

LEXICAL MAPPING IN YAMI VERBS

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Abstract

This paper demonstrates that the ergative hypothesis works out for Yami, an indigenous language of Taiwan's Orchid Island, where actor voice verbs are either intransitive or antipassive while non-actor voice verbs may be transitive. Crucially, we contend that the so-called genitive voice, marked by *no* or *ni*, is in fact accusative. The account is rendered in the simplified LMT with a unified mapping principle proposed by Her (2012). The Intrinsic Classification $pt/th \rightarrow [-r]$ applies to accusative languages like English and Chinese but not to ergative languages like Yami. This minimal parameterization, plus the morphosyntactic classification of $\theta[\text{voice}] \rightarrow \theta[-r -o]$, for voice-marking languages like Yami, is sufficient to account for the basic patterns of lexical mapping in Yami verbs.

1 Introduction

A distinctive feature of the Austronesian languages of Taiwan and the Philippines is the voice system, where a verb is marked for an argument role for voice, which receives the nominative case (e.g., Kroeger 1993, Starosta 1997, Li 1997, Arka 2003, Rau and Tung 2006). Such voice markings on the verb can be divided into actor voice (AV) and non-actor voice (NAV). While there is no dispute that NAV verbs are syntactically transitive, whether AV verbs can also be transitive is controversial. In the ergative hypothesis (e.g., Starosta 1997), AV verbs are intransitive, while under the symmetrical voice hypothesis (e.g., Kroeger 1993), AV verbs can be transitive. Chang (2004), however, claims that Formosan languages are not uniform in this regard and that AV verbs are intransitive in Paiwan, Tsou, Atayal, and Kavalan but transitive in Seediq and Saisiyat.

Yami, *a.k.a.* Tao, is a language indigenous to Orchid Island, southeast of Taiwan; yet, Yami belongs to the Batanic, *a.k.a.* Bashiic, group of the northern Philippine islands and thus not the Formosan group (e.g., Li 1997, Rau and Tung 2006). In this paper we will first demonstrate that the ergative hypothesis works out for Yami and then account for the lexical mapping in Yami verbs. The paper is organized as follows. Section 2 establishes the grammatical functions encoded by the various case markers in Yami. Section 3 then describes a revised and streamlined version of LMT, proposed by Her (2009, 2012), and applies it to the argument-function mapping of Yami verbs. Some concluding remarks are given in section 4.

2 Yami Case Markers and Grammatical Functions

The most authoritative reference in the literature on Yami is Rau and Tung's (2006) dictionary and reference grammar, where four different cases are identified, as shown in Table 1.

Table 1. Rau & Tung (2006): Case Markers

	Nom	Gen	Loc	Obl
Common noun	<i>o</i>	<i>no</i>	<i>do</i>	<i>so</i>
Proper noun	<i>si</i>	<i>ni</i>	<i>ji</i>	ϕ

Under the LFG framework (e.g., Bresnan 2001, Falk 2001), it should be without controversy that the nominative case encodes the grammatical function (GF) of subject (SUBJ), the locative case, the GF $OBL_{locative}$, and the Obl case, the GF OBL_{θ} , a cover term of the oblique functions of various argument roles, e.g., $OBL_{beneficiary}$, OBL_{goal} , $OBL_{instrument}$, etc. However, the so-called 'genitive' case is rather problematic. First of all, the name 'genitive' is used simply because the two case markers *no* and *ni* are the same two forms marking possessives in the nominal phrase. However, calling it 'genitive' does not tell us anything as to what GF this case encodes. Now that we have identified SUBJ, OBL_{loc} , and OBL_{θ} in Yami, the most likely GF the genitive case may encode is OBJ. OBJ_{θ} is out as it is the most marked GF and is found only in languages with the OBJ function. SUBJ and OBL_{θ} are both unlikely candidates because they have already been represented. Thus, Deng (2004) argues that what is called GEN in fact encodes the accusative case, or the term function OBJ.

Table 2. Deng (2005): Case Markers and Grammatical Functions

	SUBJ	OBJ	OBL_{loc}	OBL_{θ}
Common noun	<i>o</i>	<i>no</i>	<i>do</i>	<i>so</i>
Proper noun	<i>si</i>	<i>ni</i>	<i>ji</i>	ϕ

The use of the possessive forms to encode a term GF is in fact not uncommon in Austronesian. In Balinese, for example, the genitive elements are terms (Wechsler and Arka 1998, Arka 2003). This classification is straightforward, as non-terms in Balinese are PP's but genitive agents are not. Deng (2005) demonstrates that genitive agents in Yami are likewise terms unlike the *do*- or *so*-marked non-terms. First of all, genitive agents in some NAV sentences may not be omitted, as in (1). (Yami has three NAVs: patient, locative, and instrument; the NAV in (1) is locative voice). Yet, *so*-marked

patients in AV sentences are optional, as in (2). This also indicates that the NAV clause in (1a) is transitive, while the AV clause in (2) is intransitive.

(1) a. *na-bakbak-an yaken ni yama*
 he-beat(LV) I(NOM) GEN father (LV = locative voice)
 ‘I am beat by father.’

b. **bakbak-an yaken*
 beat(LV) I(NOM)

(2) *ko man-bakbak (so ino).*
 I(NOM) AV-beat OBL dog
 ‘I beat (the dog).’

The second piece of evidence comes from the fact that with agent as the subject, the verbs must always be morphologically marked, as in (2), but with patient subjects, the verb may be unmarked, as in (3) (Ho 1990). This suggests that patient as subject is the basic transitive clause, where the genitive (GEN) agent is thus the object.

(3) *to ko a cita si apen Kalalanet ito*
 then I(GEN) LINK see NOM grandfather Kalalanet that
 ‘Then grandpa Kalalanet is seen by me.’

Thirdly, the AV patient marker can only be used on common nouns but not proper nouns or pronouns; in contrast, the PV (patient voice) agent maker, i.e., the genitive marker, can be used on all three types of nouns (Ho 1990). According to Hopper and Thompson (1980), the individuation of the patient could determine the transitivity of a sentence. Proper nouns and pronouns being more specific than common nouns, PV agents are thus more specific, or individuated, than AV patients, which again suggests that PV clauses are transitive. The genitive case thus encodes OBJ in a PA transitive clause.

Finally, there is a special agreement device in Yami in the form of a third-person pronoun, which agrees with a full NP counterpart later in the sentence. This agreement device, crucially, is found only when the pronoun is in the nominative or genitive case (Deng 2005, Rau and Tung 2006: 94).

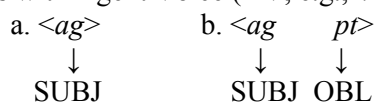
(4) a. *ni-t-om-ane k sira o kanakan*
 PAST-stand(AV) they(NOM) NOM children
 ‘The children stood up.’

b. *na-kan-en o soli ni yama.*
 he(GEN)-eat-PV NOM taro GEN father
 ‘The taro is eaten by father.’

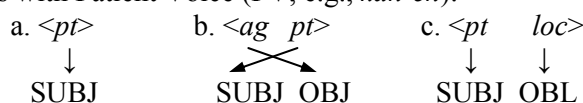
In (4a) *sira* ‘they’ agrees with the nominative *o kanakan* ‘the children’, and in (4b) *na-* ‘he’ agrees with the genitive *ni yama* ‘by father’. According to the accessibility hierarchy in Keenan and Comrie (1977), the subject and the object are the two highest functions in the hierarchy. The evidence that this agreement in Yami applies only to nominative and genitive cases, but not others, thus also suggests that the genitive case is a term GF like the nominative.

In short, the ergative hypothesis is applicable to Yami, where AV verbs are either intransitive (5a) or antipassive (5b) and NAV verbs may be transitive, as in (6)-(8). The argument-function mapping in the four voices are shown in (5)-(8), with the four respective forms of *k-om-an*, *kan-en*, *akan-an*, and *i-akan*, derived from the root *-kan* ‘eat’, as an example (Deng 2005).

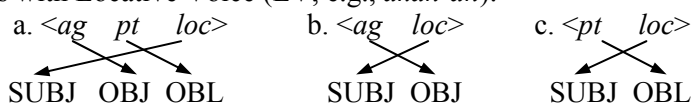
(5) Verbs with Agent Voice (AV, e.g., *k-om-an*):



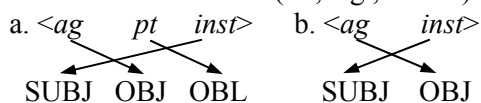
(6) Verbs with Patient Voice (PV, e.g., *kan-en*):



(7) Verbs with Locative Voice (LV, e.g., *akan-an*):



(8) Verbs with Instrument Voice (IV, e.g., *i-akan*):



The voiced role is thus to be assigned [-r -o], similar to how the Icelandic quirky case is lexically marked (cf., Zaenen and Maling 1990), to ensure mapping to SUBJ. Given the Monotonicity Condition (e.g., Brennan 2001: Chp 5), lexically marked features are preserved in syntax. Mapping principles then determine the grammatical functions of non-voiced roles. However, in the conventional formulations of the Lexical Mapping Theory (LMT), e.g., Bresnan and Zaenen (1990), Bresnan (2001), and Falk (2001), agent is [-o] intrinsically, and patient [-r] or [-o]. Such classifications, where agent is never OBJ and patient is never OBL, are too restrictive for Yami.

Also, there is an inconsistency between the mapping principle of subject roles, which in essence supplies unmarked features, and that of non-subject roles, which essentially assigns marked features. In addition, the Subject Condition and the Argument-Function Biuniqueness Condition should ideally be consequences of a unified mapping principle and not stipulated output constraints. We will therefore adopt the revised and streamlined LMT proposed in Her (2009, 2012).

3 Yami Mapping in a Revised and Simplified LMT

While OBJ[-*r* +*o*] and OBL_θ[+*r* -*o*] were previously on a par in terms of markedness, Her (2012) proposes that [-*r*] be seen as less marked than [-*o*], as only [-*r*] functions can be athematic (e.g, Bresnan 2001). The addition of (9) enables a comprehensive markedness hierarchy of argument functions, as in (10).

(9) Markedness Hierarchy of Grammatical Features (revised):

- a. [-*f*] > [+*f*] (*f* = *r/o*)
- b. [-*r*] > [-*o*]

(10) Markedness Hierarchy of Argument Functions:

$$\text{SUBJ}[-r -o] > \text{OBJ}[-r +o] > \text{OBL}_{\theta}[+r -o] > \text{OBJ}_{\theta}[+r +o]$$

For feature assignment in Yami we also propose three generalizations: 1) a parameterized option of no intrinsic assignment of features to any role (11), 2) a morphosyntactic operation assigning [-*r* +*o*] to the role selected for voice (12a), and 3) a universal default morphosyntactic operation assigning [+*r*] to all non- $\hat{\theta}$ roles (12b). We then adopt the spirit of the Unified Mapping Principle (UMP) proposed by Her (2009, 2012) to complete our account. The rephrased single declarative mapping principle we propose is given in (13), which consistently favors the least marked function and can do without the previous output constraints; thus, intuitively, arguments are mapped as high in the hierarchy as possible while maintaining uniqueness.

(11) Intrinsic Classification of Roles:

$$(pt/th \rightarrow [-r]) (\checkmark: \text{English, Chinese}; \times: \text{Yami})$$

(12) Morphosyntactic Classification of Roles (DC):

- a. ($\theta[\text{voice}] \rightarrow [-r -o]$) (\checkmark : Yami; \times : English, Chinese); otherwise,
- b. $\theta \rightarrow [+r]$, if $\theta \neq \hat{\theta}$

- (13) Unified Mapping Principle (UMP):
 Map a fully specified role θ_1 onto a compatible function F_1 ,
 and map a unspecified or underspecified role θ_2 onto the
 highest compatible function F_2 , if $F_2 \neq F_1$ and also F_2 is not the
 highest compatible function for a role higher than θ_2 .

We now present the basic argument-function mapping in the four voices
 that a Yami verb may be marked for, with illustrative examples.

- (14) Verbs with Agent Voice (AV):

a. *ko man-bakbak.*
 I(NOM) AV-beat
 'I beat.'

(I)
 <ag>
 AV [-r -o]
 DC

 SUBJ
 UMP **SUBJ**

b. *ko man-bakbak so ino.*
 I(NOM) AV-beat OBL dog
 'I beat the dog.'

(I) (dog)
 <ag pt>
 AV [-r -o]
 DC [+r]

 SUBJ OBL_θ/OBJ_θ
 UMP **SUBJ OBL_{pt}**

- (15) Verbs with Patient Voice (PV):

a. *ya ma-saray si ina.*
 YA PV-happy NOM mother
 'Mother is happy.'

(mother)
 <pt>
 PV [-r -o]
 DC

 SUBJ
 UMP **SUBJ**

b. *na-kan-en o soli ni yama.*
 he(GEN)-eat-PV NOM taro GEN father
 'The taro is eaten by father.'

(father)	(taro)
<i><ag</i>	<i>pt</i> >
PV	[-r -o]
DC	

SUBJ/OBJ/ OBL _θ /OBJ _θ	SUBJ
UMP OBJ	SUBJ

c. *ya ma-pno do yala o wakay*
 YA PV-full LOC basket NOM sweet-potato
 'The basket is full of the sweet potatoes.'

(sweet potatoes)	(basket)
<i><pt</i>	<i>loc</i> >
PV [-r -o]	
DC	[+r]

SUBJ	OBL _θ /OBJ _θ
UMP SUBJ	OBL_{loc}

(16) Verbs with Locative Voice (LV):

a. *ya ko pi-akan-an so among o pasalan ya*
 Aux I(GEN) eat(LV) OBL fish NOM shore Aux
 'This seashore is where I eat fish.'

(I)	(fish)	(seashore)
<i><ag</i>	<i>pt</i>	<i>loc</i> >
LV		[-r -o]
DC	[+r]	

SUBJ/OBJ/ OBL _θ /OBJ _θ	OBL _θ /OBJ _θ	SUBJ
UMP OBJ	OBL_{pt}	SUBJ

b. *ya ko pi-akan-an o pasalan ya*
 Aux I(GEN) eat(LV) NOM shore Aux
 'This seashore is where I eat.'

(I)	(seashore)
<i><ag</i>	<i>loc</i> >
LV	[-r -o]
DC	

SUBJ/OBJ/ OBL _θ /OBJ _θ	SUBJ
UMP OBJ	SUBJ

c. ya pi-akan-an so among o pasalan ya
 Aux eat(LV) OBL fish NOM shore Aux
 'The seashore is where fish are eaten.'

	(fish)	(seashore)
	<i><pt</i>	<i>loc></i>
LV		[-r -o]
DC	[+r]	

	OBL _θ /OBJ _θ	SUBJ
UMP	OBL_{pt}	SUBJ

(17) Verbs with Instrument Voice (IV):

a. ya ko ya-kan so among o ipangan ya
 Aux I(GEN) IV-eat OBL fish NOM knife Aux
 'I eat fish with the knife.'

	(I)	(fish)	(knife)
	<i><ag</i>	<i>pt</i>	<i>inst></i>
IV			[-r -o]
DC		[+r]	

	SUBJ/OBJ/ OBL _θ /OBJ _θ	OBL _θ /OBJ _θ	SUBJ
UMP	OBJ	OBL_{pt}	SUBJ

b. ya ko ya-kan o ipangan ya
 Aux I(GEN) IV-eat NOM knife Aux
 'I eat with the knife.'

	(I)	(knife)
	<i><ag</i>	<i>inst></i>
IV		[-r -o]
DC		

	SUBJ/OBJ/ OBL _θ /OBJ _θ	SUBJ
UMP	OBJ	SUBJ

4 Concluding Remarks

In this paper, we first offered four kinds of evidence for the OBJ function that the so-called genitive case encodes in Yami: 1) genitive agents in an NAV sentence may not be omitted, 2) PA subjects occur with unmarked verbs, suggesting the co-occurring genitive agents are objects, 3) an agreement is found between a nominative (SUBJ) or genitive pronoun and a full NP, indicating the genitive GF is a term, and 4) unlike the AV oblique

patient marker, the PV genitive agent maker can be used on all types of nouns, suggesting its objecthood.

We then adopted Her's (2009, 2012) revised, simplified lexical mapping theory to account for the argument-function mapping in Yami verbs. With a minimal parameterization of the intrinsic classification of argument roles, i.e., $pt/th \rightarrow [-r]$ does not apply to ergative languages like Yami, and a morphosyntactic classification, i.e., $\theta \rightarrow [-r -o]$, if θ is marked for voice, we are able to derive all lexical mappings in the four different voices. The simplified LMT proposed in Her (2009, 2012) is thus shown to be applicable to accusative languages like English and Chinese as well as ergative languages like Yami.

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