Aki ci Panay-an.
 AV-know 1SG.NOM U IRR-AV-beat NOM-PPN Aki PPN Panay-DAT
 'I know that Aki will beat Panay.'
- (17) *Mi-lalang kaku ci Aki-an u mi-palu ci Kacaw-an.
 AV-dissuade 1SG.NOM PPN Aki-DAT U AV-beat PPN Kacaw-DAT
 Intended: 'I dissuaded Aki from beating Kacaw.'
- (18) *Pa-ka-so'elin kami cingraan u ma-luwud k-u cacikayen.
 CAUS-KA-real 1PL.EXCL.NOM 3SG.DAT U UV-win NOM-CN contest
 Intended: 'We believe him to have won the contest.'

Earlier I suggested that finiteness/infiniteness is not the key to determining the occurrence of *a*. Nevertheless, finiteness seems to be a key factor in determining the occurrence of *u*. Besides, *u* seems to introduce more types of TAM information than *a* does. Table 2 gives a comparison of *u* and *a* in terms of a number of factors. It is shown that the real similarity between them is their function: a "linker" between the matrix and complement clauses.

3.3 ORIGINS AND OTHER FUNCTIONS OF AMIS *u* AND *a*. As shown above, even though *u* and *a* can occur before a complement clause, their appearance is still subject to certain syntactic conditions, making the environments in which they can occur differ from each other. These restrictions may pertain to their other functions.

First, Amis *a* is often reported as a linker (e.g., Wu 2000), and it occurs in a variety of syntactic environments. Inside a DP, *a* optionally occurs between the noun and its modifier, such as demonstratives (19a), numerals (19b), adjectives (19c), and restrictive relative clauses (19d). But it obligatorily appears in an attributive noun construction: example (19e) shows that *a* must be present between the attributive noun and the modified noun in an attributive noun structure.

- (19) a. Ma-ʔulah kaku t-u-ni (a) tamdaw.
 AV-like 1SG.NOM DAT-CN-this A person
 'I like this person.' (E. Liu 2003:57)
- b. Ma-qaca' n-i Aki k-u tulu (a) futing.
 UV-buy GEN-PPN Aki NOM-CN three A fish
 'Three fish were bought by Aki.' (E. Liu 2003:57)

TABLE 2. CONTRAST BETWEEN *u* AND *a*

	<i>u</i>	<i>a</i>
Sentence initial	Yes	No
Linker	Yes	Yes
Infiniteness	No	Yes
Cooccur with <i>-ay tu</i>	Yes	Only in some stative verbs
<i>Ca</i> -reduplication	Yes in some cases	Yes

- c. Ma-qaca' aku k-u fangcal-ay (a) rikuq.
 AV-buy ISG.GEN NOM-CN beautiful-NMLZ A clothing
 'I bought the beautiful clothes.' (E. Liu 2003:57)
- d. Ma-araw aku k-u-ya mi-palu-an n-i Aki (a) wawa.
 UV-see ISG.GEN NOM-CN-that hit-UV GEN-PPN Aki A child
 'I saw that child that Aki hit.' (Wu 2000:152)
- e. Mi-sanga' kaku t-u fadisusu' (*a) qemu.
 AV-make ISG.NOM DAT-CN grape A wine
 'I am making the grape wine.' (E. Liu 2003:56)

Amis *a* also functions as a conjunction with limited use. According to E. Liu (2003), *a* must appear when it conjoins two NPs. However, it cannot conjoin two PredPs, IPs, or CPs. For example:

- (20) a. Mala-widang-ay c-i Aki (*a) c-i Panay.
 become-friend-NMLZ NOM-PPN Aki A NOM-PPN Panay
 'Aki and Panay are friends.' (E. Liu 2003:51)
- b. R<um>adiw (*a) ma-sakeru c-i Aki.
 <AV>sing A AV-dance NOM-PPN Aki
 'Aki is singing and dancing.' (E. Liu 2003:52)
- c. Ma-'ulah kaku mi-nengneng t-u uhong (*a) ma-'ulah
 AV-like ISG.NOM AV-read DAT-CN book A AV-like
 cingra mi-nengneng t-u tilifi.
 3SG.NOM AV-read DAT-CN television
 'I like reading books and he likes watching TV.' (E. Liu 2003:53)

Scholars such as E. Liu (2003) and Tsai (2007) argue that the original function of Amis *a* is a linker, and then it undergoes grammaticalization. After grammaticalization (E. Liu 2003) or conjunctive reduction (Tsai 2007), *a* can conjoin two clauses with temporal sequential relation (Tsai 2007:597), conjoin a manner predicate with another, and introduce a control complement (E. Liu 2003).

U, which seems to appear in Amis complement clauses with very distinct usages from those of *a*, is very well known in its role as a noun marker. M. Huang (1995) and T. Liu (1999) propose that, in Amis, *-u* should be analyzed as the common noun marker. From Huang's and Liu's proposal, *ku*, which was analyzed as a nominative form for common nouns, is now viewed as a combination of *k-*, the nominative case, and *-u*, the common noun marker. E. Liu (2003) furthermore suggests that *u* might be a nominal marker, since it can occur by itself without the case marker. For instance, according to E. Liu (2003), *u* can head a common nominal predicate, as in (21a), and an interrogative pronoun, as in (21b) (E. Liu 2003:19–20).

- (21) a. U mitilid-ay kaku.
 U study-FACT ISG. NOM
 'I am a student.'
- b. U ma'an k-u-ra?
 U what NOM.that
 'What is that?'

Amis *u* can also occur in a cleft construction like (22). T. Liu (1999:106) argues that an Amis cleft clause “[undergoes] the nominalization.” She assumes that “there are a covert expletive subject and an invisible copular verb co-occurring with the cleft NP” (T. Liu 1999:107). On the surface structure, no case is assigned to the cleft NP since it is located in the Focus, a C position, and presupposed information is nominalized, indicated by the occurrence of *-ay*.⁶

- (22) a. [CP[IP[Cl_{left}-NP **u-ra wacu'**]_i]] [CP[IP **u-ya /ya c<um>kay-ay**
CN-that dog CN-that.IV/ that.IV<AV>run-NMLZ
 ______i **ì lalan anini**]
PREP road today
 ‘It is that dog that is running on the road today.
- b. [CP∅[IP∅[NP **u/uni/u(ra)/(u)ya NP**]_i]] [CPOP_i[IP **u/(u)ra/u(ya V-NMLZ_i)**]]
Focus Preposition
 (T. Liu 1999:110)

It seems that Amis *a* is somehow associated with time (especially nonpast). However, it is difficult to tell whether its association with time comes before or after the grammaticalization. If Amis *a* is a linker and is grammaticalized into a complementizer connecting two events, either sequential or simultaneous, it is encoded with time information after grammaticalization. However, one reviewer also points out that, in another dialect, the Northern dialect, *a* is a future marker. Though the Northern dialect is not the dialect studied here, and while it is unknown to what degree *a* was originally associated with future in the Hai-an dialect, it seems possible that the association of *a* with time is before the grammaticalization. And as a complementizer, this property restrains the occurrence of Amis *a* in the complement constructions.

On the other hand, Amis *u* is originally a noun marker; when it is grammaticalized into a complementizer, it is more likely to head a nominalized or deverbalized complement in which the operations are most often done by *Ca*-reduplication and the affixation of *-ay*.⁷ However, the cooccurrence of *Ca*-reduplication or *-ay* is not consistent in *a*-complements, since *a* is not initially associated with a noun.

3.4 TWO COMPLEMENTIZERS IN AUSTRONESIAN LANGUAGES.

Amis is not the only western Austronesian language with distinctive linkers. Paiwan, another Formosan language, is similarly argued to possess two complementizers. According to Tang (1999) and Chang and Tsai (2001), *a* in Paiwan introduces a nonfinite complement clause, while *tu(a)* introduces a finite one, as illustrated below.

- (23) PAIWAN
 a. ʔ-əm-adil ti kina tua alak a/*tu(a) pa-kan.
force-AV NOM mother ACC child LINK CAUS-eat
 ‘Mother forces her child such that she causes him/her to eat.’
 (Chang and Tsai 2001:12; originally from Yeh 1997:99)

6. T. Liu (1999) glossed *u* as NCM, noun class marker. For consistency, this paper follows the gloss of Wu (2006, 2007).
 7. I am grateful to an anonymous scholar who mentioned that *V-ay* and *Ca*-reduplication forms that *u* often heads are sometimes used deverbally.

- b. ʔ-əm-adil ti kina **tu(a)**/*a k-əm-an a alak.
 force-AV NOM mother LINK eat-AV NOM child

‘Mother forces the child to eat.’

(Chang and Tsai 2001:12; originally from Yeh 1997:99)

Malagasy also has two elements glossed as complementizers, *fa* and *ho* (Travis forthcoming). In the examples below, if the “complementizer” is *ho*, the argument of the embedded clause can be raised and case assigned by the matrix verb. Travis does not give any explanation for the alternation of *ho* and *fa*. However, at least from the data below, there may exist two complementizer-like elements in Malagasy, and the choice between them can influence word order as well as case assignment.

(24) MALAGASY

- a. Nanantena Rakoto [**fa** nianatra tsara ny ankizy].

PST.AT.hope Rakoto COMP PST.AT.study good the children

‘Rakoto hoped that the children studied well.’

- b. Nanantena an’ny ankizy_i [**ho** nianatra tsara t_i] Rakoto.

PST.AT.hope ACC.the children COMP PST.AT.study good Rakoto

‘Rakoto hoped that the children studied well.’ (Travis forthcoming)

Tagalog also has two complementizers (glossed as linkers in Richards’s study), an affix *-ng* and a free-standing morpheme *na*, whose distribution is similar to that of English covert and overt complementizers, and by which Richards (1999) supports Pesetsky’s argument that “the English null complementizer is an affix, attaching to the higher verbs” (Richards 1999:297).

(25) TAGALOG

- a. **Na** sumayaw si Juan sa lamesa ay itinatuwa ni Maria.

LINK dance-AT TOP Juan LOC table AY denied.TT AG Maria

‘That Juan danced on the table was denied by Maria.’

(Richards 1999:299)

- b. *[-**Ng** sumayaw si Juan sa lamesa] ay itinatuwa ni Maria.

LINK dance-AT TOP Juan LOC table AY denied.TT AG Maria

(Richards 1999: 299)

- c. Si Maria ang gusto [-**ng** kumain ng tambakol].

TOP Maria TOP want LINK eat.AT GOAL mackerel

‘Maria’s the one who wants to eat the mackerel.’

(Richards 1999:301)

- d. *Si Maria ang gusto [**na** kumain ng tambakol].

TOP Maria TOP want LINK eat.AT GOAL mackerel

(Richards 1999:301)

According to Pesetsky (1991), in English there are two complementizers, *that* and \emptyset . Specifically, the null complementizer is an affix, unable to occur in an environment without a host. Although Amis *a* is neither an affix nor a null complementizer, it seems that *a* is parallel to the null complementizer in English in terms of the structural distribution, where *a* and \emptyset cannot occur sentence-initially, and they are both compatible with infinite complements. On the other hand, Amis *u* and English *that* can occur in the sentence-ini-

tial position and introduce finite complements. In other words, Amis is similar to many other western Austronesian languages in which two complementizers exist. Also, similar to Pesetsky's analysis (1991), syntactic environments that *u* and *a* can occur in are somehow similar to those of English *that* and \emptyset . According to Pesetsky (1991) and Richards (1999), in English and Tagalog, one of two complementizers can only occur in some very limited syntactic environments. They argue that this is due to the morphological forms of the complementizers: either null or an affix. The syntactic environments Amis *a* can occur in are very similar to those of English \emptyset and Tagalog *-ng*, but *a* is a free-standing morpheme, not an affix. In addition, TAM information of the embedded clause should be taken into consideration while deciding on the occurrence of *u* and *a*.

3.5 THE AMIS FORCE-FIN SYSTEM. The existence of two complementizers is commonly found in western Austronesian languages. Thus it is not surprising that there are two complementizers in Amis. However, the argument that *a* is a sole complementizer is unsatisfactory. This paper suggests that *a* can occur in two positions: an irrealis Fin and a defective Mod-Asp. Recall that *a* can introduce almost every type of complement clause, including indicative, control, Exceptional Case Marking (ECM), and even direct-perception constructions (see example [26]) where no CP is present (see, e.g., Felser 1998, 1999; van Gelderen 2004).

- (26) Ma-nengneng aku \emptyset -ci Aki a mi-palu ci Panay-an.
 UV-see I SG.GEN NOM-PPN Aki A AV-beat PPN Panay-DAT
 'I saw Aki beating Panay.'
 (Wu 1995:55)

In other words, there is no single position that can accommodate the occurrence of *a* in a full CP (for an indicative complement) and in a truncated CP (for a direct perception construction). It is very unlikely that the Irrealis Fin is the only status of *a*. If there is only a single account for *a*, every type of complement would be treated as similar. In other words, the function of *a* does not specify the finiteness as a Fin does in many Romance and Germanic languages. Rizzi shows that *che* in Italian "co-occurs with present, past, and future indicative, with present and past subjunctive and present and past conditional, thus distinguishing these forms from infinitival, gerundival, and participial clauses" (Rizzi 1997:283–84).

Another problem is that irrealis is not the only TAM information encoded in Amis *a*-complement clauses. Although an irrealis Fin can give a plausible explanation for an *a*-indicative complement, and possibly also a control complement, this claim cannot survive in the direct perception construction where the embedded event is perceived, which is definitely *not* irrealis. Alternatively, if we assume that *a* can be a defective Mod-Asp, this assumption matches the fact that the TAM of an *a*-introduced complement is either restrictive or anchored with the matrix clause (for example, in control and direct perception). Thus, this study suggests that Amis *a* is either an irrealis Fin or a defective Mod-Asp.

In previous studies, Amis *u* has been analyzed either as a common noun marker (M. Huang 1995; T. Liu 1999; and Wu 2003 and subsequent works) or as an element participating in the cleft construction (T. Liu 1999). This study suggests that Amis *u* may also be grammaticalizing into a Fin, though its syntactic role as a complementizer is still underlined by its origin.

The most promising evidence is the cooccurrence of *-ay* and *Ca*-reduplication, which are also deverbalization operations. If *u* is grammaticalized from the noun class marker, its origin accounts for the deverbal forms that *u* introduces in the complement construction. However, though *Ca*-reduplication and the affixation of *-ay* are deverbalization devices, not all predicates that undergo either or both procedures must be completely deverbalized. For example, some finite predicates with *Ca*-reduplication still function as predicates. While studying the function of *u*, Liu indicates that the occurrence of *u* with *Ca*-reduplication forms “denotes the meaning of *will do something*” (E. Liu 2003:20, fn. 17). Below are some examples: (27) has *u* in the matrix clause, and (28) has it in the embedded clause.

- (27) (U) ma-mi-qaca' t-u fafuj Ø-ci Aki.
 U IRR-AV-buy DAT-CN pig NOM-PPN Aki
 ‘Aki will buy pigs.’ (E. Liu 2003:20)
- (28) Ma-fana' kaku (u) ma-mi-palu Ø-ci Aki ci Panay-an.
 AV-know 1SG.NOM U IRR-AV-beat NOM-PPN Aki PPN Panay-DAT
 ‘I know that Aki is going to beat Panay.’

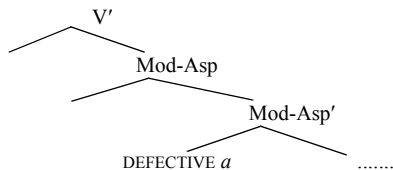
In addition, in complements involving *u*—either *Ca*-reduplication or with *-ay*—it specifies TAM information to some extent; that is, inflection is still marked so that the sentence is considered finite and *u* is considered as a finite Fin in the left periphery.

In summary, this study proposes that Amis *a* cannot merely be considered an infinite complementizer. Instead, it should be viewed as two elements: an irrealis Fin and a defective Mod-Asp, depending on the syntactic environment. Additionally, *a* is not the only element in the left periphery. Amis *u* is also specified in Fin where *u* and irrealis *a* highly interact with the inflectional domain they dominate.

4. AMIS COMPLEMENTATION. Despite similar surface structures of all types of complement clauses, clausal integration does happen in Amis. This study proposes that CP is reducible if the defective *a* is present in the embedded Mod-Asp. The proposed cartography is illustrated in figure 3.

This section further suggests that defective *a* occurs when the TAM of the embedded clause must be anchored by the matrix clause. In other words, the Mod-Asp head is not composed of complete features: it loses its ability to freely specify Mod-Asp information. This is why it is called “defective” here. The defective Mod-Asp is often found in complement clauses whose matrix verbs are control (for example, *try*; *persuade*) or direct-perception (for example, *see*) verbs. As briefly mentioned in the overview of this paper, tense is relevant to complementation. For instance, the control predicates often select an

FIGURE 3. CARTOGRAPHY OF REDUCED CP IN AMIS



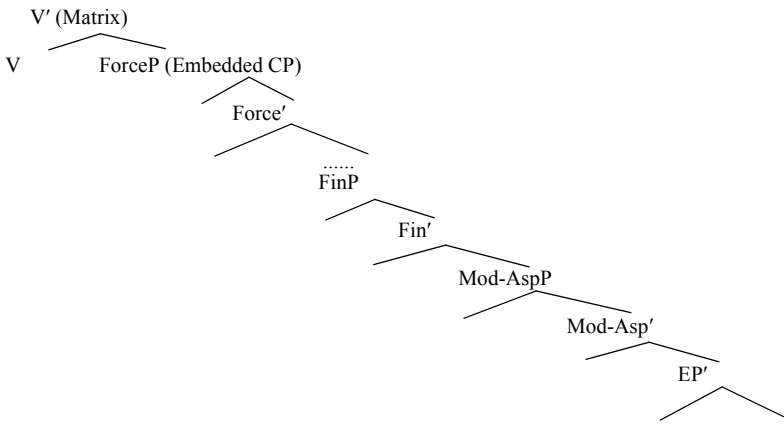
infinitive in the embedded T. This infinitive is argued as either tenseless (e.g., Wurmbrand 2007) or future/irrealis (e.g., Stowell 1982; Martin 1996, 2001; Bošković 1996, 1997).

Alternatively, aspect and mood are not often emphasized in control constructions. Nevertheless, unlike languages such as English, T in Amis is weak because T is not inflected. Even though Amis T is weak and probably not projected, this study suggests that Mod-AspP is still projected in Amis control constructions. According to some researchers (e.g., Abusch 1985; Wurmbrand 2001, 2007), the infinitive *to* of control predicates in English actually consists of two elements: the tense and the modal value of ModP. Since ModP also contributes to the future/irrealis information of a control complement, it should be projected while computing a control construction. In Amis, a language that may not have strong tense value, the realization of future/irrealis of a control construction can still be satisfied by the computation in ModP. That is, the projection of Mod-Asp satisfies the irrealis requirement of a control construction in Amis.

Since Mod-AspP is responsible for finiteness in Amis, embedded Mod-AspP is projected with the finiteness in complement clauses whose mood or manner of predication can be measured independently. Consequently, CP is not reduced, because the finite feature is endowed from C (Chomsky 1995, 2001, 2004, 2007). Thus, this study proposes figure 4 as a syntactic representation of Amis nonreduced complements. This paper also proposes that *u* and irrealis *a* are specified in Fin (also see figure 4).

This study also emphasizes that nonreduced CP is only possible when the embedded Mod-AspP can measure the mood and manner of predication *independently* and is free from the tense imposition of the matrix predicate. Indicative complements headed by *u* and irrealis *a* are of this kind. There is a concern regarding the location of *u*-complement and irrealis *a*-complement in the complementation continuum. Although irrealis *a*-complement is a CP, its occurrence is more restricted than its *u* counterpart in terms of the TAM information it can specify. This study still locates irrealis *a*-complements to the left of the continuum but a bit to the right of the *u*-complement. This study also locates Amis *believe-verb* complements to the very left side of the continuum. In Amis, a CP is pro-

FIGURE 4. AMIS NONREDUCED COMPLEMENT



tion would become “Who believes Kacaw will win this contest?”, not the same question as in (29b) and (29c).

- (29) a. Cimanan pa-aca kisu t-u futing?
 whom CAUS-buy 2SG.NOM DAT-CN fish
 ‘To whom did you sell fish?’
- b. *Cimana/*cima ku pa-ka-so’elin Ø-ci Kacaw a
 whom / who KU CAUS-KA-real NOM-PPN Kacaw
 pa-ka-luwid t-u cacikayen?
 CAUS-KA-win DAT-CN contest
 Intended: ‘Kacaw believes who will win the contest?’
- c. Cima pa-ka-so’elin Ø-ci Kacaw a pa-ka-luwid
 who CAUS-KA-real NOM-PPN Kacaw A CAUS-KA-win
 t-u cacikayen?
 DAT-CN contest
 ‘Who believes Kacaw will win the contest?’
 *‘Kacaw believes who will win the contest?’
- d. Pa-ka-so’elin Ø-ci Kacaw u cima nangra ku pa-ka-luwid
 CAUS-KA-real NOM-PPN Kacaw U who 3PL.GEN KU CAUS-KA-win
 t-u cacikayen?
 DAT-CN contest
 ‘Kacaw believed who will win the contest?’
- (30) Cima ku pa-tangic kisu a tayra i Taypak?
 who KU CAUS-force 2SG.NOM A go PREP Taipei
 ‘Who_i did you force ____i to go to Taipei?’

The *wh*-question construction of Amis *believe* verbs is more similar to that of an indicative complement. In (31) and (32), *wh*-extraction of arguments in the indicative complement is not allowed, since it moves across two barriers. The indicative complement is a CP, and it blocks the possibility of *wh*-movement out of the embedded clause. In other words, Amis *believe* complements exhibit the same pattern as indicative complements, but differ from control complements in terms of *wh*-extraction. Thus, despite the surface structural similarity, the projections of Amis *believe* and control complements are different from each other in their underlying structure. Specifically, there is a CP in the *believe* complement but not in control complements. This is why (30) is grammatical but (29b) is not.

- (31) a. Ma-tawal aku u cima nangra ku ma-mi-palu ci Panay-an.
 UV-forget 1SG.GEN U who 3PL.GEN KU IRR-AV-beat PPN Panay-DAT
 ‘I forgot who (among them) will be going to beat Panay.’
- b. *(U) cima nangra ku ma-tawal aku ma-mi-palu ci Panay-an.
 U who 3PL.GEN KU UV-forget 1SG.GEN IRR-AV-beat PPN Panay-DAT
 Intended: ‘I forgot who (among them) will be going to beat Panay.’
- (32) a. Ma-fana’ kaku u cima nangra ku ma-mi-palu ci Panay-an?
 AV-know 1SG.NOM U who 3PL.GEN KU IRR-AV-beat PPN Panay-DAT
 ‘You know who will be going to beat Panay?’

- b. *(U) cima nangra ku ma-fana' kaku ma-mi-palu ci Panay-an?
 U who 3PL.GEN KU AV-know 1SG.NOM IRR-AV-beat PPN Panay-DAT
 Intended: 'You know who will be going to beat Panay?'

To summarize, this study posits that there are only two levels of complementation in Amis. Control and direct-perception construction are grouped together, since their embedded CP is completely reduced. On the other hand, the embedded CP is fully projected in Amis indicative and *believe*-verb complements. The fewer levels of the complementation continuum may be attributed to weak TP in Amis and may explain why the surface structures of Amis complement clauses are similar.

5. CONCLUSION. This study has investigated two C elements in Amis: *u* and *a*. In addition to their functions as linkers, their occurrence is highly relevant to the TAM of embedded clauses and is influenced by their origins. It was found that *a*, which has been analyzed as the infinite complementizer, can in fact introduce an indicative complement with certain restrictions. Specifically, the complement clause cannot be past or past perfective. In finite complements, *a* very often introduces an irrealis event. In addition, *a* can also occur in infinite complement clauses, which has been reported in previous studies. In this case, the embedded verb cannot be further affixed other than with the voice marker. On the other hand, *u* must cooccur with *Ca*-reduplication or *-ay* when it is present in both sentence-initial position or as a linker for two clauses. Although *u* can introduce complement clauses with a wide range of TAM marking, *u* cannot freely alternate with *a*, even while the TAM is compatible with both elements. The most representative case is the embedded verb with *Ca*-reduplication.

Complementation in general is influenced by Force-Fin and the inflectional layer, and Amis complementation is no exception. This paper shows that Amis complementation is also guided by two Fins, the defective Mod-Asp, and the weak tense, which render only two types of complementation: finite CP and infinite Mod-Asp. These, in turn, result in less diversity of surface structures in Amis complement construction.

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