

## On the Syntax of Amis Comparative Constructions\*

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Amis is an Austronesian language spoken in Taiwan. This paper explores the syntax of Amis comparative constructions from the following aspects: (i) What are the morphosyntactic characteristics of comparative constructions in Amis? (ii) How do entity-comparison and event-comparison in Amis differ from each other in terms of syntactic realization? (iii) How are Amis comparative constructions characterized from a typological perspective? Our findings suggest that (a) in Amis, four types of comparative constructions (i.e., juxtaposition type, nominal type, *-ki-* type, and *ikaka/isafa* type) can be identified, as they exhibit different morphosyntactic features; (b) with respect to encoding event-comparison, deverbalization of the action word is obligatory for all comparative constructions, except the juxtaposition type; (c) in terms of Klein's (1991) typological characterization, Amis differs from English with regard to the syntactic patterning of comparatives. The typological distinction might be explicated by the parts-of-speech systems—based on the prototype and markedness theory, English is classified as having a full NAV inventory, whereas Amis belongs to an N[AV] language. Hopefully, this paper will contribute to both the understanding of Amis grammar and the typological theory of comparative constructions.

Keywords: Amis, Austronesian, comparative constructions, deverbalization, parts-of-speech systems, prototype and markedness theory

### 1. Introduction

The study of comparative constructions has been a challenging issue in almost every aspect of linguistics. For example, competing theories of comparatives, with respect to either syntax (e.g., adjunction vs. conjunction) or semantics (e.g., vagueness predicate analysis vs. scalar analysis) have been proposed, mostly based on Indo-European language data. In addition, cross-linguistic diversity, with respect to the morphosyntax of comparatives, has been addressed by various typological investigations (Greenberg 1966, Ultan 1972, Stassen 1985, Klein 1991, Beck et al. 2004, and Kennedy 2007, among others). While the Formosan family appears to be

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absent in the literature, thus failing to contribute to current theories and frameworks of comparatives, some recent findings (cf. Sung 2008) have begun to reveal the uniqueness of comparatives in Formosan languages in terms of morphosyntax, as well as its typological implications. In this paper, we demonstrate the potential of this branch of investigation by focusing on comparative constructions in Amis, a Formosan language with the largest population of speakers, which is mainly spoken on the east coast of Taiwan. In this paper, the following questions will be addressed:

- (i) What are the morphosyntactic characteristics of comparative constructions in Amis?
- (ii) How do entity-comparison and event-comparison in Amis differ with each other in terms of syntactic realization?
- (iii) Is the distinction in encoding strategy between Amis entity-comparison and event-comparison typologically motivated?

This paper is organized with respect to these research questions. Section 2 introduces four major types of comparative constructions, based on the expressions of entity-comparison (i.e., comparison between two objects/entities).<sup>1</sup> Section 3 further investigates the encoding strategy of event-comparison (i.e., comparison between two actions/events) by means of these four constructions. Section 4 provides an interim summary. In Section 5, Klein's (1991) typological characteristics of comparatives are introduced, in order to generalize a typological distinction between English and Amis. Section 6 explores the typological correlation between the syntax of comparatives and the parts-of-speech systems. Section 7 concludes this paper with our findings.

## 2. Comparative constructions in Amis

The definition of a comparative construction varies in the literature. Traditionally, there are four degrees of comparison: (a) positive, (b) equative, (c) comparative, and (d) superlative (Ultan 1972).<sup>2</sup> In this paper, by "comparative constructions" we specifically refer to type (c), also known as the "comparison of inequality". It is

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<sup>1</sup> Here, we choose the semantic-oriented categories "entity-comparison" and "event-comparison", for they exhibit different encoding patterns in Amis. On the other hand, the syntax-driven terms "NP comparison" and "clausal comparison", which are commonly addressed in the literature, are not ideal categories for the discussion of Amis comparatives.

<sup>2</sup> The four degrees of comparison are illustrated as below (Ultan 1972):

- (i) a. positive: e.g., *Mary is tall.*
- b. equative: e.g., *Mary is as tall as John.*
- c. comparative: e.g., *Mary is taller than John.*
- d. superlative: e.g., *Mary is the tallest of the children.*

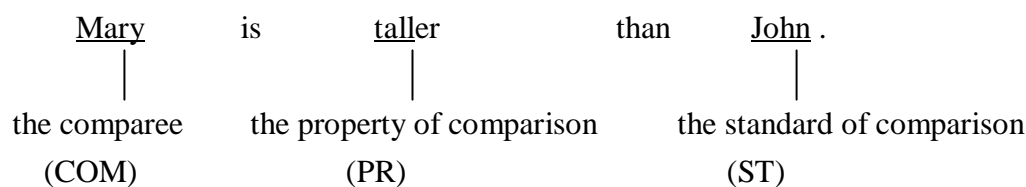
noteworthy that recent approaches (Beck et al. 2004 and Kennedy 2005, 2007) have taken semantics into serious consideration, thereby defining comparatives in a more intricate fashion. In this paper, however, the definition of a comparative construction conforms to Stassen (1985), as shown in (1), in order to accommodate cross-linguistic comparison.

(1) Definition of a “comparative construction”:<sup>3</sup>

A construction in a natural language is defined as a comparative construction if that construction has the semantic function of assigning a graded (i.e., non-identical) position on a predicative scale to two (possibly complex) objects or actions. (cf. Stassen 1985:24)

The core elements necessary for comparative constructions will be termed as follows. The linguistic codification indicating the gradable scale in the comparison will be referred to as **the property of comparison** (henceforth **PR**). For two objects (or actions) undergoing comparison, the one that serves as the yardstick for the comparison will be termed **the standard of comparison** (henceforth **ST**), while the other one, referring to the objective of the mental operation of comparison, will be termed **the comparee** (henceforth **COM**). The following example serves as an illustration of the above-mentioned terms.

(2)



Example (2) refers to the “entity-comparison”, which is defined as a comparison between two objects/entities (e.g., *Mary*, *John*). For the simplicity of presentation, this section introduces Amis comparative construction types based on the data of entity-comparison. Event-comparison in Amis is structurally more complicated, and will be discussed independently in Section 3.

It is crucial that we provide some background knowledge about Amis “property words” before discussing their manifestations in different comparative constructions. In the predicate position, Amis property words can be classified into two subclasses, based on their focus affixation: some use zero affixation, while others employ *ma-*

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<sup>3</sup> Stassen (1985:24) provides a definition of comparatives, focusing primarily on NP-comparison (i.e., entity-comparison in this study). We expand upon the definition in order to incorporate both entity-comparison and event-comparison.

affixation. This is shown in example (3).<sup>4</sup>

(3) a. zero affixation

Ø-fangcal kaku  
 AF-good 1SG.NOM  
 ‘I am good.’

b. *ma-* affixation

ma-laluk kaku  
 AF-diligent 1SG.NOM  
 ‘I am diligent.’

Here, the label AF is used for the affixation required for intransitive predicates. Apart from other alternatives suggested in J. Wu (2006) and Tsukida (2008), this label is chosen in order to avoid various controversial issues, such as Amis verb classifications and semantic alignment, which are not the concern of this study. We simply address the fact that Amis employs two types of focus affixation for property predicates.

## 2.1 Juxtaposition type

In Amis, there are four major types of comparatives: the juxtaposition type, the nominal type, the *-ki-* type, and the *ikaka/isafa* type, as pointed out in Sung and Kuo (2007, 2008), and Kuo (2008). Juxtaposition comparatives employ two parallel clauses to indicate a comparison, where the comparee and the standard of comparison are located separately. The property of comparison occurs as the main predicate of one clause, while the other clause is predicated either with the negation form or the antonym of the property. Neither clause of this bi-clausal construction, when taken separately, carries the comparative sense. Rather, it is through juxtaposition of the two clauses of contrastive propositions that the comparative interpretation is instantiated. This concept is clearly shown in the following examples.

(4) Amis juxtaposition comparatives

a. Ø-fangcal kaku, ca’ay ka-fangcal kisu  
 AF-good 1SG.NOM NEG KA-good 2SG.NOM  
 ‘I am better than you.’  
 Lit. ‘I am good; you are not good.’

<sup>4</sup> This paper follows the Leipzig Glossing Rules for the most part, except for the following abbreviations: AF: actor focus; CN: common-noun marker; LNK: linker; NCM: non-common name marker; PF: patient focus; PN: proper name/place name.

- b. Ø-fangcal kaku, Ø-tati'ih kisu  
 AF-good 1SG.NOM AF-bad 2SG.NOM  
 'I am better than you.'  
 Lit. 'I am good; you are bad.'

In this type of construction, there is no specific linguistic item (e.g., the degree morpheme *-er/more* in English *than* comparatives) responsible for the comparative interpretation. Note that in (4a), negation affects the form of the property word. The addition of some negation words (e.g., *ca'ay*) in Amis triggers a change of the form of the focus marker. For predicates with zero or *ma-* AF affixation, the corresponding form with the involvement of negation is uniformly the *ka-* form.

In addition to typical juxtaposition comparatives such as those seen in (4), there is an alternative kind of juxtaposition. The “disjunctive comparatives” contain a topic complex NP, juxtaposing COM and ST together, followed by a clause indicating a positive degree of comparison as seen in the examples below:

(5) Amis disjunctive comparatives

- a. kaku atu kisu, Ø-kereteng kaku  
 1SG and 2SG AF-heavy 1SG.NOM  
 'I am heavier than you.'  
 Lit. '(Given) I and you, I am heavy.'
- b. ci panay atu ci umus, ma-kuli Ø-ci panay  
 NCM.SG PN and NCM.SG PN AF-thin NOM-NCM.SG PN  
 'Panay is thinner than Umus.'  
 Lit. '(Given) Panay and Umus, Umus is thin.'

## 2.2 Nominal type

In nominal comparatives, the comparison is instantiated by means of an equational sentence, where the comparee occurs sentence-initially as a nominal predicate, followed by a clausal subject, containing the property of comparison and the standard of comparison. This construction has the pattern [COM [*ku* PR ST]], as illustrated in (6).

(6) Amis nominal comparatives:

a. u kaka aku [ku Ø-fangcal tisuwanan ]  
 CN older.sibling 1SG.GEN NOM AF-good 2SG.OBL  
 ‘My older brother/sister is better than you.’

Lit. ‘The one who is better than you is my older brother/sister.’

b. u kaka aku [ku ma-su’su’ tisuwanan ]  
 CN older.sibling 1SG.GEN NOM AF-fat 2SG.OBL  
 ‘My older brother/sister is fatter than you.’

Lit. ‘The one who is fatter than you is my older brother/sister.’

With respect to case-marking, COM *kaka* ‘older sibling’, as a nominal predicate without case function, is marked with the common noun classifier *u*. The clausal subject, highlighted with brackets, contains the nominative case marker *ku*, with PR functioning as the embedded predicate (e.g., *Ø-fangcal* ‘good’ in (6a), *ma-su’su’* ‘fat’ in (6b)), and ST serving as the oblique participant (e.g., *tisuwanan* ‘you’).<sup>5</sup>

### 2.3 -ki- type

In this type of construction, an affix *-ki-*, indicating an “exceed” sense, is incorporated into the property of comparison. The comparison can be literally interpreted as “the comparee exceeds the standard of the comparison with respect to the value concerning the property of comparison”. Focus marking is obligatory in this type of construction. Both AF expressions and PF expressions are available in *-ki-* comparatives.

For the convenience of illustration, we first consider typical AF and PF constructions in Amis without comparative interpretations. Consider example (7) below.

<sup>5</sup> There are some interesting phenomena concerning nominal comparatives. Despite having a nominal predicate, the nominal comparatives (e.g., (ic)) are unlike typical equational constructions as in (ia) and (ib), for they lack a deverbilization marker *-ay* for the embedded predicate in the clausal subject. Deverbilization by means of *-ay* affixation is interpreted as “someone who does something” (J. Wu 2006:70). Compare the following constructions:

(i) (Kuo 2008:53-54)

a. u kaka aku [ku **mi-palu-ay/\*mi-palu** tisuwanan]  
 CN older.sibling 1SG.GEN NOM AF-beat-AY 2SG.OBL  
 ‘The one who beat you is my older sibling.’

b. u kaka aku [ku **ma-su’su’-ay/\*ma-su’su’**]  
 CN older.sibling 1SG.GEN NOM AF-fat-AY  
 ‘The one who is fat is my older sibling.’

c. u kaka aku [ku **ma-su’su’(\*-ay)** tisuwanan]  
 CN older.sibling 1SG.GEN NOM AF-fat 2SG.OBL  
 ‘The one who is fatter than you is my older sibling.’

(7) a. AF construction

mi-palu      ku      widang    aku      cingranan  
 AF-beat    NOM   friend    1SG.GEN   3SG.OBL  
 ‘My friend is beating/will beat him.’

b. PF construction

ma-palu      nu      widang    aku      cingra  
 PF-beat    GEN   friend    1SG.GEN   3SG.NOM  
 ‘My friend beat him.’

The two observations regarding the Amis AF/PF focus dichotomy relevant to this paper are as follows: first, AF and PF constructions in (7) differ in terms of case marking strategy: in AF constructions, the agent is assigned the nominative case and the patient the oblique case, whereas in PF constructions, the agent takes the genitive case and the patient the nominative case. Second, certain default TAM interpretations are expected for different focus markers. AF *mi-* is normally associated with on-going or future events, while PF *ma-* is more likely associated with perfective/past events (Tsukida 1993 and Zeitoun et al. 1996) as shown in the translations in (7). On this basis, we discuss how *-ki-* comparatives can be generalized as having similar syntactic constructions.

### 2.3.1 AF *-ki-* comparatives

The AF *-ki-* comparatives employ *mi-* as the obligatory focus marker. The main predicate for AF *-ki-* comparatives can be generalized as *mi-ki-PR*, as seen in these examples.

(8) AF *-ki-* comparatives

a. mi-ki-kereteng      ku      widang    aku      cingranan  
 AF-exceed-heavy    NOM   friend    1SG.GEN   3SG.OBL  
 ‘My friend is heavier than him.’

b. mi-ki-laluk            Ø-ci            panay    ci            aki-an<sup>6</sup>  
 AF-exceed-diligent    NOM-NCM.SG   PN            NCM.SG   PN-OBL  
 ‘Panay is more diligent than Aki.’

In Amis, ‘heavy’ and ‘diligent’ take different AF markers: the former uses zero

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<sup>6</sup> Amis *ci* serves as the non-common singular noun marker. Note that the form *ci* itself does not necessarily bear the case function, as shown in (8b), where ‘Panay’ and ‘Aki’ require the *ci* marker despite the case distinction (see also (5)). Following J. Wu (2006), for non-common nouns we employ a zero marker for the nominative case, in contrast with the oblique case marker *-an*.

affixation (e.g., *Ø-kereteng*), while the latter uses *ma-* affixation (i.e., *ma-laluk*). However, in AF *-ki-* comparatives, these predicates lose their original AF markers and both take the *mi-* form, as shown in (8a) and (8b) respectively. Despite the lack of etymology regarding the affix *-ki-*, it may be argued that *-ki-* adds a dynamic “exceed” sense to the property, thereby choosing the *mi-* marker to replace the original marker. Compare examples (8) and (7a), where we observe the similarities including the presence of the *mi-* marker, and the case marking pattern. (7a) describes a beating event involving two participants. By analogy, *-ki-* comparatives describe an “exceeding” event, in which the comparee exceeds the standard of comparison, with respect to the property of comparison.

### 2.3.2 PF *-ki-* comparatives

In PF *-ki-* comparatives, a property predicate loses its original AF affixation, (i.e., *Ø* or *ma-*), and receives the PF *ma-* marker. Thus, the main predicate has the form *ma-ki-PR*. Consider the following examples.

(9) PF *-ki-* comparatives:

- a. *ma-ki-kereteng*    *nu*    *widang*    *aku*    *cingra*  
 PF-exceed-heavy    GEN    friend    1SG.GEN    3SG.NOM  
 ‘My friend is heavier than him.’
- b. *ma-ki-laluk*            *ni*                    *panay*    *Ø-ci*            *aki*  
 PF-exceed-diligent    NCM.SG.GEN    PN            NOM-NCM.SG    PN  
 ‘Panay is more diligent than Aki.’

We suggest that the *ma-* marker in this type of *-ki-* comparatives be glossed as PF, based on the similarities between examples (9) and (7b). The comparee, as the actor of the “exceed” predicate, is assigned the genitive case, while the standard of comparison, as the theme, takes the nominative case. In light of the case marking pattern, the *ma-* form is not the original AF marker for the intransitive predicate (cf. (5b)), but the PF marker for the transitive, “exceed” predicate.

The TAM interpretations indicated by the focus marker in *-ki-* comparatives may play a role in a speaker’s decision as to which construction should be used. This will be discussed later in Section 4.

### 2.4 *ikaka/isafa* type

In the fourth type of comparative construction, a special pair of predicates *ikaka/*



*isafa* ‘more/less’ is employed to express the comparison. Consider the following examples:

(10) Amis *ikaka/isafa* comparatives

- a. Ø-*ikaka* ku su’su’ ni mama aku tisuwanan  
 AF-more NOM fat NCM.SG.GEN father 1SG.GEN 2SG.OBL  
 ‘My father is fatter than you.’
- b. Ø-*isafa* ku takaraw nira takuwanan  
 AF-less NOM tall 3SG.GEN 1SG.OBL  
 ‘He is less tall than me.’

*Ikaka/isafa* comparatives demonstrate very unique morphosyntactic traits. Unlike in juxtaposition or *-ki-* comparatives, the property of comparison here no longer appears in the predicate position, given the occurrence of the predicate *ikaka/isafa*. In (10), the property of comparison occurs in root form (i.e., *su’su’* and *takaraw*) and follows a case marker—a structural coding pattern for nouns. PR occurs as a nominal exclusively in *ikaka/isafa* comparatives, and hence requires special attention.

In addition, this type of construction is the only one capable of conveying not only comparison of superiority, as in (10a), but also comparison of inferiority, as in (10b). We argue that the verbal predicate *ikaka/isafa* is derived from the combination of the location-indicating preposition *i*, and the kinship term *kaka/safa* ‘older sibling/younger sibling’. This can be justified by examples (10c) and (10d), where *ikaka/isafa* comparatives denote an implicit age-comparison, provided there is no overt property of comparison involved.

(10) Amis *ikaka/isafa* comparatives

- c. Ø-*ikaka* Ø-*ci* panay takuwanan  
 AF-more(.in.age) NOM-NCM.SG PN 1SG.OBL  
 ‘Panay is older than me.’
- d. Ø-*isafa* Ø-*ci* kulas takuwanan  
 AF-less(.in.age) NOM-NCM.SG PN 1SG.OBL  
 ‘Kulas is younger than me.’

Based on (10c) and (10d) we classify *ikaka/isafa* comparatives as AF constructions, as the comparee is assigned the nominative case and the standard of comparison is assigned the oblique case. This is less clear in other expressions of this type, as the presence of an explicit property affects the marking of COM and ST, something which will be discussed later. To our knowledge, there are no PF

constructions for *ikaka/isafa* comparatives.

The *ikaka/isafa* pair is glossed as ‘more/less’ to account for its capacity for taking an explicit PR, as shown in (10a) and (10b). Moreover, the “property noun” suggests a unique scheme of comparison — in *ikaka/isafa* comparatives, the targets being compared do not directly refer to COM and ST; rather, they refer to the shared property possessed by COM and ST. This is illustrated by the literal translation given in (11).

- (11) a. Ø-ikaka **ku su’su’** ni mama aku tisuwanan  
 AF-more NOM fat NCM.SG.GEN father 1SG.GEN 2SG.OBL  
 ‘My father is fatter than you.’  
 Lit. ‘My father’s **fatness** compared to yours is more.’
- b. Ø-isafa **ku takaraw** nira takuwanan  
 AF-less NOM tall 3SG.GEN 1SG.OBL  
 ‘He is less tall than me.’  
 Lit. ‘His **tallness** compared to mine is less.’

Example (11a) compares ‘my father’s fatness’ with ‘your fatness’. For the former, the property occurs in a root form (i.e., *ku su’su’* ‘fatness’), serving as the nominal head, modified by the postnominal COM in a genitive form (i.e., *ni mama* ‘my father’s’). For the latter (i.e., ‘your fatness’), the lexical content presumably includes the property as the nominal head, modified by the postnominal ST. The mere occurrence of ST in oblique form without the property, we argue, involves an ellipsis process due to economical concerns.<sup>7</sup>

Another intriguing observation on *ikaka/isafa* comparatives is their pragmatic implication. The usage of *ikaka/isafa* comparatives not only asserts the truth condition

<sup>7</sup> The ellipsis in Amis *ikaka/isafa* comparatives is illustrated below:

- (i) a. Amis *ikaka/isafa* comparatives (before ellipsis):  
 Ø-ikaka ku takaraw nira tu takaraw nura tamdaw  
 AF-more NOM tall 3SG.GEN OBL tall that.GEN person  
 Lit. ‘His tallness compared to that person’s tallness is more.’
- b. Amis *ikaka/isafa* comparatives (after ellipsis):  
 Ø-ikaka ku takaraw nira tura tamdaw  
 AF-more NOM tall 3SG.GEN that.OBL person  
 Lit. ‘His tallness compared to that person is more.’

Note that the property of comparison in *ikaka/isafa* comparatives serves as the reference. In (i), the two compared objects are of the same kind, i.e., *takaraw* ‘tallness’, and the contrast lies in the amount (of tallness) possessed by different people. Due to the economical concerns, the original ST (e.g., *tu takaraw nura tamdaw* ‘that person’s tallness’ in (ia)) should be rid of the shared property *takaraw*. The deletion of *takaraw* enables *nura tamdaw* ‘that person’ to dismiss the original role of the possessive modifier and serve as the reference function, thereby absorbing the oblique case and taking the form *tura tamdaw*, as shown in (ib).

of the comparison, but also provides the speaker's judgment regarding the degree of the property of comparison for the compared entities. As an illustration, consider the following examples:

(12) nominal comparatives

ci	panay	ku	Ø-takaraw	ci	talud-an
NCM.SG	PN	NOM	AF-tall	NCM.SG	PN-OBL

'Panay is taller than Talud.' (neutral context)

(13) *ikaka/isafa* comparatives

Ø-ikaka	ku	takaraw	ni	panay	ci	talud-an
AF-more	NOM	tall	NCM.SG.GEN	PN	NCM.SG	PN-OBL

'Panay is (even) taller than Talud.'  
(context-dependent: uttered when 'Talud is tall, whereas Panay is even taller.')

Both propositions in (12) and (13) share the truth condition *Panay has a higher value than Talud with respect to height*. Example (13), however, further implicates the speaker's belief that, according to real-world knowledge, the standard of comparison has a height great enough to be classified as "tall";<sup>8</sup> yet the comparee even excels in that property.

### 3. Event-comparison in Amis

Event-comparison is defined as "comparison between two actions/events" (e.g., *hunting is more dangerous than farming; I beat Umus harder than you beat Mayaw*). The involvement of actions/events adds structural complexity to the comparatives. First, consider event-comparison by means of the juxtaposition comparatives, as shown below:

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<sup>8</sup> The pragmatics of comparatives is beyond the scope of this study. Croft & Cruse (2004) propose that comparatives might differ with regard to "committed/impartial" construals. Along this line, it may be the case that the *ikaka/isafa* type has the "committed" reading, while the nominal type has the "impartial" reading. We leave this topic for further research.

(14) Amis event-comparison by means of juxtaposition comparatives

Ø-palifet kaku mi-palu ci umus-an,  
 AF-serious 1SG.NOM AF-beat NCM.SG PN-OBL  
 ca'ay ka-palifet<sup>9</sup> kisu mi-palu ci mayaw-an  
 NEG KA-serious 2SG.NOM AF-beat NCM.SG PN-OBL  
 'I beat Umus harder than you beat Mayaw.'  
 Lit. 'I beat Umus seriously; you don't beat Mayaw seriously.'

In Section 2.1, juxtaposition comparatives are described as a construction whereby the compared objects are juxtaposed in separate clauses. Event-comparison by means of juxtaposition involves a similar process, with the exception that it is the actions/events, rather than objects/entities, that are juxtaposed in separate clauses. Each clause in this bi-clausal construction represents the modification of an action/event. Liu (2003) has provided a thorough investigation of this topic. Here we focus on two important observations. First, in (14), the compared actions (i.e., *mi-palu* 'beat'), as well as the property (i.e., *Ø-palifet* 'serious'), contain focus affixation, a structural coding pattern for predicates. This indicates that the action words remain "verbal" in the juxtaposition comparatives. Second, although both the property and the compared actions are predicates, only the property can serve as the main predicate. This is shown in (15), where the action predicates are not allowed in the clause-initial position.

(15) \*mi-palu kaku ci umus-an (a) Ø-palifet,  
 AF-beat 1SG.NOM NCM.SG PN-OBL LNK AF-serious  
 mi-palu kisu ci mayaw-an (a) ca'ay ka-palifet  
 AF-beat 2SG.NOM NCM.SG PN-OBL LNK NEG KA-serious  
 'I beat Umus harder than you beat Mayaw.'

Unlike in juxtaposition comparatives, event-comparison by means of nominal comparatives, *-ki-* comparatives, or *ikaka/isafa* comparatives, share a unique encoding pattern—the obligatory deverbalization of the action predicate. Consider the example of nominal comparatives in (16):

<sup>9</sup> See Section 2.1 for a discussion of the change of focus marker with negation involved.

- (16) u     **pi-palu**   aku<sup>10</sup>   ci           umus-an   [ku     Ø-palifet  
           CN   PI-beat   1SG.GEN NCM.SG   PN-OBL   NOM     AF-serious  
           atu<sup>11</sup>   **pi-palu**   isu           ci           mayaw-an]  
           PART PI-beat   2SG.GEN   NCM.SG   PN-OBL  
           ‘I beat Umus harder than you beat Mayaw.’

As discussed in Section 2.2, nominal comparatives are generalized as equational constructions with the [COM [*ku* PR ST]] pattern. Likewise, the event-comparison by means of nominal comparative construction has the same syntactic organization in general: the comparee (event) serves as the nominal predicate; the standard of comparison (event) serves as oblique participant of the embedded predicate, and the nominative marker *ku* is used to mark the entire clausal subject. However, a deverbalization process is required in order to transform action predicates into action nominals. In (16), the output of ‘beat’ after “verbal affix alternation” is *pi-palu* (cf. *mi-palu* in (14)).<sup>12</sup> Thus the deverbalized event “I beat Umus” occurs as the nominal predicate, and the other deverbalized event “you beat Mayaw” occurs in the embedded clause.

Amis *-ki-* comparatives employ the same deverbalization process for both the comparee and the standard of comparison events. The deverbalized events are assigned different cases according to their thematic roles in AF and PF constructions, as shown in (17) and (18), respectively. These are shown in the following examples:

- (17) Event-comparison by means of AF *-ki-* comparatives
- mi-ki-palifet           ku     **pi-palu**   aku     ci           umus-an  
 AF-exceed-serious   NOM   PI-beat   1SG.GEN NCM.SG   PN-OBL  
 tu     **pi-palu**   isu           ci           mayaw-an  
 OBL   PI-beat   2SG.GEN   NCM.SG   PN-OBL  
 ‘I beat Umus harder than you beat Mayaw.’

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<sup>10</sup> When a predicate undergoes deverbalization, the case marking of the participants differs as follows: the agent is assigned GEN, whereas the theme is assigned OBL (e.g., *aku* and *ci umus-an* in (16)).

<sup>11</sup> The use of the coordinating particle *atu* is preferred for the linking of ST, especially in event-comparison by means of nominal comparatives. See Kuo (2008) for further discussion of possible alternatives of ST forms.

<sup>12</sup> J. Wu (2006:70) summarizes numerous morphological devices for deverbalization. Among them, two types are relevant to this paper. First, deverbalization by means of *-ay* affixation, as mentioned in Footnote 5, is interpreted as “someone who does something” (see also (27b) and (37) in Section 6.3). The “*pi-/ka-Root*” alternation, on the other hand, is interpreted as “the manner or posture of doing something”. Based on J. Wu’s observation about these interpretations, it is not uncommon to find “*pi-/ka-Root*” as the primary tool for deverbalization of events for the purpose of comparison.

(18) Event-comparison by means of PF *-ki-* comparatives

ma-ki-palifet      nu      **pi-palu**      aku      ci      umus-an  
 PF-exceed-serious    GEN    PI-beat    1SG.GEN    NCM.SG    PN-OBL  
 ku      **pi-palu**      isu      ci      mayaw-an  
 NOM    PI-beat    2SG.GEN    NCM.SG    PN-OBL  
 ‘I beat Umus harder than you beat Mayaw.’

The same process is observed in Amis *ikaka/isafa* comparatives. The deverbalized comparee event takes the genitive case, whereas the deverbalized standard of comparison event receives the oblique case, as shown in (19). According to the analysis proposed in Section 2.4, (19) has a literal meaning roughly translated as “The seriousness of my beating Umus compared to your beating Mayaw is more.”

(19) Event-comparison by means of *ikaka/isafa* construction

Ø-ikaka    ku      palifet    nu      **pi-palu**      aku      ci      umus-an  
 AF-more    NOM    serious    GEN    PI-beat    1SG.GEN    NCM.SG    PN-OBL  
 tu      **pi-palu**      isu      ci      mayaw-an  
 OBL    PI-beat    2SG.GEN    NCM.SG    PN-OBL  
 ‘I beat Umus harder than you beat Mayaw.’

**4. Interim summary**

In the previous sections, we have identified four major types of Amis comparative constructions based on expressions of entity-comparison, and have further discussed the corresponding encoding strategy when the constructions apply to event-comparison. Here, we summarize the results by providing the following table.

**Table 1. Morphosyntactic characteristics of Amis comparative constructions**

Type	Entity-comparison				Event-comparison	
	PR	COM	ST	e.g.,	Deverbalization	e.g.,
juxtaposition	predicate	NOM	NOM	(4)	--	(14)
nominal	predicate (embedded)	predicate	OBL	(6)	✓	(16)
<i>-ki-</i>	AF ( <i>mi-</i> )	predicate	NOM	OBL	(8)	✓ (17)
	PF ( <i>ma-</i> )	predicate	GEN	NOM	(9)	✓ (18)
<i>ikaka/isafa</i>	NOM	GEN	OBL	(10)	✓	(19)

Table 1 contains our descriptive analysis of the morphosyntax of Amis

comparative constructions. Based on the elicitation method, it is suggested that all of the constructions above can be employed to express any comparison. However, several questions may arise with respect to the real usage. For instance, why are there so many types of constructions? Are there any underlying factors that account for a speaker's choice among these constructions? Answers to these questions must await further research when natural spoken data is available. We would, however, like to share our preliminary observations regarding this aspect of comparative constructions before moving to the next section.

First, as mentioned previously, *ikaka/isafa* comparatives are used specifically to encode comparison with pragmatic implication (e.g., (13)). Second, juxtaposition comparatives are preferred for “complex event-comparison”, that is, event-comparison which involves not only action words, but also their participants (e.g., *I beat Umus harder than you beat Mayaw*). This, we assume, has to do with the concern for simplicity. A parallel bi-clausal structure is structurally simpler than an embedded structure, where the deverbalization process affects the case assignment of the participants involved, and burdens production or comprehension. Third, according to the informants' intuition, PF *-ki-* constructions are preferred over AF *-ki-* constructions in a neutral context. This might be explained by the default TAM reading of the focus markers. As mentioned in Section 2.3, an AF *mi-* marker usually denotes an ongoing or future event. This accounts for why AF *mi-* comparatives are less natural: a specific context (e.g., an on-going competition) has to be assumed for their appearance. Further investigation is required before we will be able to fill in the whole picture regarding speakers' choices among various comparative constructions.

The content given in Table 1 may well serve as part of the reference grammar of Amis; however, it is nonetheless rather difficult to access from a cross-linguistic perspective. In the subsequent section, we introduce Klein's typological characteristics of comparatives, thereby taking our discussion of Amis comparatives one step closer to the typological level.

## 5. Klein's typological characterization of comparatives

Klein (1991) argues that cross-linguistically, comparatives can be classified into four subcategories with two sets of features: (1) hypotactic/paratactic, (2) phrasal/clausal. First, with respect to the linking of the comparative complement, a paratactic construction consists of two coordinate constituents, while a hypotactic construction consists of a complement embedded within a main clause. Second, with respect to the syntactic unit of the comparative complement, a comparative expression is either characterized as phrasal or clausal, based on the syntactic unit of its

comparative complement. These two sets of parameters compose four patterns of comparatives across languages: paratactic clausal ( $P_{AC}$ ), hypotactic clausal ( $H_{YC}$ ), paratactic phrasal ( $P_{AP}$ ), and hypotactic phrasal ( $H_{YP}$ ).

Here, Klein's typological characterization has been adopted since it sufficiently covers the scope of this study, incorporating both entity-comparison (e.g., (20a, c, d)) and event-comparison (e.g., (20b)). For example, English has all of the four syntactic patterns, as follows:

(20) Characterizing English Comparatives:

- a. Paratactic Clausal ( $P_{AC}$ ): *He is tall; I am short.*
- b. Hypotactic Clausal ( $H_{YC}$ ): *I saw him earlier than he saw me.*
- c. Paratactic Phrasal ( $P_{AP}$ ): *More men than women came.*<sup>13, 14</sup>
- d. Hypotactic Phrasal ( $H_{AP}$ ): *He is taller than me.*

As shown in (20), English *than* comparatives occupy three of the four patterns, namely  $H_{YC}$ ,  $P_{AP}$ , and  $H_{AP}$ . The  $P_{AC}$  pattern in English, despite its rare usage for comparison, is accepted here, since this pattern represents universal basic intransitive clauses. Hence, English exhibits all four syntactic patterns of Klein's classification model.

In Sections 2 and 3, we have provided the details of four major Amis comparative constructions concerning both entity-comparison and event-comparison. Here, we characterize Amis comparatives, focusing on the juxtaposition type, the *-ki-* type, and the *ikaka/isafa* type. Nominal comparatives, as equational constructions, are not applicable in Klein's model, and therefore are disregarded. Table 2 summarizes the syntax of Amis comparatives within the same model.

<sup>13</sup> Example (20c) shows another type of entity-comparison which has not been discussed in previous sections. Here, it is indeed the case that two entities (i.e., men and women) are being compared. However, the entities are linked by their involvement with certain action (i.e., the action of 'coming').

<sup>14</sup> Klein (1991:675) identifies  $P_{AP}$  pattern based on the coordinating nature of some French comparatives and makes reference to the syntactic analyses proposed by Pinkham (1982) and Napoli (1983). Although Klein does not mention explicitly what syntactic analyses he adopts, a detailed discussion about English comparatives in Napoli (1983:679-683) might be enough to secure the stance of the coordinative *than* in (20c). One of the diagnostics, for example, is Ross's (1967) Coordinate Structure Constraint. Noun phrases introduced by coordinator *than* are not susceptible to movement (e.g., *\*who did more men than \_\_\_ come?*), but the ones introduced by prepositional *than* are (e.g., *who is he taller than \_\_\_?*).



**Table 2. Characterizing Amis comparatives**

	APPLICABILITY	Type
Paratactic Clausal (P <sub>A</sub> C)	YES	juxtaposition type
Hypotactic Clausal (H <sub>Y</sub> C)	NOT AVAILABLE	--
Paratactic Phrasal (P <sub>A</sub> P)	NOT AVAILABLE	--
Hypotactic Phrasal (H <sub>Y</sub> P)	YES	AF <i>-ki-</i> type PF <i>-ki-</i> type <i>ikaka/isafa</i> type

What is unique about the syntax of Amis comparatives is the lack of H<sub>Y</sub>C and P<sub>A</sub>P patterns. This will be proven in Section 6, by showing that the Amis equivalents of English H<sub>Y</sub>C and P<sub>A</sub>P comparatives (e.g., (20b-c)) are instead manifested in the P<sub>A</sub>C or H<sub>Y</sub>P pattern. The typological diversity between English and Amis comparatives is described in (21).

(21) With respect to comparatives, English can manifest H<sub>Y</sub>C and P<sub>A</sub>P patterns, while Amis prohibits H<sub>Y</sub>C and P<sub>A</sub>P patterns.

The motivation for the typological diversity is the primary focus of the next section. We will show that in terms of semantic-pragmatic class mapping, H<sub>Y</sub>C and P<sub>A</sub>P patterns are organized in a similar fashion. Further, the mappings between the semantic and pragmatic classes in particular languages differ according to their parts-of-speech systems. As a consequence, we propose the “parts-of-speech systems” to be used as a determinant for the syntax of comparatives.

## 6. Parts-of-speech systems and comparative constructions

In this section, we introduce the framework within which four parts-of-speech systems can be identified based on Croft (1991) and Beck (2002).<sup>15</sup> English and Amis will be shown to possess different parts-of-speech systems NAV and N[AV] respectively. We will evaluate the correlation between parts-of-speech systems and comparative constructions by analyzing the typological distinction, as per (21).

<sup>15</sup> In this study we choose a perspective compatible with Croft (1991) rather than Croft (2001). In the former work, he claims that “adjectives are less prominent as a prototype than nouns and verbs” and thus embraces the possibility for the lack of an adjective category. In the latter, he claims that “noun, verb, and adjective are typological prototypes” (Croft 2001:63) in order to develop his Radical Construction Theory. Readers are referred to Kuo (2009) for further discussion with regard to the distinction between these two perspectives.

### 6.1 The framework: Prototype and markedness theory

Over the past few decades, cross-linguistic variation in parts of speech has been the subject of intense discussion. “Adjective”, an intermediate between the Noun-Verb continuum, has become the most debatable category. Since the early 1990s, an approach under “prototype and markedness theory” has been practiced widely to justify the absence of an adjective category in particular languages (Hengeveld 1992, Bhat 1994, and Beck 2002, among others). Croft (1991) proposes that each part of speech has prototypes that can be categorized by the mappings between semantic classes and pragmatic classes (or syntactic functions), as shown in Table 3.

**Table 3. Prototypical correlations of parts of speech (Croft 1991:55)**

	Noun	Adjective	Verb
Semantic class <sup>16</sup>	Object	Property	Action
Pragmatic class	Reference	Modification	Predication

The prototype theory establishes the parts-of-speech prototypes, as shown above. Prototypically, “noun” denotes an object, and serves as the reference; “adjective” denotes a property, and plays the role of a modification function to the referent; “verb” denotes an action, and serves as the predicate.

According to the markedness theory, prototypes should possess an unmarked form. For languages with three major parts of speech categories, an unmarked structure will be observed for each of the typological prototypes. This is illustrated in Table 4.

<sup>16</sup> The semantic classes are defined by means of four semantic properties (i.e., valency, stativity, persistence, and gradability) as below:

Prototypical values of features for semantic classes (Croft 1991:65)

	Object	Properties	Actions
Valency	0	1	≥ 1
Stativity	STATE	STATE	PROCESS
Persistence	PERSISTENT	PERSISTENT	TRANSITORY
Gradability	NON-GRADABLE	GRADABLE	NON-GRADABLE

**Table 4. Overtly marked structural coding constructions for parts of speech  
(Croft 1991:67)**

	REFERENCE	MODIFICATION	PREDICATION
OBJECTS	<b>unmarked nouns</b>	genitive, adjectivalisations, PPs on nouns	predicate nominals, copulas
PROPERTIES	deadjectival nouns	<b>unmarked adjectives</b>	predicate adjectives, copulas
ACTIONS	action nominals, complements, infinitives, gerunds	participles, relative clauses	<b>unmarked verbs</b>

In Table 4, markedness/unmarkedness can be recognized by observing the structural coding for all nine mappings—the combination of three semantic classes crossed with three pragmatic classes combination—in particular languages. When an unmarked structure is found in all three prototypical mappings—Object-Reference, Property-Modification, and Action-Predication—the target language can be empirically justified as having a **Full NAV inventory** (Beck 2002). Inspired by the Amsterdam typology (Hengeveld 1992), Beck proposes a four-way classification of parts of speech as follows:

(22) The parts-of-speech systems across languages (adapted from Beck 2002:126)

**Full NAV inventory:** the lexicon distinguishes between three open classes of words—noun, verb, adjective

**[NA]V inventory:** the lexicon distinguishes only nouns and verbs, conflating property-concept words with nouns

**N[AV] inventory:** the lexicon distinguishes only nouns and verbs, conflating property-concept words with verbs

**[NAV] inventory:** the lexicon conflates all three major lexical classes, making no distinctions at all

This framework allows for various parts-of-speech systems, as shown in (22). A full NAV system is identified by observing a typologically unmarked structure in all three prototypical correlations, whereas conflation of categories can be attested for by observing no unmarked structure for one (or more) prototype. In Formosan literature, similar diagnostics have been implemented to demonstrate the absence of adjectives (Ross 2003, Yeh 2003, C. Wu 2004, and Teng 2008), despite perhaps not having all

nine mappings examined. In the subsequent section, we categorize the parts-of-speech systems of English and Amis by providing a comprehensive investigation of each of their structural coding patterns.

## 6.2 The parts-of-speech systems in English and Amis

The well-known fact that English treats noun, verb, and adjective as independent categories (i.e., full NAV inventory) can be readily attested in examples (23)-(25), summarized in Table 5.

**Table 5. Structural coding patterns of English**

	REFERENCE	MODIFICATION	PREDICATION
OBJECTS	<b>root form</b>	genitive form	copula verb
PROPERTIES	<i>-ness</i> affixation	<b>root form</b>	copula verb
ACTIONS	gerundial form	participle form	<b>root form</b>

(23) The structural coding of Object in English:

a. As REFERENCE

*Mary cried.* (an unmarked root)

b. As MODIFICATION

*Mary's bag was broken.* (a marked genitive form)

c. As PREDICATION

*The woman next to Paul is Mary.* (a marked form with a copula verb)

(24) The structural coding of Property in English:

a. As REFERENCE

*I fear his tallness.* (a marked deadjectivalization form)

b. As MODIFICATION

*I love this tall building.* (**an unmarked root**)

c. As PREDICATION

*The woman is tall.* (a marked copula verb)

(25) The structural coding of Action in English

a. As REFERENCE

*Crying* helps reduce pressure. (a marked gerundial form)

b. As MODIFICATION

She gave the *crying* baby a hug. (a marked participle form)

c. As PREDICATION.

*I cry* every time he comes. (an unmarked root)

As shown in Table 5, the prototypes Object-Reference (23a), Property-Modification (24b), and Action-Predication (25c) are structurally unmarked for they occur in a root form. Further, they are typologically unmarked, as compared to other non-prototypical mappings, where marked structures such as genitive, copulas, and gerunds are observed.

Adopting this framework, we argue that Amis is a language with the N[AV] inventory. The structural coding patterns in Amis, in sum, are presented in Table 6, accompanied with examples (26)-(28).

**Table 6. Structural coding patterns of Amis**

	REFERENCE	MODIFICATION	PREDICATION
OBJECTS	root form	genitive (postnominal)	root form
PROPERTIES	root form	focus affixation plus -ay affixation (prenominal)	focus affixation
ACTIONS	root form	focus affixation plus -ay affixation (prenominal)	focus affixation

In Table 6, the vertical shaded area indicates that all three semantic classes appear in a root form when serving as a reference, as illustrated in (26). The horizontal shaded area illustrates that Property class and Action class in Amis share the same structural coding for all pragmatic classes, including Modification, as in (27), and Predication, as in (28).

(26) Reference function in Amis

- a. Object-Reference (J. Wu 2006:68; gloss mine)

Ø-tata'ak ku **qayam** aku  
 AF-big NOM **chicken** 1SG.GEN  
 'My chicken is big.'

- b. Property-Reference

sepat polo' ku **kereteng** aku  
 four ten NOM **heavy** 1SG.GEN  
 'I'm forty (kilograms weight).'  
 Lit. 'My heaviness is forty (kilograms).'

- c. Action-Reference (J. Wu 2006:68; gloss mine)

Ø-tata'ak ku **palu** aku  
 AF-big NOM **beat** 1SG.GEN  
 'I was beaten severely.'  
 Lit. 'My beating was big.'

(27) Modification function in Amis

- a. Object-Modification<sup>17</sup>

fafuy nu lutuk  
 pig GEN mountain  
 'mountain pig'

- b. Property-Modification

ma-su'su'-ay (a) tamdaw<sup>18</sup>  
**AF-fat-AY** LNK person  
 '(a) fat person'

---

<sup>17</sup> In addition to postnominal genitive form as shown in (27a), another pattern may be observed. See the following examples.

- (i) (J. Wu 2006:94; gloss mine)

- a. singsi nu amis  
 teacher GEN Amis  
 'teacher of the Amis language (the teacher is not necessarily Amis)'  
 b. amis a/??Ø singsi  
 Amis LNK teacher  
 'Amis teacher (the teacher is Amis)'

Postnominal object modification is more commonly observed, since the use of prenominal object modifiers is subject to certain semantic constraints. This prenominal usage seems to "denote specifically an inherent or permanent property of the modified head" (J. Wu 2006:94). Compare the translation in (ia) and (ib).

<sup>18</sup> See Footnote 5 for the function and interpretation of the *-ay* marker.

c. Action-Modification

t<um>angic-ay (a) wawa  
**cry<AF>-AY** LNK child  
 ‘(a) crying child.’

(28) Predication in Amis

a. Object-Predication

**u singsi** Ø-ci Ofad  
 CN **teacher** NOM-NCM.SG PN  
 ‘Ofad is a teacher.’

b. Property-Predication

ma-su’su’ cingra  
**AF-fat** 3SG.NOM  
 ‘He is fat.’

c. Action-Predication

**k<um>a’en** Ø-ci kulas tu hemay  
**eat<AF>** NOM-NCM.SG PN OBL rice  
 ‘Kulas is eating rice.’  
 ‘Kulas will eat rice.’

Table 6 suggests a two-way distinction in Amis parts of speech: a noun class, where the Object-Reference mapping is realized in an unmarked form, and a conflated class, where the Property-Action distinction is neutralized for all functions. For these reasons, Amis is considered an N[AV] language.

### 6.3 Correlating comparatives with parts-of-speech systems

The idea of a “parts-of-speech account” for the typology of comparatives arises from a closer observation of Klein’s characterization. First, reconsider (20), as repeated in (29), with additional emphasis on the mappings between the semantic and pragmatic classes.

(29) English Comparatives with respect to morphosyntax:

- a. Paratactic Clausal (P<sub>A</sub>C): *He is **tall**; I am short.*
- b. Hypotactic Clausal (H<sub>Y</sub>C): *I saw him **earlier** than he saw me.*
- c. Paratactic Phrasal (P<sub>A</sub>P): ***More** men than women come.*
- d. Hypotactic Phrasal (H<sub>Y</sub>P): *He is **taller** than me.*

In (29), the property (of comparison) is marked in boldface, and the main predicate in the clause is underlined. For P<sub>A</sub>C and H<sub>Y</sub>P patterns, the property (of comparison) serves as the predicate, whereas for H<sub>Y</sub>C and P<sub>A</sub>P patterns, the property serves as the modifier (e.g., adverbial *earlier* in (29b); quantifier *more* in (29c)). In other words, in terms of prototype and markedness theory, the difference between P<sub>A</sub>C/H<sub>Y</sub>P and P<sub>A</sub>P/H<sub>Y</sub>C patterns lies in the mapping of the Property class: the former group maps onto Predication, and the latter group, Modification.

Understood this way, the lack of P<sub>A</sub>P and H<sub>Y</sub>C patterns in Amis can be attributed to “inability to render a Property-Modification mapping” in these comparatives. In the previous section, we concluded that Amis and English have different parts-of-speech systems—English has a Full NAV inventory, whereas Amis has an N[AV] inventory. Through parallel discussion of these two languages, we will demonstrate how this typological distinction in comparatives is motivated by the parts-of-speech systems.

### 6.3.1 Comparatives in English—an NAV language

First, we summarize the parts-of-speech system in English in a more refined version, as shown below.

**Table 7. The parts-of-speech inventory of English: NAV**

Syntactic function / Semantic class	Reference	Modification	Predication
Object (N)	noun (root form)	marked	Marked
Property (A)	marked	adjective (root form)	marked
Action (V)	marked	marked	verb (root form)

In terms of prototype and markedness theory, English employs an unmarked structure for the Property-Modification mapping and thus belongs to NAV languages. The available unmarked structure in Property-Modification in English is crucial. As we have pointed out earlier, such mapping occurs in comparatives in P<sub>A</sub>P and H<sub>Y</sub>C patterns. For example, consider first the event-modification in English:



(30) Event-modification in English

- a. *I swim fast.*
- b. ??My swimming is fast.

The above examples demonstrate a universal tendency of organizing propositions with unmarked structures. With respect to event-modification, (30a) is more welcome than (30b). This might be explained in terms of markedness, as in (30a), that all linguistic items manifest themselves in an unmarked fashion (i.e., Object-Reference *I*, Action-Predication *swim*, and Property-Modification *fast*; the shaded slots in Table 7). Example (30b), on the other hand, contains numerous marked structures (i.e., Object-Modification *my*, Action-Reference *swimming*, and Property-Predication *is fast*; the white slots in Table 7).

It is noteworthy that the adverb *fast*, rather than an adjective, serves as the modifier of the action predicate *swim* in (30). While adverbs are not involved in the parts-of-speech analysis throughout this study, NAV languages are likely to have other independent categories serving the modification function (i.e., adverb, quantifier), as will be discussed later along the line of Hengeveld (1992). The following English examples involve quantity expressions whose organization (i.e., the mapping preference) is influenced by the markedness concern as well.

(31) Quantity expression in English:

- a. Many men came.
- b. ??The men coming were many.

In English, the presence of the quantifier category results in preference of (31a) over (31b): the former consists of unmarked structures including Property-Modification (i.e., *many*<sup>19</sup>) and Action-Predication (i.e., *came*), while the latter contains marked structures such as Property-Predication (i.e., *were many*) and Action-Modification (i.e., *coming*).

Similarly, H<sub>YC</sub> and P<sub>AP</sub> patterns occur when such markedness concern applies to English comparatives. Examples follow.

- (32) a. H<sub>YC</sub>: I saw him earlier than he saw me.
- b. H<sub>YP</sub>: \*My seeing him is earlier than his seeing me.

---

<sup>19</sup> At first glance, the concept ‘many’ may not be regarded as a member of the Property class. However, quantification, as pointed out by Dixon & Aikhenvald (2004), belongs to one of the semantic categories of adjective. Furthermore, by applying Croft’s semantic features “valency, state, persistence, and gradability”, quantity is conceptually closer to Property than to Action or Object.

- (33) a. P<sub>AP</sub>: More men than women come.  
 b. H<sub>YP</sub>: ?? The men coming are more than the women coming.

As an NAV language, English possesses unmarked structures for the Property-Modification mapping. The presence of various modification categories (i.e., adjectives, adverbs, and quantifiers) prominently affects the syntactic organization of the above-mentioned propositions. In English comparatives, H<sub>YC</sub> and P<sub>AP</sub> patterns are unmarked (e.g., (32a) and (33a)), while their H<sub>YP</sub> equivalents are full of marked structures (e.g., (32b) and (33b)) and less preferred. In the following section, we propose a parallel discussion to show how a different parts-of-speech system in Amis is responsible for its structural organization when it comes to comparison.

**6.3.2 Comparatives in Amis—An N[AV] language**

A summary of Amis parts-of-speech system is presented in Table 8.

**Table 8. The parts-of-speech inventory of Amis: N[AV]**

Syntactic function Semantic class	Reference	Modification	Predication
Object (N)	noun (root form)	marked (postnominal genitive)	noun (root form)
Property/Action ([AV])		marked (focus affixation with deverbalizer)	verb (focus affixation)

The absence of an unmarked structure for Property-Modification in Amis, as shown in Table 8, affects the syntactic organization of propositions, including event-modification, quantity expression, and comparison. First, with respect to event-modification, the Amis equivalent of (30) is demonstrated as follows:

- (34) Event-modification in Amis

Ø-harakat    mi-danguy    kaku  
 AF-fast      AF-swim      1SG.NOM  
 ‘I swim fast.’

Some important characteristics of Amis event-modification have been discussed in Section 3 (see (14) and (15)). Here, we emphasize the fact that the property word ‘fast’ surfaces as a verb. Upon scrutiny, this syntactic pattern conforms to the markedness concern. As an N[AV] language, Amis prefers an unmarked Property-Predication mapping (i.e., *Ø-harakat* ‘fast’) over a marked Property-Modification mapping (see Table 8).

The fact that the manner adverbial ‘fast’ in the example above takes the predicate position can be predicted, given the absence of the adjective category in Amis. Here, we introduce Hengeveld’s (1992) Parts-of-Speech Hierarchy:

(35) Parts-of-Speech Hierarchy (Hengeveld 1992)

Verb > Noun > Adjective > Adverb

This hierarchy sums up a series of implicational statements: the existence of a category in a language entails the existence of all the categories to its left, and the absence of the category entails the absence of all the categories to its right. It should be noted that “adverbs” here are restricted to a narrower sense, including mainly predicate modifiers or modifier modifiers (e.g., manner adverbs). In his typology of parts of speech, Hengeveld does not intend to deal with the heterogeneous “adverbial” category (e.g., sentential adverbs or circumstantial adverbials, see Jackendoff (1972) and Cinque (1999)). In Section 6.2, we have confirmed the absence of the category adjectives in Amis. According to (35), Amis does not form an independent adjectival category, and thus does not possess an independent category for predicate modifiers or modifier modifiers.

Now consider quantity expressions in Amis. Example (36) is the Amis equivalent of (31). Although the quantifiers are not in the scope of parts-of-speech system, they and manner adverbials share the nature of modification. For the quantifier ‘many’, an unmarked form in the predicate position is preferred over a marked form in the modifier position. As an illustration, compare (36) with the constructed expression in (37):

(36) Quantity expression in Amis

**Ø-adihay** ku fayinayan Ø-tayni  
AF-many NOM man AF-come  
‘Many men came.’

(37) Constructed quantity expression in Amis (marked)

??Ø-tayni ku Ø-adihay-ay a fayinayan  
 AF-come NOM AF-many-AY LNK man  
 ‘Many men came.’

Similarly, comparative expressions in Amis abide by the same markedness concern. The property (of comparison) thus serves as the predicate, rather than the modifier. For this distinction, the Amis equivalents of English H<sub>Y</sub>C and P<sub>AP</sub> patterns, instead, occur in the H<sub>Y</sub>P pattern. AF *-ki-* comparatives, for instance, are demonstrated below:

- (38) a. mi-ki-ratal ku pi-nengneng aku cingranan  
 AF-exceed-early NOM PI-see 1SG.GEN 3SG.OBL  
 [tu pi-nengneng nira takuwanan]  
 OBL PI-see 3SG.GEN 1SG.OBL  
 ‘I saw him earlier than he saw me.’
- b. mi-ki-adihay ku Ø-tayni-ay a fayinayan  
 AF-exceed-many NOM AF-come-AY LNK man  
 [tu Ø-tayni-ay a fafahi’an]  
 OBL AF-come-AY LNK woman  
 ‘More men than women come.’

Example (38a) refers to an event-comparison which in English is manifested in the H<sub>Y</sub>C pattern (cf. (32)). Example (38b) refers to quantity-comparison, which in English selects the P<sub>AP</sub> pattern (cf. (33)). In Amis, however, these types of comparison exhibit H<sub>Y</sub>P patterns: They are hypotactic constructions, since the comparative complements (i.e., marked with the brackets in (38)) are embedded within the main clause; the comparative complements are phrasal due to an obligatory deverbilization process, as discussed in Section 3.

The Amis equivalents by means of *ikaka/isafa* comparatives are also organized in the H<sub>Y</sub>P pattern. Consider example (39):

- (39) a. Ø-ikaka ku ratal nu pi-nengneng aku cingranan  
 AF-more NOM early GEN PI-see 1SG.GEN 3SG.OBL  
 [tu pi-nengneng nira takuwanan]  
 OBL PI-see 3SG.GEN 1SG.OBL  
 ‘I saw him earlier than he saw me.’

- b. Ø-ikaka    ku    adihay    nu    Ø-tayni-ay    a    fayinayan  
 AF-more    NOM    many    GEN    AF-come-AY    LNK    man  
 [tu    Ø-tayni-ay    a    fafahi'an]  
 OBL    AF-come-AY    LNK    woman  
 'More men than women come.'

Examples (39a) and (39b) refer to Amis equivalents of English H<sub>Y</sub>C and P<sub>A</sub>P patterns (cf. (32) and (33)). They are also H<sub>Y</sub>P patterns, with the same finding as in (38), namely that the comparative complements are phrases embedded within the main clause.

In sum, the syntax of comparatives in a language appears to be motivated by the parts-of-speech system. The typological distinction between English and Amis, as pointed out in (21), merely reflects the fact that languages employ different encoding strategies favoring an unmarked structure. As revealed in (29), H<sub>Y</sub>C and P<sub>A</sub>P patterns map Property onto the Modification function. In English, the Property-Modification mapping is preferred because of its unmarked structure, as suggested by the full NAV inventory. In Amis, the N[AV] inventory entails the markedness of Property-Modification mapping, thereby prohibiting the usage of H<sub>Y</sub>C and P<sub>A</sub>P patterns.

#### 6.4 Discussion

So far, we have proposed a typological correlation between parts-of-speech systems and the syntax of comparatives, based on the data accumulated from English and Amis. There are nonetheless some issues awaiting further investigation. First, according to the Parts-of-Speech Hierarchy, it is the case that the absence of adjectives can entail the absence of adverbs in N[AV] languages. However, the existence of adjectives does not entail the existence of adverbs in NAV languages. This may weaken our hypothesis with regard to the correlation between NAV languages and the presence of H<sub>Y</sub>C/P<sub>A</sub>P patterns. We would therefore have a gap to fill in this regard. Second, while the correlation between the Amis parts-of-speech system and the absence of H<sub>Y</sub>C/P<sub>A</sub>P patterns appears justifiable, observations from other N[AV] languages and their syntax of comparatives are required to confirm its validity. Third, in this paper we discuss only two parts-of-speech systems, namely NAV and N[AV]. Further investigation of the comparative constructions in [NA]V and [NAV] languages is necessary, in order to establish a comprehensive typological framework.

## 7. Concluding remarks

Following the research questions proposed in this paper, we have classified four major types of Amis comparative constructions, with respect to morphosyntax; we have identified an obligatory deverbalization process in event-comparison (except for the juxtaposition type); we have further evaluated the syntax of Amis comparatives from a cross-linguistic perspective, and proposed an account for the typological distinction between Amis and English. In addition to documenting and analyzing comparatives, which enhances the understanding of Amis grammar, we also hope to contribute to the typological theory of comparatives by sharing our observations on Formosan languages such as Amis. Our hypothesis “parts-of-speech system as a determinant of the syntax of comparatives”, as discussed in Section 6.4, awaits verification after incorporating more languages into the examination. We believe this line of research worthy of investigation. The parts-of-speech system has been employed to account for cross-linguistic diversity in various grammatical behaviors such as the head/dependent-marking phenomenon (Dixon and Aikhenvald 2004), word order (Hengeveld et al. 2004), and dependent clauses (Van Lier 2006). Our study of comparatives provides another example demonstrating a balanced trade-off between the syntactic, morphological, and lexical structure of languages.

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## 論阿美語比較句結構的句法

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阿美語是台灣南島語的一支，本篇論文從以下面向探討阿美語比較句結構：(1)何為阿美語比較句結構的構詞及句法特徵？(2)阿美語的「物件比較」及「事件比較」在句法上如何區分？(3)如何從類型學的角度上描述阿美語比較句結構？我們的研究發現：(a)根據不同的構詞句法特性，阿美語有四種比較句結構；(b)在「事件比較」上，除了並置型(juxtaposition type)以外，所有的比較結構中都需要將(表示事件的)動作詞進行去動詞化的機制；(c)根據 Klein (1991)的類型學特徵，阿美語和英語在比較句的句法架構上有所不同，此類型學上的區分或許可以透過詞類系統得到解釋—在原型理論和標記理論的基礎之下，英語可被歸類成具備 full NAV inventory 的語言，而阿美語則屬於 N[AV] 語言。我們期許本文能同時對於阿美語法的認識及比較句的類型學理論做出貢獻。

關鍵詞：阿美語、南島語、比較句結構、去動詞化、詞類系統、原型理論、標記理論