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Iconicity and Tense, Aspect, and Mood Morphology in Yami¹

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This study aims to investigate the relationships between the forms and functions of the Tense-Aspect-Modality categories. Bybee's hypothesis (1985) was tested against Yami data to discover how the categories of tense, aspect, and mood interact to support the iconicity hypothesis. The morphemic order and the degree of fusion are not arbitrary, in that the categories that most affect the meanings of the stems occur closest to the stem, whereas those that have least impact on the lexical meaning of the stem occur in the periphery. Greater semantic cohesion of concepts is reflected in a higher degree of fusion in their corresponding expression units.

It was found that although the order of the functional categories follows Bybee's iconicity principle, in that the valence affix is closest to the stem, while the aspect and modality markers are in the periphery, Bybee's definition of terms is not entirely true of Yami and Philippine-type languages in general because there is a mixture of derivation and inflection in the Yami verbal system. The indicative focus affixes are 'derivational', but the non-indicative affixes are 'inflectional'.

Key words: tense, aspect, modality, Yami, iconicity

1. Introduction

This study investigated the tense-aspect-modality (TAM) system in Yami, a Batanic language spoken by approximately 3000 speakers on Orchid Island. Previous research of TAM has been approached from three major perspectives: semantics (Comrie 1976), discourse (Schiffrin 1981, Hopper 1982, Myhill 1992), and cross-linguistic comparison (Bybee 1985). This paper attempts to provide a detailed description of the Yami TAM system from a functional-typological approach (e.g., Givón 1984, Bybee 1985) to uncover the form-meaning relationship of the TAM categories and to test the iconicity principle that form-meaning relationship is not arbitrary. The data for this study comprises fifty texts collected by Dong and Rau (2000b).

The definitions of tense, aspect, and modality have been clearly stated in previous studies (e.g., Comrie 1976, 1985, Chung & Timberlake 1985, Palmer 1986). In this study, Bybee's definitions (1985:28) are adopted to facilitate future

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cross-linguistic comparisons in morphology as in (1).

(1)

“Aspect refers to the way the internal temporal constituency of the situation is viewed.

Tense places the situation in time with respect to an established point in time, either the moment of speech, or some other point in time.

Mood² refers to the way the speaker presents the truth of the proposition in the discourse and real-world context. Included here are expressions of probability, possibility and certainty. Evidentials indicate the source of the information expressed by the proposition and were included under mood.”

2. Bybee's principle of iconicity

Bybee (1985) found cross-linguistic evidence to support her hypothesis that the degree of morpho-phonological fusion of an affix to a stem correlates with the degree of semantic relevance of the affix to the stem. If the meaning of the affix directly affects the meaning of the stem, it tends to be fused with the stem or occurs closest to the stem. For example, the categories of valence, voice, aspect, tense, mood and agreement are ranked for relevance to verbs in that order. In other words, some functional categories are closer to the stem than the others, generally determined by the principle of relevance. A meaning element is considered relevant to another meaning element if the semantic content of the first directly affects or modifies the semantic content of the second.

There is also a strong correspondence between the content of a linguistic unit and the mode of expression it takes. If two meaning elements are highly relevant to one another, they are predicted to have lexical or inflectional expression, but if they are irrelevant to one another, then their combination will be restricted to syntactic expression. Furthermore, the generality of lexical application and the amount of semantic change are also factors predicting expression type. In other words, a very generally applicable semantic notion is most likely to be encoded as an inflectional category, whereas a more specific notion tends to be encoded as derivational.

² Palmer (1986) states that the distinction between mood and modality is similar to that between tense and time, gender and sex. Mood is traditionally restricted to verbal morphology, whereas modality may be expressed by modal verbs or particles. In this current study, I follow the same distinction between mood and modality whenever it is relevant to make the distinctions, but use modality as a cover term for both.

3. Yami TAM system

The Yami TAM system is coded by auxiliary verbs, word order variation, reduplication and affixation. These strategies are widespread throughout both Formosan and Philippine languages to express the meanings discussed in this paper. Starosta (1988:552) noted that tense marking is marked by an auxiliary verb, which occurs at the beginning of the clause and as the head of the clause, attracts clitic pronouns in many Formosan languages. Although his analysis is valid in general, auxiliary verbs are only found in a few Formosan languages (e.g., Atayal, Seediq, and Tsou). Furthermore, whether the auxiliary verbs are used to mark tense or mood is subject to one's interpretations of the TAM categories.

Yami verbal "inflection" was first proposed in Rau (2002a), as represented in Table 1. All the categories, except for the imperative form, (i.e., past, nonpast and subjunctive) distinguish the repetitive aspect with reduplication.

Table 1. Verbal inflection in Yami (from Rau 2002a)

	Indicative		Non-indicative	
	Nonpast	Past	Imperative	Subjunctive
AF				
	<i>-om-</i>	<i>ni-om-</i>	Ø-	<i>N-</i>
	<i>m-</i>	<i>ni-m-</i>	Ø-	<i>N-</i>
NAF				
PF	<i>-en</i>	<i>ni-</i>	<i>-i</i>	<i>N-a</i>
LF	<i>-an</i>	<i>ni-an</i>	<i>-i</i>	<i>N-i</i>
IF	<i>i-</i>	<i>ni-i</i>	<i>i-</i>	<i>N-an</i>

However, several problems appear in Table 1. First, the title of the table might be misleading because the distinction between inflection and derivation was not clearly stated. What the table presents is the indicative and the non-indicative forms of the Yami verbal system. Following Bybee's definition, the principle of generality distinguishes inflection from derivation. Unlike derivational affixes, the application of the inflectional affixes to the stems is obligatory and without exception. Therefore, all the focus affixes (AF, PF, LF, IF) together with the perfective morpheme *ni-* are derivational, whereas all the imperative and subjunctive forms are inflectional. In other words, there is a mixture of derivation and inflection, an interesting issue that will be pursued in this paper. In a recent typological survey of the Philippine languages, Reid & Liao (2004) insightfully analyzed the focus affixes as intransitive and transitive affixes. In other words, the focus affixes encode valence.

Second, the grouping of all focus types other than AF into NAF, following Tsuchida's (1976) practice, was not explained at all. In fact, the reason for this division is due to the fact that all such sentences in NAF are syntactically transitive,

while the AF constructions are syntactically intransitive.

Third, there are only four focus types in Table 1 with the IF as a cover term for both IF and BF (Benefactive focus). This was not made clear to those who are familiar with the Philippine languages, which typically have five focus types. Ho (1993) claimed *ka-* to be a Time focus in Yami, but this will be analyzed as a nominalizing prefix in this paper, as discussed below, because the syntax of *ka-* does not follow the pattern of the other focus affixes.

Finally, the information presented in Table 1 only exhibits the verb paradigm for dynamic verbs, but does not specify the subjunctive patterns that are peculiar to stative verbs, as discussed in Rau & Dong (forthcoming). Further data also show that the imperative form for Instrumental focus should be *-an* instead of *i-*. Thus, it is necessary to revise Table 1 to redress these problems.

The following is the revised version of Table 1 with Ross' (1995) terms juxtaposed in brackets to facilitate cross-linguistic comparisons.

Revised Table 1. Yami pivot, mood and aspect morphemes

AF (Actor) Intransitive	Indicative				Non-indicative		
	Dynamic	Dynamic	Stative	Stative	Imperative (Atemporal)	Subjunctive (Projective)	
	Neutral	Perfective	Neutral	Perfective		Dynamic	Stative
	<i>-om-</i>	<i>ni-om-</i>			<i>Ø-</i>	<i>N-</i>	<i>a-</i>
	<i>m-</i>	<i>ni-m-</i>	<i>ma-</i>	<i>ni-ma-</i>	<i>Ø-</i>	<i>N-</i>	<i>a-</i>
NAF Transitive							
PF (Undergoer)	<i>-en</i>	<i>ni-</i>	<i>ma-</i>	<i>ni-ma-</i>	<i>-i</i>	<i>N-...-a</i>	<i>a-...-a</i>
LF (Location)	<i>-an</i>	<i>ni-...-an</i>	<i>ka-...-an</i>	<i>ni-ka-...-an</i>	<i>-i</i>	<i>N-...-i</i>	<i>a-...-i</i>
IF, BF (Instrument)	<i>i-</i>	<i>ni-i-</i>	<i>i-ka-</i>	<i>ni-i-ka-</i>	<i>-an</i>	<i>N-...-an</i>	<i>a-...-an</i>

Yami verbs divide into indicative and non-indicative forms. The indicative forms are unpredictable and hence 'derivational', whereas the non-indicative affixes are formed in a predictable way, and hence manifest 'inflectional' behavior. All verbs are either dynamic or stative. The indicative verbs are either neutral or perfective. Perfective verbs, marked with the prefix *ni-*, have past time reference and are anterior. Neutral verbs are used typically with either present or future time reference. Tense neutralization (Comrie 1985: 102-104) occurs in discourse where the neutral tense form is used for a past event, similar to what is described in Reid (1971) for some Northern Philippine languages and in Jeng (1999) for Bunun discourse.

The non-indicative verbs distinguish between imperative and subjunctive forms.

The imperative forms are used exclusively in commands. The subjunctive forms are preceded by the auxiliary verbs *ji* “not, definitely (contrary to the interlocutor’s belief)” and *to* “then.” An auxiliary verb in Yami occurs at the beginning of the clause and, as the head of the clause, attracts clitic pronouns. As indicated in Revised Table 1 above, the non-indicative subjunctive forms distinguish dynamic verbs from stative verbs. The dynamic verbs are all preceded by *N-*. The set of rules of morphophonemics of *N-* is discussed in the following paragraphs.

3.1 Morphophonemics of *N-*

The affix that is labeled as *N-* is an assimilating nasal, with rules for deletion of certain consonants that have been assimilated. These rules result in a nasal initial consonant on the verb. However, the assimilating nasal only appears when the verb is dynamic subjunctive. When the verb is stative subjunctive, no assimilation or deletion processes are observed, but a prefix *a-* is attached to the stem instead. The morphophonemics of *N-* following *to* and *ji* was first discussed in Rau (2002a), but has been slightly revised since then based on new evidence.

3.1.1 Stative verb stems

The stative verb stems include the ones prefixed with *ma-* (AF) to form “adjective” like verbs, *ma-* (PF) expressing potential/abilitative mood, verbs of accidental or unintentional actions circumfixed with *ka-...-an* (LF), and *i-ka-* prefix (IF, BF) referring to reasons. The prefix *ma-* is changed to *a-* in the subjunctive forms, while those with *-an* and *i-* are changed to *-i* and *-an* respectively following the auxiliary verbs *to* ‘then’ or *ji* ‘not’, as illustrated in the following examples in (2):

- (2) *ma-téneng* > *a-teneng* ‘smart’
ma-sinmo > *a-sinmo-a* ‘meet someone’
ma-cita > *a-cita-a* > *a-cita* ‘just see someone or something’
ka-teneng-an > *a-teneng-i* ‘just know something’
i-ka-ráhet > *a-rah-et-an* ‘worry about something’

3.1.2 Dynamic verb stems

The dynamic verb stems refer to the rest of the verbs in Yami. The morphophonemics of *N-* of the dynamic verb stems is presented in Table 2.

Table 2. Morphophonemics of *N-* of dynamic verb stems

Stem beginning with	Phoneme ³	Change to
[+alveolar]	/s/ and /t/	/n/
[+palatal]	/c/	/n/ ⁴
[+labial]	/p/	/m/
[+velar]	/k/	/ng/= [ŋ]
[+vocalic]	/i/, /e/, /a/, and /o/	/ng/= [ŋ] + vowel

Table 2 indicates that (1) *N-* changes stems beginning with [+coronal], such as /s/, /t/ and /c/, to /n/; (2) *N-* changes stems beginning with [+labial], such as /p/, to /m/; (3) *N-* changes stems beginning with [+velar], such as /k/, to /ŋ/; and (4) If the stem begins with a vowel, /ŋ/ is prefixed to the vowel stem. Verb stems beginning with all the other consonants do not undergo any changes of *N-*.

Examples of correspondences between the dynamic verb stems and their subjunctive forms are illustrated in Table 3:

³ Yami has twenty consonants and four vowels, as represented in its orthography in the following tables (i) and (ii). In our previous study (Dong & Rau 2000a), the palatal nasal /ɲ / was not included in the chart. Prof. Lawrence Reid (personal communication) suggested there might be four contrastive nasals /m, n, ɲ, ŋ/ in Yami, as well as in Ivatan. An analysis of Yami phonology (Rau & Dong, forthcoming), including the phonemic status of the palatal nasal and distribution of the glottal stop, indicates that palatal nasal is an allophone of /n/ occurring before the front vowel /i/. Thus, the palatal nasal [ɲ] is not included in the inventory of the Yami consonants. The Yami stress pattern is briefly discussed in Rau & Dong (forthcoming), although a complete analysis of the relationship between stress and morphophonemic processes is yet to be worked out. Stress is phonemic in Yami and thus word stresses are marked in all examples.

Table i. Yami Consonants

	Labial	Alveolar	Retroflex	Palatal	Velar	Uvular	Glottal
Stop	p, b	t	d		k, g		ʔ
Nasal	m	n			ŋ		
Fricative	v		s, r			h	
Lateral		l					
Affricate				c, ɟ			
Trill		ʀ					
Glide	w			y			

Table ii. Yami vowels

	Front	Central	Back
High	i		o
Mid		e	
Low		a	

⁴ Rau (2002a) combined /c/ and /s, t/ under the same category [+coronal]. Prof. Lawrence Reid (personal communication) suggested that /c/ be distinguished from /s/ and /t/ in their morphophonemics, thus the subjunctive form for *ciowciow* “chase” should be *ɲiowciowa*. However, there is evidence to show that [ɲ] is a conditioned allophone of /n/ and always occurs before the high vowel /i/. Thus, there is no need to change the original analysis. The subjunctive form for *ciowciow* “chase” is written as *niowciowa*.

Table 3. Indicative and subjunctive forms of dynamic verb stems

Stem	Indicative Form	Subjunctive Form
[+alveolar]	<i>singkad-an</i>	<i>ningkaj-i</i> ‘see clearly’
	<i>a-spang-an</i> ⁵	<i>a-npang-i</i> ‘meet’
	<i>i-toro</i>	<i>noro-an</i> ‘give’
[+palatal]	<i>cita-en</i>	<i>nita-a (nita)</i> ‘look at’
[+labial]	<i>a-pno-en</i>	<i>a-mno-a</i> ‘fill’
[+velar]	<i>i-kelaw</i>	<i>ngelaw-an</i> ‘surprise’
[+vocalic]	<i>itkeh</i>	<i>ngitkeh</i> ‘sleep’
	<i>amizing-en</i>	<i>ngamizing-a</i> ‘listen to’
	<i>onot-an</i>	<i>ngonoc-i</i> ‘follow’

4. Tense

Tense is not a grammatical category in Yami. Yami verb stems are unmarked for tense in discourse when the time frame is clear from the context. If the time frame needs to be established, the past-future time contrast is distinguished in the WH question word with the prefix *ka-* ‘past’ and *ma-* ‘future’. In addition, the conjunction *no* ‘when or if (invisible)’ and *si* ‘when or if (visible)’ also help mark the time distinctions. Therefore, *no ka-* refers to past time, whereas *si ma-* and *no ma-* refer to ‘in the near future’ and ‘in the future, invisible or uncertain’ respectively, as illustrated in (3a)-(3c)⁶.

- (3a) *no ka-ngo o k-ai mo?*
 When.invisible PA-what Nom NOM-come 2.S.GEN
 ‘When was your arrival?’
- (3b) *si ma-ngo am, m-ai ka?*
 When.visible FUT-what PAR AF-come 2.S.NOM
 ‘When will you come (in the near future)?’

⁵ The *a*-prefix occurs in two types of monosyllabic bound roots (Rau & Dong, forthcoming). Type A contains consonant clusters in the bound roots that violate the canonical syllable structure, e.g., *-bhes* ~ *a-bhes* ‘throw a stone at someone’. Type B contains either a CVC bound root, e.g., *-kan* ~ *a-kan* ‘eat’ or a bound root with a glide, e.g., *-vias* ~ *a-vias* ‘sweep’.

⁶ A list of the abbreviations are as follows:

1= first person	2= second person	3= third person	AF= agent focus
AUX= auxiliary verb	C= consonant	CAU= causative	D= deictic
EMP= emphatic	EXCL= exclusive	FUT= future	GEN= genitive
HM= hesitation marker	IF= instrumental focus	IMP= imperative	INCL= inclusive
LIN= linker	LF= Locative focus	LOC= locative	MOD= modality
N= archiphoneme N-	NEG= negative	NM=nominalization marker	
NOM= nominative	OBL= oblique	P= plural	PA= past/perfective
PAR= particle	PF= patient focus	PN= personal name	Q= question
REC= reciprocal	RED= reduplication	RP= recent perfective	S= singular
SUB= subjunctive	SV= stative verb	VP= verb prefix	VS= verb suffix

- (3c) *no ma-ngo am, m-ai ka?*
 When.invisible FUT-what PAR AF-come 2.S.NOM
 ‘When will you come (in the future, invisible or uncertain)’

The prefixes are also added to time adverbials to distinguish past from future, such as *nokakoyab* ‘yesterday’, *siciaraw ya* ‘today’, and *simaraw* ‘tomorrow’.

4.1 Tense neutralization

Tense neutralization occurs in Yami narratives where the unmarked tense form is used for a past event when the time reference is pragmatically clear. In the following story⁷, the narrator first sets the time frame of the story as the old school days as in (4-1). For the rest of the story, the unmarked tense form is used for the story line. The narrator regularly uses *miratateng am* ‘later on’ and its variants *tateng am* or *ratateng am* or *mownay am* ‘a moment later’ to reset the time frame in the past. Future is also inferred from the context by the unmarked word order (predicate initial), as shown in (4-2).

- (4-1) *a no ka-pi-vat-vatek namen rana,*
 PAR when.invisible PA-VP-RED-write 1.P.EXCL.GEN already
manga-kakteh am,
 P-older.sibling PAR
 ‘This happened when we were students, dear brothers.’
- (4-2) “*mi ta na mi-vat-vatek*”
 go 1P.INCL.NOM already AF-RED-write
 “Let’s go to school! (Lit. We will go to school now.)”
- (4-3) *ko-an ko si Apen Sidongen am,*
 say-LF 1.S.GEN NOM Grandpa PN PAR
 ‘I said to Grandpa Sidongen.’
- (4-4) “*noon*”,
 OK
 “OK!”
- (4-5) *ma-ngay namen a,*
 AF-go 1.P.EXCL.NOM PAR
 ‘We went.’

⁷ This story is entitled “Playing Possum”, told by Si Apen Kotan, male, 75 years old in Yayo Village.

- (4-6) *ka-ian namen⁸ rana do pi-vate-vatek-an a,*
 then-be.at 1.P.EXCL.GEN already LOC VP-PRED-write-LOC PAR
 ‘And then we were at the school.’
- (4-7) *tateng am, nanao-en na yamen am,*
 later PAR teach-PF 3.S.GEN 1.P.EXCL.NOM PAR
 ‘Later on, he began to teach us.’

4.2 Aspect

Aspect refers to the way the internal temporal constituency of the situation is viewed. Yami aspect makes the following semantic distinctions: [+/-perfective], [+/-repetitive], and [+/-continuous]. The meanings behind each aspect and the expression units used to code each aspect is presented in Table 4.

Table 4. Meanings and expression units for Yami aspect markers

Aspect	Expression	Example
Perfective	<i>ni-</i>	<i>ni-koman</i> ‘ate, have eaten’
Recent Perfective	<i>ka-</i>	<i>ka-rateng</i> ‘recently arrived’
Unique/Limited	<i>ka-</i>	<i>ka-pi-’an’an</i> ‘only depend on s.o.’
Conjunctive	<i>ka-</i>	<i>ka-pad</i> ‘afterwards drop s.t.’
Immediate Sequential Activity	<i>to + inflection</i>	<i>to mi-sinmo</i> ‘then meet’
Continuous	<i>to + inflection</i>	<i>to lavi</i> ‘keep crying’
Repetitive	Reduplication	<i>ni-manga-mangay</i> ‘went repeatedly’

⁸ The first person plural exclusive bound pronoun has the same form *namen* for both the nominative and the genitive cases. The Yami pronominal system is presented in Table (iii):

Table iii. Yami personal pronouns (adapted from Rau & Dong, forthcoming)

	Nominative (Bound)	Nominative (Free)	Genitive (Bound)	Genitive (Free)	Locative (Free)
1S	<i>ko</i>	<i>yaken</i>	<i>ko</i>	<i>niaken</i>	<i>jiaken</i>
2S	<i>ka</i>	<i>imo</i>	<i>mo</i>	<i>nimo</i>	<i>jimo</i>
3S	<i>ya</i>	<i>iya</i>	<i>na</i>	<i>nia</i>	<i>jia</i>
1PEXCL	<i>namen</i>	<i>yamen</i>	<i>namen</i>	<i>niamen</i>	<i>jiamen</i>
1PINCL	<i>ta, tamo, takamo</i>	<i>yaten</i>	<i>ta</i>	<i>niaten</i>	<i>jiaten</i>
2P	<i>kamo, kanio</i>	<i>inio</i>	<i>nio</i>	<i>ninio</i>	<i>jinio</i>
3P	<i>sia</i>	<i>sira</i>	<i>da</i>	<i>nira</i>	<i>jira</i>

4.2.1 Perfective *ni-*

Perfective aspect *ni-* is a reflex of **<in>* in Yami, a phenomenon shared by her sister language Ivatan (Hidalgo and Hidalgo 1971:53, 70). Unlike most of the languages of the Northern Philippines, which require focus affixation prior to infixation of *<in>* (Reid 1992: 77), Yami demonstrates an innovation of the morpheme order *ni-om-*. Ivatan and Itbayatan, on the other hand, reflect the reconstructed **<um><in>* order, as in *tominbay* ‘answered’, *tominwaw* ‘appeared’ (Larson 1986: 160, 165, Reid 1992).

In an agent focus construction, *ni-* occurs almost exclusively prior to focus affixation. But the archaic infix *<in>* also occurs in the language, such as *minaN-* (*<m-in-aN>*) in *m-in-a-nakaw* ‘stole’ (*<takaw* ‘steal’).

In a NAF construction, *ni-* also occurs at the left end of a word. The archaic forms infixed with *-in-* tend to become nominalized⁹, as illustrated in (5).

- (5) *c-in-inon* ‘textile’ (*<cinon* ‘weaving’, *t-om-inon* ‘to weave’)
c-in-oat ‘heated water’ (*<koat* ‘hot’)
p-in-atodah ‘accepted taros as a gift from a singing party’ (*<todah* ‘accept’)
s-in-avat ‘collected seafood’ (*<savat* ‘collect’)

The prefix *ni-* marks the events that occur before the time of speech in absolute tense or another event in relative tense, as illustrated in (6-1~6-3).

- (6-1) S: *Ina, ko na ni-m-ai.*
 Mom 1.S.NOM already PA-AF-come
 ‘Mom, I came back.’
- (6-2) M: *Akes kong! ko pa mi-vatvatek,*
 Grandma greeting 1.S.NOM still AF-study
ko ka-ipi-doa rana
 1.S.NOM VP-time-two already
ya ni-m-ai do pongso nio.
 AUX PA-AF-come LOC island 2.P.GEN
 ‘How are you, Grandma? I am still a student. This is the second time I have come to your island.’

⁹ The reason why the so-called “archaic NAF” forms have not changed the position of *-in-* to word-initial *ni-* is probably because they were nouns to begin with. Starosta-Pawley-Reid (1982) claimed that such forms were originally nouns, and that they became verbs as a result of the development of the “focus system”.

- (6-3) A: *asio ka ma-tenéng do ciriciring namen*
 how_come 2.S.NOM SV-be.intelligent LOC language 1.P.EXCL.GEN
ya? sino o ya ni-om-nanao jimo?
 D who NOM AUX PA-AF-teach 2.S.LOC
 ‘How can you be so smart to speak our language? Who taught you?’

The prefix *ni-* also refers to anteriority and thus can be interpreted as perfect, as in (6-2). Several particles following verbs refer to the TAM categories, a phenomenon commonly found in the Philippine languages, such as Tagalog (Wolff, Centeno, and Rau 1991). For example, *pa* ‘yet, still’ and *rana* ‘already’ in (6-2) and its shorter alternant *na* ‘already’¹⁰ in (6-1).

4.2.2 Recent perfective: *ka-*

The verb prefix *ka-* encoding recent perfective in Yami is similar to Tagalog recent perfective *ka-* ‘have just done’ as in *ka-rá-rating* ‘have just arrived’ and *ka-bíbili* ‘have just bought’ (Schachter & Otnes 1972:371, Wolff, Centeno and Rau 1991:602). However, this analysis is not without its problem (Lawrence Reid, personal communication).

The major problem is that what appears at first glance to be an S of these constructions, and is translated as such in English translations, is expressed not by a Nominative NP but by a Genitive NP. The other problem is that there is no way to prove that they are in fact derived from AF constructions with all the focus affixation deleted. In fact, the *ka-* prefix can also be interpreted to form a noun. If a nominal interpretation is adopted, the beginning of the following sentence (7) could be translated as “on his arrival at their house”.

- (7) *ka-raténg na do vahay da am,*
 RP-arrive 3.S.GEN LOC house 3.P.GEN PAR
 “*iwang-i o pazezevengen*” *ko-an na*
 open-IMP.LF NOM door say-LF 3.S.GEN
o mavakes na. (10, p. 205)
 NOM wife 3.S.GEN
 ‘As soon as he arrived at their house, he said to his wife, “Open the door!”’

¹⁰ The particle *na* ‘already’ shares many similar functions of the Mandarin Chinese sentence final particle *le*. The discussion of the particles related to tense and aspect in Yami is worth another paper.

4.2.3 Unique/limited: *ka*-¹¹

The prefix *ka*- can function as a unique/limited aspect marker to express “only”. The verb inflection patterns are the same as that of the recent perfective *ka*-. The case marking of the extended core argument in a single complement actor focus intransitive construction is coded by an oblique marker (Liao 2002), as illustrated in (8), while the A and O in a patient focus transitive construction are both coded by Genitives as in (9).

(8) *ka-tangáy saon so m-eyngen ori am.* (69, p. 310)

only-face like_{that} **OBL** SV-sick that PAR

“(They) could **only** look at the sick person.”

(9) *ta o ni-mi-zaza tao am akmán sang,*

because NOM PA-AF-injure person PAR like that

ka-pi-'an'an na rana no tao-do-to an. (30, p. 99)

only-VP-depend **3.S.GEN** already **GEN** heavenly.father PAR

‘For a person injured like that, she could **only** depend on God to heal her.’

4.2.4 Conjunctive: *ka*-¹²

Clauses beginning with the conjunctive *ka*- ‘afterwards’ always follow a previous event to connect subsequent events. The morphosyntax of the conjunctive *ka*- is the same as the recent perfective *ka*- and the unique *ka*-, as discussed in Sections 4.2.1 and 4.2.2. With the proper syntax, they can be interpreted as nouns too. The following examples in (10)-(11) illustrate their use.

(10) *to namen vací-a, ka-pa-omon namen sia*

then 1.P.EXCL.GEN break-PF.SUB afterwards-VP-hide 1.P.EXCL.GEN this.OBL

do tana so oo da ori a (14, p. 77)

LOC soil OBL head 3.P.GEN this PAR

‘We broke (the reeds) in half and hid their heads in the soil.’

¹¹ This can be interpreted as nominal constructions too, as discussed in 4.2.1.

¹² The conjunctive *ka*- might be a case of inversion (Givón 1994) and requires further investigation.

- (11) *s-om-ivoz sira do kahasan am,*
<AF>slip_into 3.P.NOM LOC mountain PAR
mang-otas so raon a ka-ptad na nia,
AF-pick OBL leaf LIN afterwards-drop 3.S.GEN this.GEN
ikadoa na no raon am,
second 3.S.GEN GEN leaf PAR
kotas-en na ka-ptad na nia. (19, p. 191)
pick-PF 3.S.GEN afterwards-drop 3.S.GEN this.GEN
‘After they went up the mountain, s/he picked a (taro) leaf. Having dropped it,
(s/he) picked a second (taro) leaf. S/he picked it, (and) immediately dropped it.’

4.2.5 Immediate sequential activity: *to*

The interplay between the perfective for ‘foregrounded’ event lines and imperfective for ‘backgrounded’ scene settings and descriptions has long been observed in previous research on other languages (e.g., Hopper 1979a-b, 1982, Hopper & Thompson 1980, Rafferty 1982, Rau 1997). In Yami, the perfectivity (i.e., immediate sequential activity) encoded by the auxiliary verb *to* ‘then’ occurs in foregrounded clauses.

In my previous study on Yami discourse functions (Rau 2002a), I observed that the auxiliary verbs *to* “then” and *kato* “and then” and prefix *ka-* “afterwards” seem to occur frequently to indicate sequential events. On the other hand, the auxiliary verb *ya* tends to put other clauses into background, serving as either explanations or evaluations. Clauses containing *ni-* verbs in narratives tend to be pushed toward backgrounding because they serve as explanations and occur frequently in clausal nominalization or counter-sequentially.

The auxiliary *to* as an aspect marker, referring to immediate sequential activity, encodes the complicating actions in well-developed personal experience stories (Labov & Waletzky 1967). Let’s look at the following two excerpts of the story “Playing Possum”, the orientation of which was previously illustrated in (4). The story describes how a Yami boy fights with his Japanese teacher. After the orientation of the story is established, the following complicating actions are marked with the aspect marker *to*, as in (12).

- (12-1) *sipzot-an na rana do atang ko a,*
hit-LF 3.S.GEN already LOC buttocks 1.S.GEN PAR
‘He (the teacher) hit me on my buttocks.’

- (12-2) *mi- 'oya- 'óya ko am,*
 AF-RED-angry 1.S.NOM PAR
 'I (the boy) was very angry.'
- (12-3) *to ko rakep-a jia o si-sipzot na am,*
 then 1.S.GEN grab-PF.SUB 3.S. LOC NOM RED-hit 3.S.GEN PAR
 'I grabbed his rod from him.'
- (12-4) *to namen mi-pi-pazáng-i a,*
 then 1.P. EXCL.GEN REC-VP-drag-LF.SUB PAR
 'We were fighting with each other (for control of the rod).'
- (12-5) *"y-angay ko imo 'alio-en do obo-wbot-an,*
 IF-go 1.S.GEN 2.S.NOM load-PF LOC RED-defecate-LOC
do ta-taci-an",
 LOC RED-urinate-LOC
 "I (the teacher) will throw you into a manure pit and a urine pond."
- (12-6) *to na i 'alió-a yaken am,*
 then 3.S.GEN HM load-PF.SUB 1.S.NOM PAR
 'Then he (the teacher) picked me up [lit. loaded me on his shoulder].'
- (12-7) *to na i pa-telém-a yaken am,*
 then 3.S.GEN HM VP-jump-PF.SUB 1.S.NOM PAR
 'Then he threw me.'
- (12-8) *to ko i ma-na-navak do ráko a ranom a*
 then 1.S.NOM HM SUB-RED-middle LOC big LIN water LIN
sombing (obot) no tao a,
 feces (feces) GEN people PAR
 'Then I was in the middle of a manure pit.'
- (12-9) *to ko na ¹³sabóy-a am,*
 then 1.S.GEN already splash-PF.SUB PAR
 'Then I splashed (water).'
- (12-10) *"ana! a ya s-om-agpian!"*
 Hey PAR AUX <AF>crazy
 "Man! (He, the boy) is crazy!"
- (12-11) *ratateng am, to ko ¹⁴sabóy-a am,*
 later PAR then 1.S.GEN splash-PF.SUB PAR
 'Later on, I (the boy) splashed (water).'

¹³ There is a free variation between *saboy-a* and *naboy-a* 'splash s.t.' with the latter following the *N-*morphophonemics.

¹⁴ See footnote 13.

- (12-12) *to-da*¹⁵ *a-ciówciow* *ta*.
then-already SUB.SV-chase because
‘Then (the teacher) ran away because of it.’

All the clauses preceded by *to* resemble the historical present tense, a tense typically reserved for narrative events within the story world itself (Schiffrin 1981, 1994:81). It increases the intensity of the speech events by using a set of subjunctive verb inflections. The switch between the indicative (12-1)-(12-2) and the non-indicative verb forms (12-3)-(12-4) has a discourse function to separate episodes, as does the switch between the HP and the preterite in conversations (Wolfson 1979).

4.2.6 Continuous

The auxiliary verb *to* ‘continuously, keep doing such and such’ is also used to code the continuous (durative) aspect, as illustrated in the following examples (13)-(14):

- (13) *ma-o-óyat* *a* *tao* *am, to* *á-kaw* *sira*¹⁶. (10, p. 232)
SV-RED-strength LIN person PAR AUX SUB.SV-cultivate 3.P.NOM
‘Industrious people would **continuously** cultivate their land.’
- (14) “*asio* *ka* *ya,* *mo* *kehakay,*
strange 2.S.NOM that 2.S.GEN male.friend
a to mapá-sala so i-panci” (19, p. 201)
PAR AUX CAU-wrong OBL IF-speak
‘My friend, why did you **keep** mispronouncing (the fish names)?’

4.2.7 Repetitive

The perfective, neutral, and subjunctive verbal categories all distinguish the repetitive (frequency) aspect with reduplication. In Rau & Dong (forthcoming), seven forms of reduplication in Yami were identified: 1) CV-, 2) CVCV-, 3) CVC-, 4) CVV-, 5) VCV-, 6) -V, 7) -CCV. Noun stems are reduplicated to refer to plurality, extremity, variety, scattering, or toys. Verb stems are reduplicated to refer to an instrument that is used to do a certain action repeatedly, the result of a repeated action, or the place where the repeated action occurs. This indicates “repetition” is the core

¹⁵ The *da* of *toda* is the adverbial clitic **da* ‘already’ which now forms the first syllable of Yami *rana* ‘already’.

¹⁶ The auxiliary *to*, similar to *ya*, only attracts bound pronouns. Thus the free pronoun *sira* is not moved.

meaning of reduplication for Yami verbs.

The reduplicated part is typically the root of a word minus any final consonant that the root may have, such as *ni-gesa-gesah* ‘things that were thrown’ (< *gesah* ‘throw’), *mi-kala-kala* ‘search’ (< *kala* ‘look for’), *ka-kan-an* ‘plate’ (< *kan* ‘eat’), and *ni-maci-vaha-vahay* ‘got married’ (< *vahay* ‘house’). But if the root is prefixed with *a-*, the perfective prefix *ni-* is reduplicated, as illustrated in the following example (15).

- (15) *ni-ni-ahap* ‘everything that was taken’ (< *ahap* ‘take’)
ni-ni-akot ‘everything that was moved’ (< *akot* ‘move’)
ni-ni-akan ‘everything that was eaten’ (< *akan* ‘eat’)
ni-ni-angay ‘everywhere that one has been to’ (< *angay* ‘go’)
ni-ni-avay ‘all were scolded’ (< *avay* ‘scold’)

When the root is prefixed to form a new meaning, the new stem can become the base for reduplication. When *paN-* ‘distribution’ is prefixed to form a new stem, the morphophonemics of *N-* can apply to the stem first before reduplication as in (16), or the reduplication can apply to the root first before affixation and morphophonemics of *paN-* as in (17).

- (16) *ka-pa-ngota-ngotas* ‘then collect leaves repeatedly’
(*ka-pa-ngota-ngotas* < *ka-pa-ngotas* < *ka-* + *paN-* + *kotas*)
(17) *ni-pa-niri-ciring* ‘cursed s.o.’
(*ni-pa-niri-ciring* < *ni-paN-ciri-ciring* < *ni-* + *paN-* + *ciring*)

4.3 Modality

Modality concerns the subjective evaluation of the speaker towards an event. According to Bybee’s definitions (1985:165-166), mood is a marker on the verb that signals what the speaker is doing with the proposition. Included under her definition are epistemic modalities, ranging from certainty to probability to possibility. Excluded from the definition are the “agent-oriented” modalities, such as deontic modalities, markers of ability, desire and intention since they express conditions pertaining to the agent that are in effect with respect to the main predication. In the following sections, I discuss modality expressed by verbal morphology, auxiliaries, and word order variation in Yami.

Yami modality makes the following distinctions: (1) negative, (2) emphatic, and (3) proximity. The negative modality is expressed with the auxiliary *ji* followed by

verbal inflection, which is also used to express emphasis with the proper contexts. Proximity is expressed by auxiliary *ya* or fronting the bound pronominal.

4.3.1 Negative

Before I discuss how negation is formed with the auxiliary *ji*, I need to first give a picture of the Yami verb classification with all the TAM categories included.

Yami verbs are first divided into stative and dynamic stems. The stative verbs are composed of stems affixed with *ma-*, while the dynamic stems include all the transitive or NAF (-en, -an, i-) and intransitive affixes or AF (m-). Then the distinction is made between the indicative and the non-indicative verb stems. The non-indicative verb stems can be preceded by the auxiliary *to* 'then' as an aspect marker and undergo morphophonemic alternations. The indicative verb stems can be further divided between neutral and perfective. Finally, all the lowest levels can be further distinguished as positive or negative modality, as illustrated in Figure 1. This figure indicates that valence (stative vs. dynamic) is most relevant to the verb and hence occurs closest to the stem, followed by aspect (perfective vs. neutral) and modality (positive vs. negative). This follows Bybee's principle of iconicity: If linguistic expression is iconic, then the categories that are more relevant to the verb will occur closer to the stem than those that are less relevant. Therefore, valence occurs closer to the stem than modality.

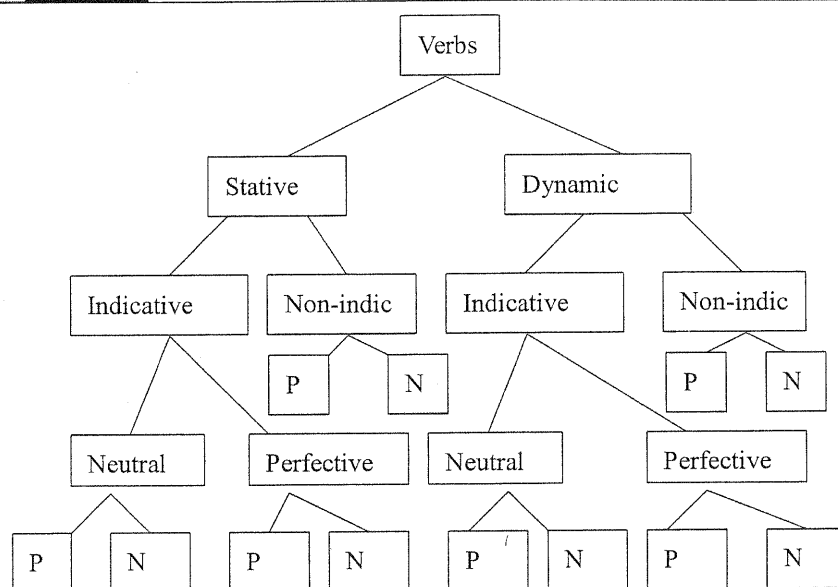


Figure 1. Verb classification in Yami

P= Positive, N= Negative

For example, the verb root *cita* ‘see’ can illustrate word formation in Figure 2. A distinction between stative and dynamic is first made, such as *ma-cita* ‘can see it’ and *cita-en* ‘look at it’. The auxiliary *to* can be further added to the new verb stems to form *to a-cita* (< *a-cita-a*) ‘just see it’ and *to nita* (< *nita-a*) ‘just look at it’. The verb stem without *to* preceding it can be further distinguished between perfective (i.e., *ni-ma-cita* ‘could see it’ and *ni-cita* ‘looked at it’) and neutral, while the verb stem with *to* can be divided between positive and negative (i.e., *ji to a-cita* ‘really¹⁷ see it’, *ji to nita* ‘do not look at it shortly or do not look at it continuously’). Finally, all the perfective and neutral verb stems can be combined with the negative markers to form stative *ji a-cita* ‘cannot see it’, *ji ni-ma-cita* ‘could not see it’, and dynamic *ji nita* ‘do not look at it’, *ji ni-cita* ‘did not look at it’.

The order of these morphemes and auxiliary verbs follows Bybee’s principle of relevance in that the prefix *ma-*, expressing valence, is closest to the root, surrounded by the perfective aspect prefix *ni-*, and with the negative marker *ji* occurring at the leftmost end, as in *ji ni-ma-cita* ‘did not see it’.

¹⁷ The negative *ji* can be interpreted as emphatic with the proper contexts and intonation, as discussed in Section 4.3.2.

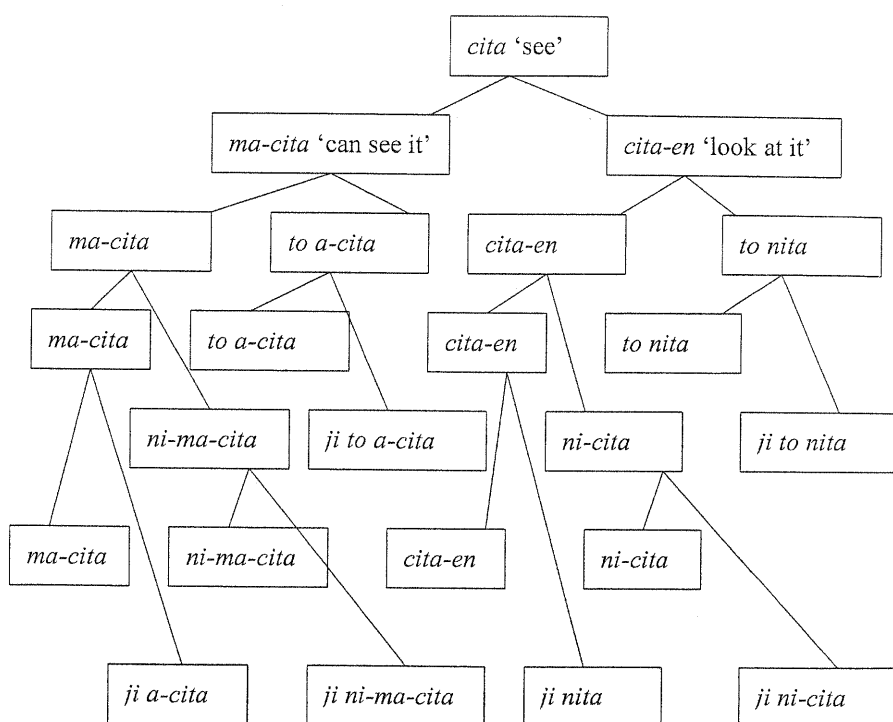


Figure 2. Derivation and inflection for the word *Cita* 'See'

4.3.2 Emphatic

The negative markers *ji* can be interpreted as positive and emphatic if the utterance ends with a rising intonation or when the contexts are clear. The following example (18-1) is positive/emphatic with a rising intonation whereas (18-2) is negative with a falling intonation.

(18-1) *ko ji á-cita imo.* (Rising intonation)

1.S.GEN NEG SUB.SV-see.PF 2.S.NOM

'I can see you (contrary to your belief).'

(18-2) *ko ji á-cita imo.* (Falling intonation)

1.S.GEN NEG SUB.SV-see.PF 2.S.NOM

'I can't see you.'

4.3.2.1 *Ji abo* ‘absolutely not’

The auxiliary *ji* in *ji abo* ‘absolutely not’ frequently takes its emphatic meaning. The nominalizing prefix *ka-* is required following *ji abo*, as in (19).

- (19) *ji abó ka-paka-hap da so siko-siko da*
 EMP no NM-VP-take 3.P.GEN OBL RED-cane 3.P.GEN
no ka-mang-anak-an da no ni-manci niaken
 GEN NF-VP-child-NF 3.P.GEN GEN PA-AF-say 1.S.GEN
a ji á-pin-pintek am. (31, p. 33)
 LIN NEG SUB.SV-RED-long.life PAR
 ‘The descendents of those who used to say I would not live long will die early before they are old enough to use canes.’

Ji abo as an adverb can modify the clauses led by the nominalized auxiliaries *ka-to* and *ka-ji*. The verb inflection *N-...-an* is governed by *kato/kaji*. The morphophonemics of *N-* follows the pattern discussed in 3.1. Except for example (22), where *ji* is interpreted as emphatic, *ji* in (20)-(21) expresses the negative.

- (20) “*ji abó ka-to ko i maci-vava-an jimo*
 EMP no NM-then 1.S.GEN HM SUB.VP-carry-NF 2.S.LOC
do akma sia ka-lakalahetan no rarahan am”. (50, p. 109)
 LOC like OBL.this NF-bad.place GEN road PAR
 “I definitely cannot let you carry me with the road in such bad condition.”
- (21) *ji abó ka-ji ko ang-sem-an so mata mo* (10, p. 165)
 EMP no NOM-NEG 1.S.GEN SUB-raw.meat-NF OBL eye 2.S.GEN
 ‘I will definitely (lit. by no means not eating) eat your eyes raw.’
- (22) *ji abó ka-ji ko a-viay-an*
 EMP no NM-EMP 1.S.NOM SUB.SV-live-NF
a si mi-pono o enep ya. (6, p. 47)
 LIN if AF-full NOM tidewater that
 ‘If the tide rises, I definitely won’t live.’

4.3.3 Auxiliary verb *ya*

The auxiliary verb *ya*, grammaticalized from the demonstrative or deictic ‘this, here’, is used to draw attention to temporal and spatial proximity. The third person singular nominative pronoun *ya* is also developed from the deictic, albeit through a

different path of grammaticalization.

Ya was analyzed as a tense marker by Ho (1993). According to her analysis (1993:130), when *ya* occurs with a non-past verb, it provides a present progressive or a future reading as in (23a)¹⁸. However, when *ya* occurs with a past-tense verb, it has a present perfect interpretation in (23b).

(23a) *ya m-itkeh si Mapapo.*

AUX AF-sleep NOM PN

‘Mapapo is sleeping. Or Mapapo will go to sleep.’

(23b) *ya ni-man-linas si Mapapo so rasey.*

AUX PA-AF-wipe NOM PN OBL mat

‘Mapapo has wiped mats.’

However, Ho’s analysis could not provide a correct analysis without examining discourse. A more complete analysis of the discourse functions of *ya* can be found in Rau (2002a). It is probably more accurate to analyze *ya* as a deictic marker because its function is to draw attention to spatial and temporal proximity of the event. This phenomenon is similar to the functions of auxiliaries in Tsou and thus *ya* should be identified as marking mood¹⁹.

I begin by illustrating how *ya* functions to mark temporal proximity. In the following passage of a procedural text in (24), the speaker contrasts the past practices with the current ones by using *ya* to refer to the present.

¹⁸ (23a) and (23b) are Ho’s examples with the orthography changed to follow Rau & Dong’s system (forthcoming).

¹⁹ Suggested by one of the anonymous reviewers.

- (24) *ano mi-kan-kanen rana am,*
 when.invisible AF-RED-food already PAR
tey-te-tlo aviik a tey-epat o aviik,
 every-RED-three boar LIN every-four NOM boar
nokakoa am tey-de-doa o aviik.
 formerly PAR every-RED-two NOM boar
am ya t-om-azestes rana do sivo-sivovoong da
 but AUX <AF>gradually already LOC RED-descendant 3.P.GEN
rana ya am, a na²⁰ aloslos-an am,
 already that PAR PAR 3.S.GEN slide.down-LF PAR
ya aró o ya maka-ngarnan so aviik,
 AUX many NOM AUX VP-ten OBL boar
ya aró o ya tey-si-siam,
 AUX many NOM AUX every-RED-nine
am ori o mi da pa-ney-neyked-an no vaza-vazay no tao
 so that NOM go 3.P.GEN VP-RED-stop-LF GEN RED-work GEN person
nokakoa an, yamen a mavakes am ma-pi-vazay so akma sang
 formerly PAR 1.P.EXCL.TOP LIN female PAR AF-VP-work OBL like that
an, alo-aloslos-an na ori am, akma sang o mina-vaza-vazay
 PAR RED-slide.down-LF 3.S.GEN that PAR like that NOM SV<PA> RED-work
namen nokakoa, ni-ma-cita namen i-wey-wawalam
 1.P.EXCL.GEN formerly PA-SV-see 1.P.EXCL.GEN IF-RED-custom
nokakoa, ya namen pa ya asa tapilan o ya
 formerly AUX 1.P.EXCL.GEN still AUX one generation NOM AUX
maka-vood so ya ma-kman sang am,
 AF-inherit OBL AUX AF-like that PAR
akma sang a na²¹ tebtéb-an no ciring ko. (22-26, pp. 250-251)
 like that LIN 3.S.GEN break-LF GEN word 1.S.GEN

‘When food was ready to be distributed (in the inauguration ceremony following the building of a house), (everyone received a portion of) three or four pigs. Formerly (everyone received a portion of) two pigs, **but gradually as it has come down to succeeding generations, (everyone received a portion of) as many as ten.** That is the way it used to be when people stopped working (following the building of a house). Formerly, as for us women, we used to work like that. It (the custom) came down to us, it was like that, the way we

²⁰ The third person bound genitive pronoun *na* ‘s/she, it’, together with first and second person genitive pronouns, can be moved in front of the verb to indicate proximity, as discussed below in 4.3.4.

²¹ Same as above.

used to work formerly. We could see the former customs. **As for us, our generation still inherits it like that. Like that is the breaking point of my talk.**'

At the end of a procedural text, the speaker draws attention back to here and now by using *ya*, as illustrated in (25):

- (25) *ya na kavós-an rana ori*
 AUX 3.S.GEN end-LF already that
no ya ko i-panci. (14, p. 267)
 GEN AUX 1.S.GEN IF-speak
 'This is the end of what I wanted to say.'

In the following dialogue (26), one interlocutor asks what has happened to the other person's foot (something visible). The other interlocutor's response relates the event to the current time of interaction by using *ya*.

- (26) "*ya ni-ma-kong o ai mo?*" *ko-an na,*
 AUX PA-AF-what NOM foot 2.S.GEN say-LF 3.S.GEN
 "*a do*²² *ya ko ni-angaz-an a*
 PAR LOC AUX 1.S.GEN PA-go.up-LF LIN
ya ko ni-aong-an jimo. (27-28, p. 136)
 AUX 1.S.GEN PA-catch.up-LF 2.S.LOC
 "What happened to your foot?" asked he. "It was injured when I went to chase you."

As a deictic referring to temporal and spatial proximity, *ya* occurs frequently in conversations, as shown in the examples in (27)-(28):

- (27) "*mán-ngo ka manga wari?*"
 AF-what 2.S.NOM P younger.sibling
 "*ya m-ian so ya alikey a ya apía.*" (34-35, p. 83)
 AUX AF-exist OBL AUX small LIN AUX good
 "How are you feeling, my sister?" "A little better."

²² The locative case marker *do* "because" implies that the following event is not done voluntarily. The patient of the NAF (or transitive) verbs *imo* 'you, singular' is demoted to the locative case *jimo*.

- (28) *“mo ina, ya ko ni-maka-hap so panganpen”*. (11, p. 141)
 2.S.GEN mother AUX 1.S.NOM PA-VP-take OBL fox
 “Mom, I caught a fox.”

Ya also serves as a backgrounding device, providing explanations for previous actions in narratives, as illustrated in (29).

- (29) *ya ko m-ai jia am,*
 AUX 1.S.NOM AF-come there PAR
ya ko today n-ibo ji Akay a yokay-in ang. (19, p. 38)
 AUX 1.S.NOM then SUB-start.off LOC Grandpa LIN waken-PF PAR
 “I was about to come back, but then I started off to Grandpa’s place to wake him up.”

In summary, *ya* can be analyzed as an auxiliary indicating mood, occurring frequently in personal stories and dialogues to draw attention to temporal and spatial proximity. It also occurs in narratives contrasting the past with the present condition, and provides background comments and explanations.

4.3.5 Word order variation

Temporal proximity can also be encoded by word order variation. Bound pronominal forms are fronted to indicate recency of the event. Examples (30a), (31a), and (32a)²³ with S occurring in sentence initial position indicate temporal proximity.

- (30a) *ko k-om-an so wakay.*
 1.S.NOM <AF>eat OBL sweet.potato
 ‘I am eating a sweet potato.’
- (30b) *k-om-an ko so wakay.*
 <AF>eat 1.S.NOM OBL sweet.potato
 ‘I want to eat a sweet potato.’ Or ‘I ate a sweet potato.’
- (31a) *ko k-om-an rana so wakay.*
 1.S.NOM <AF>eat already OBL sweet.potato
 ‘I am eating a sweet potato already.’
- (31b) *k-om-an ko rana so wakay.*
 <AF>eat 1.S.NOM already OBL sweet.potato
 ‘I am about to eat a sweet potato.’ Or ‘I began to eat a sweet potato.’

²³ The examples are adapted from Rau & Dong (forthcoming).

- (32a) *ko ni-k-om-an rana so wakay.*
 1.S.NOM PA<AF>eat already OBL sweet.potato
 'I just ate a sweet potato.'
- (32b) *ni-k-om-an ko rana so wakay.*
 PA<AF>eat 1.S.NOM already OBL sweet.potato
 'I have eaten a sweet potato.'

In summary, Yami mood is expressed by (1) auxiliary *ji* followed by verb inflection in negation and emphatic constructions, (2) auxiliary *ya* in sentence initial position to indicate temporal and spatial proximity, and (3) fronting of bound pronominal forms to sentence initial position to indicate temporal proximity.

5. Conclusion: Iconicity and TAM in Yami

My investigation of Yami TAM system has supported the claim that although the three categories were discussed separately, they interact closely with one another, a fact that has been well established in previous research (e.g., Lyons 1977:690, Waugh 1979:229, Wallace 1982).

The Yami form and meaning relationship in TAM is by no means arbitrary. The repetitive aspect coded by reduplication typically occurs in the root with idiosyncratic semantic change. The valence category (or focus markers) is closest to the stem, but the derivational/inflectional distinction as defined by Bybee and others does not work for Yami verbal morphology nor does it for the verbal morphology of other Philippine-type languages. The indicative focus affixes are unpredictable, and therefore 'derivational', but when the non-indicative affixes are applied to them, the indicative focus affixes are deleted/replaced in a predictable way, and therefore manifest 'inflectional' behavior. Therefore, although reduplication is derivational, the focus markers are a mixture of derivation and inflection. Based on the Yami evidence presented in this paper, we can conclude that it is not entirely true of Yami that derivational affixes are always closer to the stem.

The perfective aspect prefix *ni-* occurs at the left end of a word because it is less relevant than the focus markers. Its lexical application is more general than the valence (or focus) marker, although its lexical application is still not obligatory, and hence should be classified as a derivational morpheme. In the outer layer of a word, the application of the morphophonemics of *N-* following the negative modality *ji* (or *kaji*) and the immediate sequential activity aspect *to* (or *kato*) is obligatory and hence should be classified as inflectional. The auxiliary *ya*, occurring at the beginning of a clause to express temporal and spatial proximity, is closely correlated with its low relevance to a stem. Finally, word order variation marking proximity is also low in

relevance to a stem and hence is coded by a syntactic device. The order of those semantic categories are presented as follows in Table 5:

Table 5. Order of semantic categories in Yami

Mood	Aspect	Valence	Stem
Word order variation			
Auxiliary <i>ya</i>			
Auxiliary <i>ji</i> or <i>kaji</i>			+Verb inflection
	Auxiliary <i>to</i> or <i>kato</i>		+Verb inflection
	Derivational prefix <i>ka-</i>		
	Derivational prefix <i>ni-</i>		
	Stem reduplication		Stem reduplication
		Derivational indicative affixes <i>m-</i> , <i>-en</i> , <i>-an</i> , <i>i-</i> , but the non-indicative forms are inflectional	

In general, Bybee's principle of relevance of the meaning of an affix to a stem, the generality of lexical application and the amount of semantic change as factors predicting expression type could account for the order of the TAM categories in Yami.

The order of the TAM categories in relation to the stem displays a similar ranking (i.e., Mood-Aspect-Valence-Stem) to that found in Bybee's cross-linguistic survey. Furthermore, the size of the expression units also follows the iconicity principle to form a continuum, with Valence expressed by affixes (a mixture of derivation and inflection) only, Aspect expressed by reduplication, affixes and auxiliary plus verb inflection, while Mood is expressed by auxiliaries, auxiliary plus verb inflection, and word order variation.

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達悟語時貌情態構詞法之形義相似關係

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本研究之目的為探究時貌情態範疇之語形和其功能之間如何展現一種自然、非任意性的關係，主要以達悟語之時貌情態構詞法之間的互動關係為證據，檢測 Bybee (1985) 所提出的 iconicity 假設是否能合理解釋構詞法之形義相似關係。此項假設認為構詞法中語素和語素之間的結合方式、先後次序和遠近關係不是任意的：凡是影響語根之語意變化最直接、最全面的語意範疇，在距離上一定最接近語根，相反的，影響語根之詞彙語意變化最小的語意範疇則遠離語根，所以衍生詞綴距離語根較近，而屈折詞綴距離語根較遠。同樣的，這些語意範疇也會依照對於語根之影響度大小，呈現出與語根溶合之不同緊密程度。

結果顯示達悟語之功能範疇與語根之間的關係雖然大致符合 Bybee 的假設：表達及物性關係（亦即焦點）的詞綴最接近語根，其次為動貌、最外緣者為情態，然而 Bybee 對於這些範疇的定義確不能完全適用於分析達悟語和一般菲律賓語言，因為在達悟語的動詞變化系統中，及物性關係和時貌情態詞綴緊密互動，所以在檢視詞綴與語根之距離關係時，無法將衍生詞綴與屈折詞綴完全分開，所以表達完成和未完成貌之焦點詞綴為“衍生”詞綴，而表達祈使和虛擬之焦點詞綴為“屈折”詞綴。

關鍵詞：時態、時貌、情態、達悟（雅美）語、形義相似關係