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Nominal and Adjectival Predication

in Yoreme/Mayo of Sonora and Sinaloa

TESIS

Que para optar por el grado de

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presenta

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CONTENTS

To my family:

    My father, whose air of wisdom can be seen through his eyes.

    My mother, whose flow of emotions surrounds her heart.

    My brother, whose silence is rock solid and whose serenity calms me down wordlessly.

    And my sisters, whose hearts' fire sheds light into my life

I love you all,

Melina

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ABBREVIATIONS

O	zero copula
1	first person
2	second person
3	third person
A	adjective
ACC	accusative
ADJR	adjectivizer
ADV	adverb
AGT	agentive
ART	article
ABS	absolutive
AN	animate
AUX	auxiliary
CAUS	causative
CLASS	classifier
COP	copula
COM	comitative
COMP	complementizer
CONF	confirmation particle
CONJ	conjunction
CP	

	completive
DAT	dative
DECL	declarative
DEF	definite
DET	determinate
DEM	demonstrative
DIM	diminutive
DIR	direccional
DUR	durative
EMPH	emphatic
EV	echo vowel
FEM	feminine
FUT	future
GEN	genitive
GND	gerundial
H	nucleus
HUM	human gender
IN	inanimate
INC	inceptive/inchoactive
INDEF	indefinite
INDIC	indicative
INESS	inessive case

INSTR	instrumental
INTEN	intention
INTERR	interrogative
INTR	intransitive
IMPERF	imperfective
IRR	irrealis
L	locative phrase
LOC	locative
MASC	masculine
N	noun
NEG	negative
NEUTR	neutral
-NONPAST	non-past
NOM	nominative
NOMNL	nominalization
NPS	non-possessed
NUM	numeral
OBJ	object
P	proform
PAST	past
PART	particle
PCN	past-continuative

PERF	perfective
PERS	person marking
PL	plural
PRED.CASE	plural predicative case
PRES	present
PREP	preposition
PROG	progressive
PRSUP	presupposition
POSS	possessive construction
POSP	postposition
QUANT	quantifier
QUOT	quotative
REAL	realis
RED	reduplicated base
REF.PART	referent particle
REFL	reflexive
STAT	stative
SUBJ	subject
SG	singular
T	theme
TOP	topic
TNS	tense-marker

UNDET	undeterminate
V	verb
VAL	validator
VERBLZR	verbalizer

INTRODUCTION

Research in non-verbal predication has been done both in formal linguistics (Doron 1983; Carnie 1996; Turunen 2009; 2010, Roy 2006, among others) and in functional-typological linguistics (Hengeveld 1992; Stassen 1997; Wetzer 1996, etcetera). Theoretical groundwork published on the subject by Hengeveld (1992), Wetzer (1996) and Stassen (1997) defines a non-verbal predication as a construction where the predicate is not a verb. The predicate may refer to a property (A), to a class (N) or to a location. Adjectival predicates express a semantic relation of *property* by attributing a certain property or characteristic to their subjects while nominal predicates designate *membership* of a class and consider that their subject is a member of that class (Stassen 1997:13). Nominal predicates are characterized by the fact that they may only express social properties and tend to be accompanied by a copula such as English *to be*. A copula is defined as a semantically empty device that functions as an 'abstract linking morpheme' (Stassen 1997:65). The presence of copulas is also observed in adjectival predications of many languages in the world. Adjectival predicates do not have an encoding strategy of their own (Stassen 1997), and tend to take over the encoding strategy of another type of predicate construction. Research has shown that the most commonly borrowed strategies for adjectival predications are from nominal and verbal predicate encoding strategies. This is known as *nominal* or *verbal takeover* respectively (Stassen 1997).

Nominal and adjectival predication in Yoreme/Mayo of Sonora and Sinaloa, a member of the Uto-Aztecan language family (§1.2) and spoken in Northwestern Mexico borrow or *take over* the encoding strategy of another grammatical category in the

language. The purpose of this work is to account for the way in which these two types of intransitive predications in Yoreme/Mayo of Sonora and Sinaloa are constructed, to determine which is the distribution of the encoding strategies observed in the data of both nominal and adjectival predications, and to study the function of copulas or copula-like items in these constructions.

Corpus

The data collected for this work was obtained during three periods of linguistic fieldwork in Las Culebras, Guasave, Sinaloa, Mexico (2010 – 2012). In addition, data was elicited from a native speaker of the language residing in Hermosillo, Sonora from April 2010 to May 2011. Hence, data pertaining to two linguistic varieties of Yoreme/Mayo -- Yoreme/Mayo of Sonora and Yoreme/Mayo of Sinaloa -- were taken into account for the purposes of this thesis. However, both the objectives and intention of the work as well as the examples of nominal and adjectival predications given throughout the analysis are not sufficient to assert that these two varieties are morphosyntactically distinct.

Moreover, comparative studies pertaining to linguistic data from the mountainous region of Northeastern Sinaloa, the tropical savanna of the coast and the valley that gives way to the desert must also be carried out for Yoreme/Mayo in an attempt to determine the degree of linguistic variation, dialectological differences and morphosyntactic distinction of the language throughout Sinaloa. In this thesis, only data from the coast was elicited and documented. Nonetheless, data from both the Northeastern Mountains of

Sinaloa and the valley should also be included in further research regarding the description and documentation of Yoreme/Mayo.

Comparative studies in regard to the morphosyntactic structures of non-verbal predication and other linguistic topics of research between Yaqui and Yoreme/Mayo are also necessary. In this thesis, the works of scholars such as Dedrick and Casad (1999), Alvarez and Martínez Fabián (2005) and Alvarez Gonzalez (2007) were cited for examples from Yaqui; however, the study of the morphosyntactic differences of these two languages requires further research. Data of other sources will also be used when relevant; such sources include Collard and Collard (1962), Freeze (1989), De Wolf (1997) and Almada Leyva (1993; 1999).

Why non-verbal predication and yoreme/mayo?

Scholars in Uto-Aztecan languages tend to refer to Yoreme/Mayo simply as Mayo and consider that members of this indigenous group are part of a group with the same name. However, in this thesis I will digress slightly from this denomination and add the term *yoreme* due to the fact that even though the Mayo accept this term and identify themselves as Mayos, the term they prefer to denominate themselves with is Yoreme. Sonora and Sinaloa are included in the name because data from both Northwestern states of Mexico was included in the study.

The topic for this work was originally selected by studying the recorded data of Yoreme/Mayo of Sonora that the scholar Jeff Burnham facilitated to the Department of Linguistics at the University of Sonora at the end of his research stay in the Department.

Nonetheless, it is important to clarify that transcribed examples from these recordings were not included in our analysis. Comparative data between Yoreme/Mayo and Yaqui is included in our analysis when relevant for the purposes of this thesis but such a comparison is minimum and is not a part of the main objectives of this work.

Organization of the thesis

This thesis is organized as follows: Chapter 1 describes the ethnographic and sociolinguistic context of the Yoreme/Mayo and mentions some of the most important aspects of their culture. Moreover, it introduces the reader to some of the features of their language and its typological characteristics as well as giving a brief account of previous research done in the language. Chapter 2 presents the theoretical framework on which the analysis is based on and defines the phenomenon of interest. In addition, it introduces nominal and adjectival predication by describing how these phenomena may be found in other languages of the world. Finally, it addresses the importance of copulas in this type of constructions. Chapter 3 is the core of this thesis as it describes nominal and adjectival predication in Yoreme/Mayo. This chapter is divided into three subsections, the first of which attempts to define both nouns and adjectives as recognized parts-of-speech of the language. The following subsections concentrate on the description of nominal and adjectival predication respectively, and are followed by the conclusions of the analysis.

CAPÍTULO 1

Los Mayo y su Lengua

Este capítulo describe el contexto etnográfico y sociolingüístico de los Mayo, un grupo étnico del noroeste de México autodenominado Yoreme, y menciona algunos de los aspectos más importantes de su cultura. Posteriormente, se presentan algunas características tipológicas relevantes de la lengua mayo para el estudio de la predicación no-verbal en esta lengua y, por último, se describen brevemente los trabajos lingüísticos de investigación que se han llevado a cabo hasta la fecha sobre lengua mayo.

CHAPTER 1

The yoreme/mayo and their language

1.1 Ethnographic and Sociolinguistic Context

1.1.1 Geographic Location of the Yoreme/Mayo

The current region of Northwestern Mexico is comprised of the modern states of Sonora, Sinaloa, both Northern and Southern Baja California and Nayarit. In this area, four

physiographic zones are found: (i) the desert in Baja California and Western Sonora; (ii) the mountains in Northeastern Sonora, Southern Sinaloa and in Nayarit; (iii) the tropical savanna in the coast of Sinaloa and (iv) the areas in which the savanna changes into the desert (Ortega 1980). The Seri, Pericu, Gaicura and Cochimi aboriginal tribes inhabited the desert of Baja California, Sonora and Northern Sinaloa at the time of the Spanish Conquest. The first spoke Seri, a language isolate while the Pericu, Gaicura and Cochimi spoke languages classified today as members of the Hokan linguistic family. These groups lived as gatherers and fishermen. The Papago, Pima and Cahita groups, also living in the desert, practiced agriculture, hunting and fishing. Their languages were Uto-Aztecan. These last three groups have survived until this day. The mountains were mostly inhabited by Uto-Aztecan groups such as the Opata, Chinipa, Tarahumara and Guarijio though not all ethnic groups of this zone have survived until today. These groups practiced agriculture through irrigation and became isolated from other human settlements by natural resources (Ortega 1980). In the transition zone between the desert and the tropical savanna lived several Cahitan groups among them the Yoreme/Mayo, Zuaques, Ocoroni, Sinaloas, and others. Today, only the Yoreme/Mayo and Yaqui have survived. They practiced agriculture, gathering and fishing. The Tahue and Totorame lived in the mountainous region between the Cañas and Mocorito Rivers (Ortega 1980). The geographic location of these groups can be seen more accurately in Figure 1:

1.- Pápago
2.- Pima alto
3.- Opata
4.- Pima bajo
5.- Jova
6.- Seri
7.- Cahita
8.- Chínipa
9.- Guasave
10.- Tahue
11.- Totorame
12.- Pericú
13.- Guaicura
14.- Cochimí

Figure 1. Geographic location of the main indigenous groups of Northwestern Mexico at the time of the Spanish Conquest (Ortega 1980).

According to this map, the Yoreme/Mayo and other Cahitan groups inhabited the area that is now the modern states of Sonora and Sinaloa. The geographic location of surviving indigenous groups in Northwestern Mexico and their languages can be seen in (§1.2.1). According to the census of 2010 perfomed by INEGI (Instituto Nacional de Estadística, Geografía e Informatica) the number of speakers of an indigenous language in Sinaloa is 23, 426; representing an approximate 1% of the state's population. The most commonly spoken languages in this state are Yoreme/Mayo and Nahuatl. The number of people who are monolingual in either one of these languages amounts to 94, which in turn

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represent less than 1% of the population in Sinaloa. Statistically, of 100 people who speak an indigenous language in this state 47 of them speak Yoreme/Mayo. In Sonora, the number of aboriginal language speakers increases to 60, 310 people. That is, an approximate 2% of the total population. Here, the most commonly spoken languages are Yoreme/Mayo and Yaqui (INEGI 2010).

The number of monolingual speakers of Yoreme/Mayo has suffered a severe reduction in the last ten years. In 2000, a 0.7% of Mexico's indigenous population spoke Yoreme/Mayo whereas in 2005 the number reduced to 0.2%. This suggests that new generations have started to replace Yoreme/Mayo with Spanish as their native language at an alarming rate; however, in the census of 2010, this number shows an increase from 0.2% to 0.3% of speakers which may be an indicator of the recent efforts made to create consciousness in the population concerning the imminent loss of the language in the region. These numbers should be considered with caution though because the only criterion on which they are based on is the linguistic one, and there are instances where members of the group do not speak the language at all yet identify themselves as Yoreme/Mayo. Moreover, the census also shows an increasing number of both Maya and Triqui speakers in Sonora and Sinaloa. The presence of these groups in the territory of the Yoreme/Mayo, however, is primarily due to migration factors such as better employment opportunities in the area. By 2005, however, the numbers reduced significantly as speakers of these languages returned to their places of origin (Moctezuma and Cifuentes 2012).

1.1.2 Social Organization of the Yoreme/Mayo

The identity of the Yoreme/Mayo is based on two fundamental aspects: the ceremonial ritual and their language (Crunrine 1968). Their social organization is based on the hierarchy of the *oficios* that participate in the ritual, which are organized in turn according to the Holy Trinity. One of the most important *oficios* is that of the *fiestero*, who is responsible for the preparations and arrangements needed for every ritual performed. The highest position within this *oficio* is that of the *alferez mayor*, who represents all of the fiesteros and determines what is to be done to prepare every ritual; he also administers the money spent on the preparations and is the one who carries the flag during a procession if the celebration requires it. He represents the Father.

The *parinas* take care of the flag by washing and ironing it when necessary; the *parina mayor* helps the *alferez mayor* gather the money for the celebration. The parinas represent the Holy Ghost. The *alawassim* hire the musicians, pascolas and other dancers; they also take care of the necessities that they may have during the celebration. The *alawassim mayor* represents the Son. Each group of fiesteros is lead by a *kubasleero*, whose function is to mark the pace of the celebration with a drum (Moctezuma and Aceves 2007).

Another institution that represents the social structure of the Yoreme/Mayo is the *kohtumbre*. Its most important function is to characterize the Passion of Christ by organizing the celebrations held during Lent. One of the most prominent figures in this group is the *fariseos* (Moctezuma and López Aceves 2007). Other important figures are the *three Josephs* and *three Marys*. The *matachines* are the soldiers of the Virgin Mary

and participate in festivities such as that of the Holy Trinity. They, too, have a hierarchical order: the *monaha yo'owe*, the *alawassim* and the dancers. The Dance of the Matachines – Matachiín Yiwame – represents a guard of honor for a saint at a given celebration or ritual. This dance was introduced into the traditions of the group by the evangelists who arrived with the Spanish Conquest (Beaumont Pfeifer).

The oficios are themselves led by a governor, whose main function is to represent the group in social affairs and to work to preserve their traditions. The governor is also known as *kobanaro*, and he is considered a defender of his people against those who scorn their traditions or intend to eradicate them by imposing other beliefs in the community. Currently, the governor functions as a link between the government and the community he represents.

Traditionally speaking, the *kobanaro* was inferior to the *kobba yo'owe*, the eldest member of the tribe, who had attained a great deal of respect in the group. The Council of Elders, superior to the *kobba yo'owe*, consisted of seven or eight members who represented the group, and the *jiteberi*, also known as the traditional medicine-man or wise man, occupied an intermediate position between the Cosmos, Nature and Men. The most important knowledge that a *jiteberi* may attain is that of Nature (Fieldwork 2010).

1.1.3 Economy and Working Trades

The Yoreme/Mayo traditionally practice agriculture, raise cattle or become fishermen. Given the layout of the region, the most lucrative activity is the production of maize, tomatoes, cotton, wheat, potatoes, sesame seeds, and safflower, followed by the raising of

cattle or pigs. Herding commonly occurs in areas that were once covered in shrubs and small vegetation while the breeding of smaller species, such as goats or chickens is primarily for domestic use. Fishing has become a third source of income for this group in the form of the capture and exploitation of aquatic species such as shrimp, several species of fish and shark, stingray, and to a lesser extent marine turtles. Nonetheless, this economic activity is less prolific given the year-round bans concerning the extraction of certain species from the ocean as well as the amount of existing competition (Moctezuma and Aceves 2007).

1.1.4 Religion and Cosmogony

One of the most important religious symbols for the Yoreme/Mayo is the Cross. According to their traditions, it represents the *naiki takawa* or the four points of the Sun, which are an allusion to the fact that it does not set or rise from the same place in the skies. The four points are: (i) *ba$^/$a ania yowe* 'water'; (ii) *buiyya ania yowe* 'earth'; (iii) *jekka ania yowe* 'air', and (iv) *machira ania yowe* 'fire'. The Festivity of the Saint Cross or *Santa Kurusta Paskota* celebrates this belief.

Lent is one of the most important religious festivities of the group and it begins when the fariseos, on the first Friday of Lent, appear on the streets in an act of initiating the ritual; they are distinguished by the fact that they wear a blanket that covers their torso, tenabaris (cocoons) on their calves, and a mask made out of goat skin. While wearing the mask, they are sworn to silence and thus communicate by means of hitting their drums or by making signs. In the ritual, they represent the Jews and their task is to

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capture Jesus Christ and to take him to the Calvary; this is symbolically done every Friday of Lent with the contis, a procession around the church in which thirteen crosses represent the way to the Calvary. Jesus Christ is protected by the children, who, known as the three Josephs or three Marys, purify the act by throwing flowers to the figure representing the Christ and thus keep the fariseos at bay. The ritual lasts several weeks, and it ends when the Jews burn their masks as a symbol of purification and rebirth as entities of darkness for next year's celebration (Moctezuma and López Aceves 2007).

1.2 The Yoreme/Mayo language

1.2.1 Geographical Location and Genetic Affiliation

Yoreme/Mayo of Sonora and Sinaloa is a member of the Uto-Aztecan language family, which extends from Southern California in the United States to the Northwestern states as well as Central Mexico. It is the most widespread language family in America. Yoreme/Mayo, which is spoken in Southern Sonora and Northern Sinaloa belongs to the Taracahitan branch of the Uto-Aztecan languages of Sonora (Miller 1984); in this branch, we may also find Yaqui, whose intelligibility with Yoreme/Mayo reaches up to 90 percent, and Tehueco, a now extinct sister language.
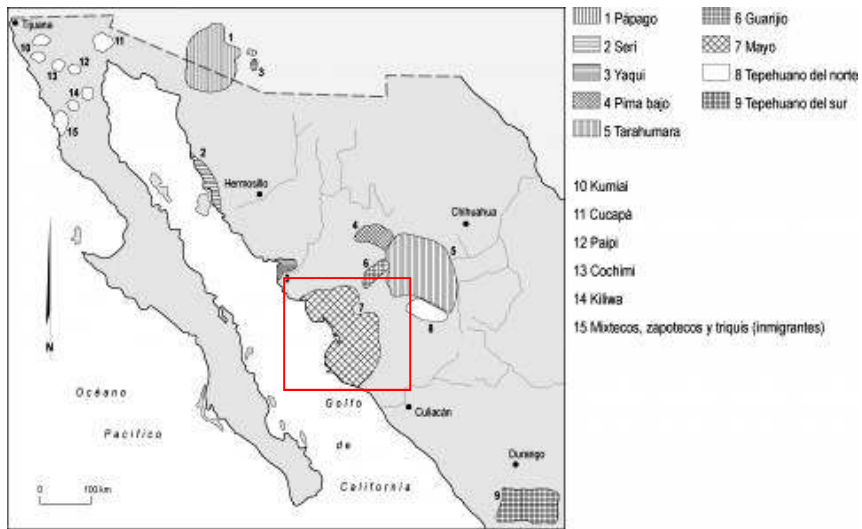
Figure 2. Geographic location of Uto-Aztecan languages (Moctezuma 1991).

1. Numic
   a. Western Numic: Mono, Northern Paiute (or Paviotso)
   b. Central Numic: Panamint, Shoshoni, Comanche
   c. Southern Numic: Kawaiisu, Ute (Chemehuevi, Southern Paiute, Ute)
2. Tubatulabal
3. Takic
   a. Serrano-Gabrielino
      (1) Serranan: Serrano, Kitanemuk
      (2) Gabrielino (Gabrielino, Fernandino)
   b. Cupan
      (1) Cupeño, Cahuilla
      (2) Luiseño
4. Hopi
5. Southern Uto-Aztecan
   A. Sonoran
      a. Tepiman: Upper Piman (Papago, Pima, Nevome), Lower Piman, Northern Tepehuan, Southern Tepehuan (Southern Tepehuan, Tepecano)
      b. Taracahitian
         (1) Tarahumaran
            (a) Tarahumara (Eastern Tarahumara, Western Tarahumara, Southern Tarahumara)
            (b) Guarijío (Highland Guarijío, Lowland Guarijío)
         (2) Opatan: Opata, Eudeve, Jova?
         (3) Cahíta (Mayo, Yaqui)
      c. Tubar
      d. Corachol: Cora, Huichol
   B. Aztecan
      a. Pochutec
      b. General Aztec: Pipil, Aztec (Classical Aztec, Tetelcingo, Zacapoaxtla, and others)

Figure 3. Uto-Aztecan family tree (Miller 1984).

Nonetheless, there are several problems with this classification: (i) the direct linguistic data on which it is based on is relatively poor and skimpy and (ii) the criteria pertinent to the division of branches and sub-branches are based primarily on comments of early missionaries, place names and cultural identity or similarity. However, language identity does not always correlate with cultural similarity (Miller 1983). Moreover, languages within the Taracahitan sub-branch have shown that both Tarahumara and Guarijio are more conservative languages than Yaqui and Yoreme/Mayo (Dakin 2004), a fact that has

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caused further disagreement and aroused differences of opinion between scholars concerning this classification. Hence, the division of the Taracahitan sub-branch of Sonoran Uto-Aztecan languages into two independent sub-branches was proposed by Dakin (2004):

```
(yutonahua norteña)
    1.  númicas
            1.  númico occidental: mono, payute norteño
            2.  númico central: tümpisha shoshone (Panamint), shoshone, gosyute,
                comanche
            3.  númico sureño: kawaiisu, chemehuevi, payute sureño, yute
    2.  táquicas
            1.  cupana: cahuilla, cupeño, luiseño
            2.  serrano: gabrielino-fernandeño
    3.  tübatulabal
    4.  hopi
(yutonahua sureña)
    1.  tepimanas
            1.  pima – tohono o'otam (pápago)
            2.  pima bajo o névome (extinto)
            3.  pima bajo o de la montaña
    2.  ópata-eudeve
            1.  ópata
            2.  eudeve
    3.  tarahumara-guarijio
            1.  tarahumara
            2.  guarijio
    4.  tubar
    5.  yaqui-mayo
            1.  yaqui
            2.  tehueco (extinto)
            3.  mayo
    6.  corachol-náhuatl
            1.  corachol
                    1.  cora
                    2.  huichol
            2.  náhuatl
```

Figure 4. Classification of Uto-Aztecan languages (Dakin 2004).

1.2.2 Phonology

1.2.2.1 Consonants

According to De Wolf (1997) the sound system of Yoreme/Mayo of Sonora and Sinaloa consists of 28 phonemes, 18 of which are consonants and 10 vowels (Table 1.1):

	Labial	**Coronal**		**Dorsal**	**Glottal**
	Bilabial	Dental	Alveopalatal	Velar	
Nasals	m	n			
Stops	p b bʷ	t (d)	Č	k (g)	ǀ
Fricatives	(f)	s			h
Lateral Approximant		l			
Multiple Trill		(ρ))			
Simple Trill		r			
Glides	w		Y		

Table 1.1. Consonants of Yoreme/Mayo of Sonora and Sinaloa (Paul de Wolf 1997).

	Labial	**Coronal**		**Dorsal**	**Glottal**
	Bilabial	Dental	Alveopalatal	Velar	
Nasals	m	n			
Stops	p bʷ	t	Č	k	ǀ
Fricatives	B	s			h
Lateral Approximant		l			
Multiple Trill					
Simple Trill		r			
Glides	w		Y		

Table 1.2. Consonants of Yoreme/Mayo of Sonora and Sinaloa (Freeze 1989).

Table 1.1 (De Wolf 1997) shows slight differences with Table 1.2 (Freeze 1989). These include (i) the presence of the bilabial fricative (B) instead of the bilabial stop (b), and (ii)

the absence of phonemes borrowed from Spanish such as the voiceless labiodental fricative (f), the voiced alveolar stop (d) and the voiced velar stop (g). Moreover, no multiple trill (ρ)) is registered by Freeze (1989). The position of the phoneme (bʷ) has been reevaluated by scholars and reclassified as a possible labiovelar phoneme. Burnham (1984) differs from the above in the presence of the voiceless velar fricative (x). Furthermore, he adds that the fricative glottal (h) may sometimes appear as its allophone. Table 1.3 includes the voiceless labiodental fricative (f), the voiced alveolar stop (d) and the voiced velar stop (g) as well as the multiple trill (ρ)):

	Labial	Coronal		Dorsal	Glottal
	Bilabial	Dental	Alveopalatal	Velar	
Nasals	m	n			
Stops	p b bʷ	t (d)	Č	k (g)	ǀ
Fricatives	(f)	s		x	(h)
Lateral Approximant		l			
Multiple Trill		(ρ))			
Simple Trill		r			
Glides	w		Y		

Table 1.3. Consonants of Yoreme/Mayo of Sonora and Sinaloa (Burnham 1984).

These phonemes are found in the following positions:

p	paapa 'potato' baapuhtia 'spray' tepput 'flea'

t	teeni 'mouth' wiikit 'bird' batwe 'river' matta 'metate'

č	čukte 'to cut oneself'
	eˈeča 'to sow'
	bičča 'to see'

k	kawwi 'mountain'
	chukuri 'black'
	yepsak 'to come'
	xikkaxa 'to hear'

| ˈ | aˈapo 'he' |
| | moˈoberi 'hat' |

b	baawe 'ocean'
	habi 'uncle'
	habbe 'who?'

| d | Diosemchiania(bo) 'God is coming to help you' |

| bʷ | bʷeˈuru 'big' |
| | juˈbʷa 'young' |

| f | fruuta 'fruit' |
| | kafée 'brown' |

s	siaari 'green'
	kuupis 'the species of an ant'
	missi 'cat'
	ˈasoa 'son' (a woman's son)

| h | hammut 'woman' |
| | bahi 'three' |

m	maala 'daughter' (a man's daughter)
	mamni 'five'
	kabaim 'horses'
	hammut 'woman'

n	naabo 'nopal'
	hačin 'how?'
	aˈane 'to be at'
	uˈnna 'a lot'

l	lipti 'blind'
	kiičul 'cricket'
	uuli 'rubber'
	alleiya 'happy'

ρ)	ρ)osaariam 'rosary' aaρ)pa 'harp'

ρ	ρ˺oi 'limp' ta˺aρ˺uk 'to loose'

w	wakasi 'cow' tawaachi 'tlacuache' sawwe 'leaves' saw 'behind'

y	yepsa 'to come' weyye 'to walk' kuttay 'with a stick' eeye 'ant'

The consonants found at a final word position are: /m, n, č, t, k, l, ,s, w, y/. In an initial word position we find /p, t, č, k, ˺, b, d, bʷ, f, s, h, m, n, l, ρ), ρ˺, w, y/; and in medial position we can find both simple and geminated consonants. The first may be: /p, t, č, k, ˺, b, bʷ, f, s, h, m, n, l, ρ), ρ˺, w, y/ while the second are: /p, t, č, k, ˺, b, bʷ, s, h, m, n, l, w, y/ (De Wolf 1997).

1.2.2.2 Vowels

Yoreme/Mayo has five vowels and distinguishes between vowel length and rearticulated vowels. Hence its phonological system differentiates 15 vowels:

Short		Long	
i u e o a		ii uu ee oo aa	

Rearticulated	
i˺i u˺u e˺e o˺o a˺a	

Table 1.4. Vowel Chart for Yoreme/Mayo of Sonora and Sinaloa.

Short and rearticulated vowels appear in an initial, medial and final word position while long vowels appear both in an intial and medial position; the exception is the long anterior vowel /ii/, which is only found in medial position:

a	abari 'corn'; tassi 'ixtle'; bʷiika 'to sing'
e	empo 'you'; tewa 'name'; pipeiʼike 'to milk'
i	ilitči 'little'; wakia 'dry'; teeni 'mouth'
o	otia 'bone'; kobba 'head'; baʼaso 'blood'
u	ukaa 'that' juppa 'skunk'; siiku 'navel'

aa	aače 'to laugh; maachil 'scorpion';
ee	eeye 'ant' teebe 'long';
ii	miiki 'gift'
oo	joowa 'to do'
uu	uusi 'boy'

aʼa	aʼapo 'he'; baʼaso 'blood'; taʼa 'sun', waʼa 'other'
eʼe	meʼeča 'moon' eʼe 'no' seʼe 'sand'
iʼi	iʼime 'this' pipeiʼike 'to milk'; imiʼi 'here'
oʼo	oʼola 'old' čoʼoki 'star'; joʼo 'back''
uʼu	ujuʼu 'babysit' yuʼuni 'a lot

The contrast between long and short vowels can be seen in the following examples (De Wolf 1997: 71):

31

a/aa	ˈane ˈeli 'so'
	a ˈane 'to be at'

e/ee	hekka 'shadow'
	heeka 'wind'

i/ii	miko ˈori 'left'
	miiki 'gift'

o/oo	konila 'around'
	kooni 'raven'

u/uu	hurukte 'to drown'
	húuri 'badger'

Contrasts between short vowels and rearticulated ones can be seen in the following

examples:

a/aˈa	bachia 'seed'
	ba ˈachia 'pitcher of water'

e/eˈe	eria 'to think about'
	e ˈeria 'to put away'

i/iˈi	jikachi 'arriba'
	ji ˈika 'coser'

o/oˈo	beroktia 'thunder'
	bero ˈobua 'to lick'

u/uˈu	ju 'him/her'
	ju ˈu 'that'

Similar contrasts can be observed between long and rearticulated vowels:

aa/aˈa	chaaye 'to scream'
	cha ˈaye 'to hang' 'to tie up'

ee/eˈe	seewa 'flower'
	se ˈe 'sand'

ii/iˈi	biitia 'to grind'
	bi ˈiitia 'to wrap'

| oo/oˈo | chookola 'very thin'
 choˈokora 'salty' |

| uu/uˈu | muumu 'bee'
 muˈu 'owl' |

1.2.3 Typological Characteristics

1.2.3.1 Classification

The morphological classification of the world's languages distinguishes three types: (1) isolating, (2) agglutinative and (3) inflectional languages. An ***isolating*** language is characterized by the fact that each word consists of a single morpheme. Thus, there is a clear correspondence between the form and meaning of that morpheme. In these languages, there is no variation of morphological case markers on the noun or TAM markers on the verb. The words of an ***agglutinative*** language, on the other hand, consist of several morphemes that are clearly distinguished within the word itself. That is, the meaning of each morpheme of a word is distinctively clear. Moreover, a morpheme may have an invariable form so that its phonetic identification is relatively easy. Finally, in an ***inflectional*** language there is no distinction or delimitation between morphemes. The main characteristic of this type of language is that the codification or expression of different grammatical categories in a word is fused into a single morpheme that cannot be segmented. This is known as a portmanteau morpheme. In addition, the fused morpheme tends to have a phonetically varying form.

How is Yoreme/Mayo of Sonora and Sinaloa classified accordingly? The most common morphological process in this language is suffixation. These morphemes, for

their part, tend to express grammatical categories such as number, tense, aspect or mood; verbal suffixes are classified into five positional types that Paul de Wolf denominates I, II, III, IV and V (1997:101) while nominal morphemes are inflectional affixes. The form of the two types of morphemes has little or no variation:

(1) Yoreme/Mayo of Sonora

    a. in   čuˈu   muuku-k   (Almada Leyva 1993: 24)

      1SG.GEN   dog   to die-PAST

     'My dog died'

    b. aˈapo   ˈaˈasim-tua-k   (De Wolf 1997:104)

      3SG.SUBJ   3SG.OBJgo-CAUS-PAST

     'He/She said goodbye to him/her'

    c. aˈapo   hiˈibʷa-taite-k   (De Wolf 1997:125)

      3SG.SUBJ   to eat-INC-PAST

     'He started to eat'

    d. xu-me   yoreme-m   kaa   allee-taiti-nake   (De Wolf 1997: 126)

      DET-PL   man-PL   NEG   to be happy-INC-FUT

     'The men will not be happy'

e. xu   ili   xammut   paan-im   nenka   (Almada Leyva 1993: 45)

DET.SG   DIM   woman   bread-PL   to sell

'The girl is selling bread'

In (1d) both the subject and determiner agree in number; the same is true for (1e), where the nominal phrase is singular. The plural marker is -m/-im. Present tense, on the other hand, is the morphologically unmarked form in the language while the past and future tenses are distinguished by the suffixes -k (1a); (1c) and -nake (1d). If we compare these examples with others of the same kind it will be possible to make this distinction clearly. Verbal markers for aspect are found in examples (1c) where the inchoative marker denotes that the action is just starting to take place. Finally, the causative -tua in (1b) is a valence-changing marker that adds a causative agent to the clause. Hence, from these examples, it is possible to conclude that Yoreme/Mayo is a predominantly agglutinative language.

1.2.3.2 Marking: head or dependent?

Nichols (1986) distinguishes (i) head-marking and (ii) dependent-marking languages. This classification is based on the fact that phrases, clauses and complex sentences are hierarchically organized grammatical units whose constituents consist of elements that may function as a nucleus and elements that function as their dependents. This classification is based on two key concepts: (i) nucleus and (ii) morphological marker,

and the relationships of dependency may be morphologically marked on the nucleus or on the dependent. A nucleus is the word that determines the syntactic classification and distribution of the entire constituent while the morphological marker, on the other hand, may be an affix or any other morphological mechanism that determines the presence of the dependent constituent. Nichols (1986) distinguishes two ways to differentiate these syntactic relations: (i) affixes may index certain properties of the nucleus or dependent element on the other element or (ii) indicate the presence of a syntactic relation by codifying it directly. The morphological markers may be found on the nucleus, on the dependent, on both or on none. If they are found on the nucleus then the studied language is a head-marking language but if they are found on the dependent then the relations expressed in the language are marked in the dependent element. A language is a double-marking language if the syntactic relations of its constituents are marked both on the nucleus and on the dependent.

To determine if Yoreme/Mayo of Sonora and Sinaloa is a head-marking or dependent-marking language, we will analyze three types of syntactic constructions: phrases, clauses and simple sentences. At the phrase level, there are at least three types of syntactic relations cross-linguistically significant that serve as a basis of comparison: (i) the possessive construction, (ii) the attributive construction and (iii) the appositional construction.

The marking patterns for a possessive phrase are:

DEPENDENT MARKING: $Noun_1 + {}^{M}GEN \quad {}^{H}Noun_2$

HEAD-MARKING: $Noun_1 \quad {}^{H}Noun_2 + {}^{M}Pronominal\ Affix_{N1}$

In Yoreme/Mayo, this type of construction is:

(2) Yoreme/Mayo of Sonora   (Almada Leyva 1993)

    a. in   atčay-ta   kabbay

      1SG.GEN   father-GEN   horse

     'My father's horse'

    b. Mikkel-ta   kaari

      Miguel-GEN   house

     'Miguel's house'

In these examples we can see that the genitive marker -ta adheres to the element that denotes the possessor, and according to the patterns proposed by Nichols (1986) if an affix adheres to the possessor noun phrase then that noun phrase is the dependent element of the possessive phrase while the possessed item functions as the nucleus.

An attributive phrase, on the other hand, has the following marking patterns:

DEPENDENT MARKING: Adjective + ^{M}AFF$_N$ ^{H}Noun

HEAD-MARKING: Adjective + ^{H}Noun ^{M}AFF$_N$

In Yoreme/Mayo, an attributive construction is:

    (3) Yoreme/Mayo of Sinaloa   (Fieldwork 2010)

      a. may   bette   tetta

        very   heavy   rock

        'The heavy rock'

b. may   bweuru   wiikit

   very   big   bird

  'The big bird'

In these examples the attributive adjective agrees in number with the noun that it modifies; hence, it also shows a dependent-marking pattern. An appositional phrase has the following marking patterns:

DEPENDENT MARKING: Noun + ^{M}Case ^{H}Adposition

HEAD MARKING: Noun + ^{H}Adposition ^{M}AFF$_{N}$

Some examples in Yoreme/Mayo are:

(4) Yoreme/Mayo of Sonora

   a. xu   kukku sebo$^{|}$ora   kutta-po   muuku-k   (Almada Leyva 1993:25)

     DET.SG   cicada   stick-LOC   to die-PERF

    'The cicada died on the stick'

   b. kutta-y $^{|}$a$^{|}$a   beeba-k   (De Wolf 1997: 71)

     stick-INST   3SG.OBJ   to hit-PAST

    'He hit him with a stick'

   c. a$^{|}$apo $^{|}$a$^{|}$a-mek   yepsa-k   (De Wolf 1997:72)

     3SG.SUBJ   3SG.OBJ-COM   to come-PAST

    'He/she came with him/her'

In these examples, the morphological marker adheres to the noun while the apposition functions as the nucleus. In Yoreme/Mayo, the three examples denote a different nominal case, which, in turn, are oblique.

At the clause level, the marking patterns are:

DEPENDENT MARKING:

$$\text{Noun} + {}^{M}\text{Case} \quad \text{Noun} + {}^{M}\text{Case} \quad \text{Noun} + {}^{M}\text{Case} \ + {}^{H}\text{Verb}$$

HEAD MARKING:

$$\text{Noun}_1 \quad \text{Noun}_2 \quad \text{Noun}_3 \ + {}^{H}\text{Verb} \quad {}^{M}\text{AFF}_{N1} + \quad {}^{M}\text{AFF}_{N2} + {}^{M}\text{AFF}_{N3}$$

In Yoreme/Mayo, the clause follows a dependent-marking pattern:

(5) Yoreme/Mayo of Sonora   (Almada Leyva 1993)

  a. Juan-O   banko-ta joowa

   John.NOM stool-ACC to do

   'John is making a stool'

  b. xu   ili usi ye'ewe

   DET.SG DIM boy to play

   'The boy is playing'

In (5a) the morphological marker for a nominative case adheres to the subject noun phrase whereas the accusative -ta distinguishes the direct object of the clause. The same occurs in (5b). The sole argument of the intransitive clause is treated as the most agent-like participant, which is the same treatment that the subject noun-phrase of

transitive clauses receives. Hence, Yoreme/Mayo of Sonora and Sinaloa is classified as a dependent-marking language.

1.2.3.3 Word Order

Word order is defined as one of the main criteria in which one language differs from another; nonetheless, the same term may also refer to any possible order of constituents in a clause or phrase; for example, the order of constituents of a nominal phrase. Based on the criterion, the languages of the world may be classified into SOV (subject-object-verb), SVO (subject-verb-object), VOS (verb, object, subject), VSO (verb, subject, object), OSV (object, subject, verb) or OVS (object, verb, subject) languages. SOV languages are the most common type, followed by SVO languages and, finally, VOS/VSO languages. OSV and OVS are less common than the above. To identify the basic word order of a language is, on occasion, problematic due to the fact that a language may accept grammatical constructions with different word orders.

An intransitive clause in Yoreme/Mayo has an SV word order whereas a transitive clause has an SOV basic order of constituents:

(6) Yoreme/Mayo of Sinaloa

     a. xu   ili   usi   ye'ewe

       DET.SG   DIM   boy   to play

      'The boy is playing'

                 S   V

b. Juan   in   ču ˈu-ta   me ˈa-k

   John   1SG.GEN   dog-ACC   to kill-PERF

   'John killed my dog'

      S   O   V

The order of constituents in a bi-transitive clause is S OD OI V:

(7) Yoreme/Mayo of Los Capomos, Sinaloa

      a ˈapo   ˈi ˈime   bwiikim   nee-mahtia-k   (Freeze 1989:100)

      3SG.SUBJ   this   song   1SG.OBJ-to teach-PAST

      'She taught me this song'

      S   OD   OI   V

The objects of a bi-transitive clause may change position:

(8) Yoreme/Mayo of Los Capomos, Sinaloa

      hibba-te   enči-me-wi   taskari-m   ˈa ˈa:wa   (Freeze 1989:99)

      always-1PL   2SG-PL-DIR   tortilla-PL   to ask

      'We always ask you for tortillas'

      S   OI   OD   V

The indirect object tends to be marked with the directional -wi. And on occasion, the subject noun phrase may be omitted:

(9) Yoreme/Mayo of Los Capomos, Sinaloa

  hibba   taskari-m   emome-wi   a˧-a:wa (Freeze 1989:99)

  always   tortilla-PL   2SG.OBJ.PL -DIR   to ask

          OD   OI   V

  'She always asks you for tortillas'

This only happens in third person constructions.

  In transitive clauses, an OVS order of constituents is possible:

(10) Yoreme/Mayo of Los Capomos, Sinaloa   (Freeze 1989:99)

  yoreme-ta   kekke-ye   ču˧u

  man-ACC   to bite-DUR   dog

  'The dog was biting the man'

  OD   V   S

Intransitive clauses with a locative expression also have a differing order of constituents;

nonetheless, the word order of both the clause's subject and predicate remains rigid:

(11) Yoreme/Mayo of Sinaloa   (Fieldwork 2010)

  a. Nabo Joa-po a˧apo   a˧ane-y

  Navojoa-LOC 3SG.SUBJ to be at-IMPERF

   'He is in Navojoa'

   LOC   S   V

b. itapo   a'ane   Nabo Joa-po

  1PL.SUBJ   to be at   Navojoa-LOC

  'We are in Navojoa'

      S   V   LOC

c. Nabo Joa   siika   Juan

  Navojoa   to go-PAST   John

  'John went to Navojoa'

    LOC   V   S

Not every intransitive clause in Yoreme/Mayo shows this behavior. The most common word order in the language is SOV. Intransitive clauses have an SV word order.

1.2.3.4 Case-Marking

According to Blake (1994), the nominal case distinguishes the type of relation that occurs between a noun and its nucleus. That is, it distinguishes the syntactic function of a clause's arguments and the semantic relation that these have with their predicate. The morphological markers of the arguments of intransitive and transitive clauses differentiate three types: (S), (A) and (P); (S) is the sole argument of an intransitive clause while (A) is the most agent-like argument and (P) the most patient-like argument of a transitive clause. The discriminatory function of case marking, in other words to distinguish between (A) and (P), is best seen in a transitive clause than in an intransitive one, where there is no

functional need to distinguish (S) from other nominal phrases (Comrie 1981). Cross-linguistically, six different types of alignment systems have been observed in the languages of the world. The nominative-accusative system distinguishes (S) and (A) (nominative) from (P) (accusative) whereas the ergative-absolutive system, on the other hand, distinguishes (S) and (P) (absolutive) from (A) (ergative). The neutral system has the same morphological marker for all three arguments; hence, the distinction between (A) and (P) is made by means of other criteria such as verbal agreement or word order. The tripartite system distinguishes not only (A) and (P) but also the former from (S), which makes it unnecessarily explicit whereas the system (A-P)/(S) does not distinguish between the arguments of a transitive clause but does distinguish the former from that of an intransitive clause. This distinction, however, is less functional given that (S) and (A) or (S) and (P) never occur in the same construction (Comrie 1981). Finally, the active-inactive system is characterized by identifying some (S) arguments with the semantic role of agent while others with the patient of transitive clauses. That is, $(S_A = A)$ and $(S_P = P)$. This system is also known as split intransitivity. Each system is shown in the following graphs:

(12)

| Nominative-Accusative | Ergative-Absolutive | Neutral |

Tripartite   A-P/S system   Split Intransitivity
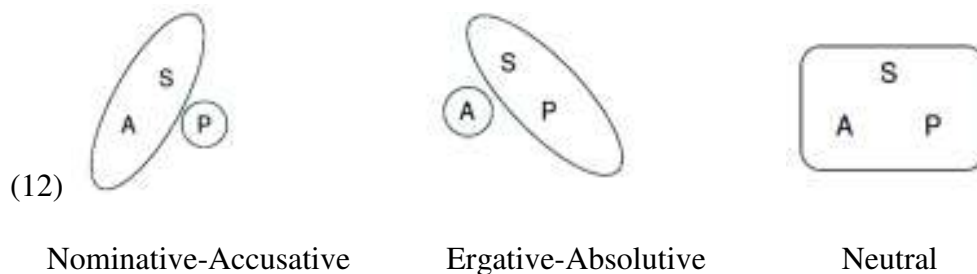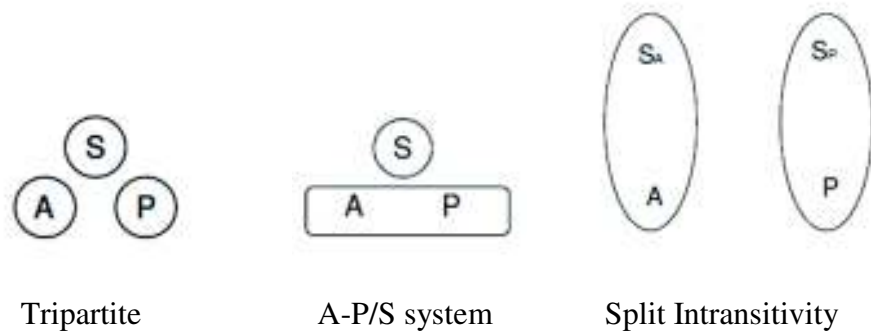
In bi-transitive constructions, Malchukov *et al.,* (2007) distinguish three patterns of alignment: (i) indirective, (ii) double-object and (iii) neutral. In the first, the theme argument (T) of a bi-transitive clause is marked as the (P) argument of a transitive clause while (R) is marked differently. The double-object system identifies the receptor of a bi-transitive with the patient of a transitive clause while (T) differs from each one. In a neutral system all three arguments have a different morphological marker. Each system is shown in (13):

(13) a.   Indirective

b.   Double-object

c.   Neutral
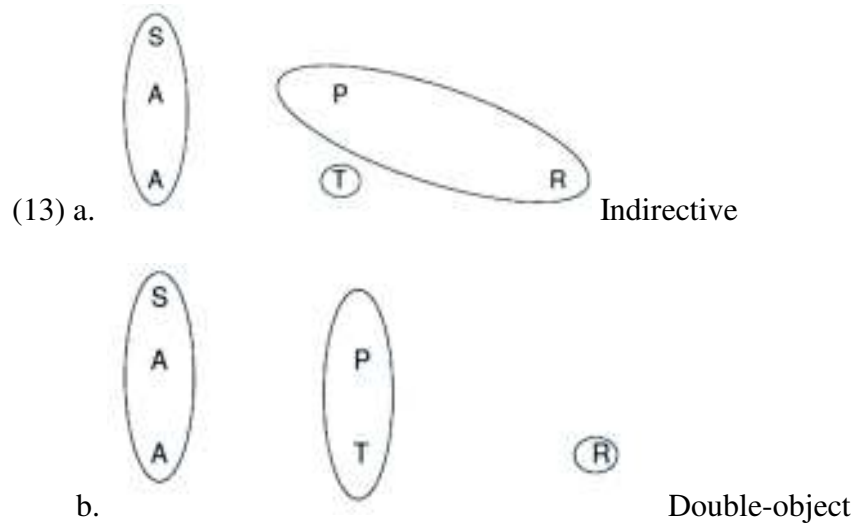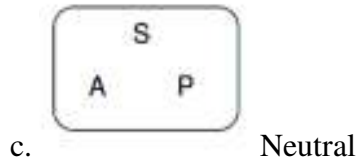
Yoreme/Mayo of Sonora and Sinaloa is a nominative-accusative language. That is, the (S) argument of an intransitive clause is marked with a zero marking nominative case as the most agent-like (A) argument of a transitive clause, while (P) receives the accusative –ta. This can be seen in (14a) and (14b):

(14) Yoreme/Mayo of Sinaloa   (Fieldwork 2010)

       a. xu   ili   usi-O   ye'ewe

         DET.SG   DIM   boy.NOM   to play

        'The boy is playing'

       b. xu   ču'u-O   wakas-ta   jiwa

         DET.SG   dog-NOM   meat-ACC   to eat

        'The dog is eating meat'
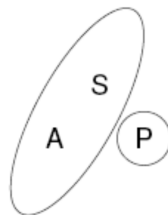
(15)

This system is the same one for pronouns:

(16) Yoreme/Mayo of Sonora

    a. aˈapo-O   yeˈewe

      3SG.SUBJ-NOM   to play

     'He is playing'

    b. aˈapo   ˌaˈasim-tua-k   (De Wolf 1997:104)

      3SG.SUBJ   3SG.OBJgo-CAUS-PAST

     'He/she said goodbye to him/her'

	SUBJECT	OBJECT
1 SG	inapo	nee-
2 SG	empo	enči-
3 SG	aˈapo	ˈa-
1 PL	ítapo	ˌitom
2 PL	ˈemeˈe	enčim
3 PL	bempo	ˈam

The alignment pattern of bi-transitive clauses can be observed in the following examples

(Paul de Wolf 1997:166):

(17) Yoreme/Mayo of Sonora

    a. aˈapo   hibba   taskarim   ˌino-wi   ˌaˈaawa

      3SG.SUBJ   always   tortilla.PL   1SG.OBJ-DIR   3SG.OBJ.to ask

     'He always asks me for tortillas'

b. aˈapo   ˈiˈime   bwiikim   nee-mahtia-k

   3SG.SUBJ   this   song   1SG.OBJ-to teach-PAST

   'She taught me this song'

c. aˈapo   taskarim   nee-mika

   3SG.SUBJ   tortilla-PL   1SG.OBJ-to give

   'He gives me the tortillas'

The receptor, which denotes the grammatical function of the indirect object, is pronominal, and is indexed to the verb. Hence, the alignment pattern of bi-transitive clauses in Yoreme/Mayo of Sonora and Sinaloa is double-object marking:

(18)

However, in (17a) the indirect object receives a directional marker thus making the alignment pattern neutral (13c).

1.3 Previous Description and Documentation of Yoreme/Mayo

Cahitan languages were first documented in the work Buelna (1989) *Arte de la lengua cahita escrita por un padre de la Compañía de Jesús*, first published in 1737 with the intention of facilitating the instruction of religious doctrine to the northern tribes of México as well as to allow other evangelists to become acquainted with the languages of

the region. *Arte de la lengua cahita…*, nonetheless, does not describe Yaqui or Yoreme/Mayo; it analyzes, on the other hand, Tehueco, the third language classified as a member of the Yaqui-Mayo sub-branch of Southern Uto-Aztecan languages (Dakin 2004), which is now extinct. The first study to focus primarily on Yoreme/Mayo was Howard and Elizabeth Collard's vocabulary of Yoreme/Mayo-Spanish/Spanish-Yoreme/Mayo with more than 1500 entries published in 1962. This work was one more volume printed by the Summer Institute of Linguistics (SIL) as a result of its intention to elaborate dictionaries of every indigenous language investigated by the institution.

In 1968, Lynne Crumrine published a paper in sociolinguistics about ethnical structures within the Yoreme/Mayo community. The purpose was to outline how these structures work taking into consideration both cultural and social aspects of the community; hence, the paper included a repertoire of religious prayers and ritual chants, myths and legends in addition to a small account of phrases and expressions in formal language. At the end of the following decade (1977) André Lionnet published a comparative study of Yaqui and Yoreme/Mayo in order to determine if both varieties of the Cahitan language could be considered two varieties of the same language. He studied lexical, phonological and morphosyntactic aspects of both languages and concluded that they were mutually intelligible and that some morphological rules of Yaqui could be understood given those of Yoreme/Mayo (Moctezuma 2001:197).

Ray Freeze, an academic from the University of Utah, published in 1989 a small volume following the format of the Archives of Indigenous Languages of Mexico in which he included a comprehensive study in phonological, morphological, syntactic and

lexical terms of Yoreme/Mayo of Los Capomos, Sinaloa spoken the Northeastern region of this state. This publication is the only one published so far concerned with morphosyntactic aspects of the language. It is also the only publication of this author pertaining to Yoreme/Mayo.

The phonology of Yoreme/Mayo is perhaps the most studied aspect of this language. Larry Hagberg, from the University of Arizona, published a series of papers on the topic. The first of these was Hagberg (1988) where he studied the interrelation between the accentual patterns of the language and both long vowels and geminated consonants; his doctoral dissertation (1993) further studied these patterns based on the autosegmental theory. During this period he also presented conference papers and manuscripts about the language's suprasegmental features and proposes that the accent in Yoreme/Mayo is related to some degree with a high tone (Moctezuma 2001:199). The problem concerning the phonological pattern of this language has not been resolved to date. A complete account of Larry Hagberg's work is summarized in Moctezuma (2001). Jeff Burnham (1984), on his part, worked on Yoreme/Mayo from 1983 to 1987 at the University of Sonora where he intended to publish a grammatical sketch of the language but the project did not come to fruition and his collected data was stored away at the Department of Linguistics of the University of Sonora while his work remains unpublished to this day.

Paul de Wolf (1997) published a compendium of two volumes based on the tagmemic theory, and in which he studied phonological and syntactic aspects of the language (Volume 1) on the one hand, and morphological characteristics of

Yoreme/Mayo (Volume 2), on the other. This work is a first attempt to describe relevant aspects of the language, such as morphosyntax and discourse and thus gives a lot of examples to study them. Nonetheless, the conclusions reached at here are just preliminary to the study of the linguistic structure of Yoreme/Mayo.

Both sociolinguistic and dialectology studies concerning Yoreme/Mayo have also been conducted and published. Works of the first type consider the problem of language displacement and maintainance within the ethnic group while those of the second try to reassess if both Yaqui and Yoreme/Mayo are indeed two variations of the same language or two different related languages. Moctezuma Zamarrón (1987) is concerned about the accelerated process of linguistic displacement of the language in favor of Spanish while his published work of (1989) is a description of the linguistic conflict between Yoreme/Mayo and Yaqui. Moreover, in that same year he co-authored a publication with Gerardo López [see bibliography] related to his (1987) paper while in (1991) they published a second work concerning the dialectal differences between Yoreme/Mayo and Yaqui as a first attempt to resolve the issue concerning their classification. Moctezuma Zamarrón has continued to work on the sociolinguistic aspects of this language until this day, and his most recent publications add an anthropological perspective to the study of Yoreme/Mayo.

CAPÍTULO 2

Preliminares teóricos

Este capítulo define el fenómeno de predicación no-verbal, y lo distingue de su contraparte verbal con el propósito de delimitar claramente el tema de interés. Posteriormente, se definen predicación nominal y predicación adjetival por medio de una descripción de las formas en las que este tipo de predicados se encuentran en diferentes lenguas del mundo. Finalmente, se define el concepto de cópula y se describe la importancia de estos elementos dentro de este tipo de construcciones.

CHAPTER 2:

Theoretical preliminaries

2.0 Introduction

This chapter outlines the theoretical background of non-verbal predication. More specifically, it distinguishes between verbal and non-verbal predication in order to introduce the reader with the topic of interest. (§2.2) describes and explains non-verbal predication and its syntactic implications; this section is divided into two parts, each of

which concerns a different type of non-verbal construction. That is, nominal predication and adjectival predication respectively, and aims at describing how these phenomena are found in the languages of the world. Finally, (§2.3) concerns copulas and their syntactic function within intransitive predication.

2.1 Predication: Verbal and Non-verbal

2.1.1 Definition

Aristotle defines predication as a proposition where 'something is said of something else' (Aristotle cit. in Rothstein 2006). This simple definition introduces, hitherto, two central ideas to the discussion of linguistic predication: (a) the syntactic idea that a proposition has a binary structure, where one element, the subject, refers to an entity and the other expresses a property, and (b) the semantic idea of a proposition asserting that an object, the reference of the subject argument, has a property expressed by the predicate (Rothstein 2006).

Hence, this Aristotelian definition has given rise to two types of predication: (i) syntactic predication, which involves a predicate term and a singular referring term functioning as its argument, and (ii) semantic predication, which deals with the interpretation of verb arguments and thematic role assignment (Stalmaszczyk 1998:101). For instance,

(1) a. give: <Agent, Theme, Goal>

b. faint: <Experiencer>

c. see: <Experiencer, Percept>

In a proposition from English such as *John gave the book to Mary*, for example, the verb *give* needs three distinct arguments, each of which assumes a different semantic role. This clause has three grammatical relations: subject, direct object and indirect object. The subject, which, in this case is expressed by the noun phrase John, is the agent of the action expressed by the verb. The grammatical role of agent is always assumed by the subject but not all subjects are agents. The direct object, which expresses the grammatical role of theme here, denotes the thing that the subject gives to someone else; that is, *the book* while the goal is expressed by the prepositional phrase *to Mary*. This role is also that of recipient, which is more appropriate in this case. The recipient or goal is expressed by the indirect object. The absence of this third argument in a clause with a three argument verb renders it ungrammatical:

(2) *John gave the book

The predicate of these constructions includes both the direct and indirect objects. In a clause with an intransitive verb such as *faint* the person fainting usually does so unwillingly; hence, the role that the subject assumes is not one of an agent but of an experiencer because he or she does not faint deliberately. Neither does the subject initiate the action. Instead, he or she experiences the action of fainting. Not all intransitive verbs accept subjects that do not control the action. In '*John runs*', for example, the subject is an agent because John can start or stop running with volition. In a transitive clause both arguments can also assume different semantic roles. For instance, in '*The lion killed the zebra*', the subject noun phrase '*the lion*' assumes the role of agent because the animal deliberately and volitionally initiates the action of killing whereas the direct object noun

phrase '*the zebra*' assumes the semantic role of patient for it has been affected somehow by the action; that is, it suffers a change of state. This semantic role is the prototypical one for direct objects. However, in *I saw Forrest Gump* the subject experiences the action of seeing the movie Forrest Gump, and thus assumes the semantic role of experiencer. The direct object, on the other hand, assumes the role of that which is perceived by the subject. The general context for semantic predication is, thus:

(3) Predicate: <Argument$_1$, Argument$_2$ …>

The predicate is any element that can stand alone as such in the language, while the arguments are any number of terms necessary to render the proposition grammatical. This formula can also be stated as (4), where the variables (x) and (y) represent any term that can function as an argument of the predicate. This structure is known as a proposition function (Payne 1997).

(4) Predicate (x, y)

The predication relation denotes, then, a specific event and the participants that are involved in it.

Syntactic predication, on the other hand, has the following structure:

(5) [Subject [Predicate]]

Stalmaszczyk (1998:102) defines syntactic predication as the structural relation where a predicate is linguistically predicated of its subject. That is to say, it is the relation pertaining between the subject and predicate of a sentence. In order to explain this, though, the types of verbs denoted above will, once again, serve as an example. The predicate see can take two arguments: SEE (x, y), and it can be thought of as referring to

the relationship of seeing that holds between someone that sees (x) and something that is seen (y). A verb that takes a single argument, like faint, expresses the relation of someone fainting (x) while give, which takes three arguments, denotes a relationship of someone (x) giving something (y) to someone else (z).

2.1.2 Verbal Predication

Predication can be either verbal or non-verbal. Hengeveld (1992: 25) defines the term as a unit of semantic analysis corresponding to (6), where $pred_\beta$ is a predicate, β represents the category of the predicate (V, A, etc.,) and $(\alpha_1) \ldots (\alpha_n)$ are the arguments required by that predicate.
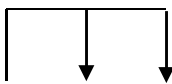
(6) $(e_i: [pred_\beta (\alpha_1) \ldots (\alpha_n)](e_i))$

An example is:

(7) $e_i: [read_v (d1x_i: man_N (x_i)_{\%})_{Ag}: (ilx_j: book_N (x_j)_{\%})_{Go}] (e_i))$ (Hengeveld 1992:25)

The man reads a book

In this example, the expressed relation states that the verbal predicate read is based on the semantic function of the two arguments that it requires: the Agent (Ag) argument the man and the Goal (Go) argument the book. The predication relation can be graphed as:

(8) $(e_i: [pred_\beta (\alpha_1) \ldots (\alpha_n)](e_i))$

Verbal predication is, accordingly, any proposition where the category of a predicate β is a verb. Stassen (1997:13) defines it, though, more specifically as the

prototypical encoding of event predicates. This author proposes furthermore three criteria that help us distinguish non-verbal predicates from verbal predicates: (i) The Subject-Agreement Criterion, (ii) The Auxiliary Criterion and (iii) The Negation Criterion, which do not, he warns us, occur cross-linguistically in exactly the same way. That is, languages differ considerably as to how they recognize person, number or gender in subject agreement as well as to the way in which each category is morphologically encoded. Namely, languages may choose to either fuse all three agreement categories into one 'portmanteau' agreement morpheme or they may choose to codify each category distinctly. For example,

(9) Maltese   (Stassen 1997: 36)

    a. Hu   jikteb

       3SG.MASC   3SG.MASC.IMPERF.write

       'He writes'

    b. Hi   tikteb

       3SG.FEM   3SG.FEM.IMPERF.write

       'She writes'

(10) Kalispel   (Stassen 1997: 37)

    Qeˈ-iˈap

    1PL-arrive

    'We arrived'

(11) Barasano

    Oko   kedi-a   -ha

    water   fall-PRES-3SG

    'It is raining'

In 9(a), person, gender and number are fused in the portmanteau morpheme *hu*; in 9(b) there is a distinction of gender. In Kalispel, on the other hand, the only categories expressed are person and number and, finally, Barasano only marks person. It should be noted that Stassen (1997) has neutralized this variation of subject agreement by stipulating a pivotal role only for person agreement. There are two reasons for this: First, subject agreement categories other than person are often found to be optional, formally irregular and semantically unpredictable (Stassen 1997:35); if we consider the expression of number agreement on verbs, for instance, some of these have suppletive stems for number while others are marked for this category by a variety of irregular derivational processes, which include reduplication, stem-changing or affixation, and still other verbs cannot be marked to indicate number at all (Wetzer 1996:89). Plural forms do not only indicate number but may also refer to aspectual notions such as iteration, habituality, duration, and etcetera. On the contrary, what is common to examples (9), (10) and (11) is that person agreement marking is obligatory; it must be present somewhere in the sentence. A second argument for selecting person as the basic agreement category is that cross-linguistically, this category is much more selective than other categories of subject agreement. That is, as a rule, number and gender agreement tend to cover a much larger

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part of the predicate categories in a language than person agreement does (Stassen 1997:36). Hence, the Subject-Agreement Criterion can be defined as:

(12) Subject-Agreement Criterion

If a language has person agreement, any predicational strategy in that same language which does not employ the same system of person marking as verbs is nonverbal.

This criterion, though, is only applicable to languages where there is any form of person agreement at all. The Auxiliary Criterion, on the other hand, is attested in languages where the Agreement Criterion is irrelevant. It states that if a language allows independent, non-supported predicates, these will always consist of event predicates. If, contrarily, a predicate needs a supportive item, that predicate will be non-verbal.

(13) Mandarin   (Stassen 1997: 42-43)

   a. Tā   pǎo

      3SG   run

   'He/she runs/ran/will run'

   b. Nèi-ge   rén   shì   juéshēng

      that-CLASS   person   COP   student

   'That man is a student'

That is, a verb such as run (13a) in Mandarin Chinese does not need a supporting item to function as a predicate whereas a noun usually requires the presence of a copula, *shì* (13b), in order to be used predicatively The Auxiliary Criterion, however, like the one before it, should be accompanied by a few words of caution: First, it is only applicable to languages that contain at least one non-supportive predicative form; for example, a verb. Thus, it is of no consequence in languages that do not allow non-supported predicative verb forms. Second, this criterion does not identify verbal encoding strategies in a language; on the contrary, it merely helps us to decide upon the non-verbal status of certain encoding strategies.

The third criterion, the Negative Criterion, is motivated by any seemingly uniform encoding strategy that starts to fragment whenever negation is involved, and it states that if a category codifies negation differently from predicative verbs, then that category is non-verbal. If, however, the second category codifies negation in a manner similar to predicative verbs this does not necessarily imply verbal status for that said category because the Negative Criterion is not sufficient to determine the status of those predicates. Thus, this criterion turns out to be more of a complement to one or both of the other two criteria whenever the Agreement Criterion or the Auxiliary Criterion fails to determine the non-verbal status of a predicative encoding strategy.

Verbal predication is then, according to these criteria, any proposition characterized by:

    (i) The absence of supportive items

(ii) The presence of person agreement if the language allows person agreement at all, and

(iii) A specific negation strategy

2.1.3 Non-verbal Predication

Non-verbal predication is any construction with a non-verbal main predicate. Hengeveld (1992: 43) represents it by the following formula:

(14) $(e_i: [pred_\beta (\alpha_1)...(\alpha_n)](e_i))$ $\qquad (\beta \neq V)$

The predicate may refer to a property (β = A), to a class (β = N) or to a location, and it is defined negatively as a predicate that is not a verb. A non-verbal predication may, however, be expressed by means of a verbal sentence (Hengeveld 1992:26); hence, the distinction between predication as a semantic unit and sentence as a morphosyntactic unit. The verb in these types of constructions is dubbed a copula, and it is considered to be a semantically empty supporting device (Hengeveld 1992:73); Stassen (1997) also refers to them as supporting items.

Hengeveld (1992) classifies non-verbal predicates according to the semantic differences of non-verbal predications. Not all elements of non-verbal predications used to arrive at this classification are present in (14). Thus, the author reformulates it into the following:

(15) $(e_i: [(f_1: pred_\beta (f_1)) (\alpha_1)_{SemPrag} ... (\alpha_n)](e_i))$ $\qquad (\beta \neq V)$

The predicate variable (f_1) differentiates between a lexical unit and a syntactic unit; that is, between a verb and a verb phrase respectively. $(\alpha_1)_{SemPrag}$ refers to the semantic

and pragmatic functions of the first argument. In addition, not all elements in this formula have the same relevance in every type of non-verbal predication; i.e., the pragmatic and semantic functions of (α_1) are significant to some non-verbal predication types while the predicate type (β) and argument type (α) elements are relevant to all non-verbal predications. This will be clarified with examples in the following paragraphs.

Thus, non-verbal predicates may be classified according to the following types: (i) bare predicates, (ii) referential predicates and (iii) relational predicates. A few examples from English are:

(16) English   (Hengeveld 1992: 74-75)

    (a) John is nice

       The man is tall

    (b) That man is my father

    (c) This book is for John

       The meeting was at five o'clock

The examples in (16a) are classified as bare predicates because the English copula has no semantic content. Hence, these examples are the same as (17), where the subject noun phrase and adjectival predicate are simply juxtaposed:

(17) Mojave   (Hengeveld 1992:75)

    /i:pa-č   homi:-k

    man-SUBJ   tall-PRES

    'The man is tall'

The presence of the copula in the English examples is also taken as an indication of the non-verbal status of the predicate, which may be, on the other hand, either adjectival or nominal. Bare adjectival predicates express a semantic relation of property whereas nominal predicates designate membership of some class. Referential predicates, exemplified in (16b), can either be term predicates or predicates based on larger units such as predications, propositions or clauses. Term predicates is a concept first introduced by Dik (1980; cit. in Hengeveld 1992), and it refers to expressions with a nominal head. For example, (18b):

(18) Dutch   (Hengeveld 1992)

    a. Jan   is   schilder

        John   COP.PRES.3SG   painter

      'John is a painter'

    b. Jan   is   een   schilder

        John   COP.PRES.3SG   INDEF   painter

      'John is a painter'

Example 18(a), on the other hand, is a bare predicate. It is distinguished from the term predicate by the absence of the indefinite article een, and by some syntactic differences in the behavior of each type of construction. For instance, bare predicates do not take a plural form when used with a plural subject while a term predicate does. The

latter can also be modified and used as a referring expression whereas the former cannot. Term predicates are also differentiated from bare predicates, for example, by taking or not taking a copula or by person marking. This occurs in Nama Hottentat, a Khoisan language spoken in South Africa, Botswana and Namibia, and described by Olpp (1977 cit. in Hengeveld 1992).

Term predicates are definite or indefinite. If a definite term predicate is used predicatively, the semantic relation expressed in the clause is one of identification. In example (18b), on the other hand, the predicative term is indefinite; hence, the encoded semantic relation is one of class membership. This predication type can also have an indefinite argument, which expresses a semantic relation of class inclusion. Both class membership and class inclusion predicates can be grouped together as classification predicates.

This division of term predicates, though, is not sufficient to account for sentences such as those in (19):

(19)   a. The capital of France is Paris   (Hengeveld 1992:82)

         b. Paris is the capital of France

In these examples, both term predicates have a definite marker. Therefore, both clauses express an identification relation between the arguments. However, the term predicate of (19a) can be specified alternatively as Paris while that of (19b) merely states a characteristic of the subject. That is, the predicate the capital of France is one of many

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characteristics of the city Paris. Hence, the semantic relation of the first type of construction is one of specification and that of the second is one of characterization. If we consider classification term predicates, clauses of this type would be (20):

(20)   a. A bachelor is an unmarried man   (Hengeveld 1992:87)

         b. A cat is an animal

Once again, the difference here is found on the semantic relation. Example (20a) specifies that a bachelor is a man that has yet to get married while (20b) says that one of the characteristics of a cat is that it is also an animal; however, this characteristic can also be applied to animals other than cats. The classification of term predicates (Hengeveld 1992) is summarized, thus, as:

Term predicates
        Identification
                Specifying
                Characterizing
        Classification
                Specifying
                Characterizing

These types of constructions are distinguished by the fact that specifying clauses are reversible whereas characterizing ones are irreversible.

(21) a. An unmarried man is a bachelor   (Hengeveld 1992:87)

         b. *An animal is a cat

This is true for both identification and classification term predicates. Relational predicates are based on complex referential units, such as clauses, propositions or other predications. These types of predicates may encode locative, existential or possessive predicates (16c). These constructions, however, are beyond the scope of this thesis.

Non-verbal predications can also be classified accordingly. Hengeveld (1992) divides them into three categories: equative, ascriptive and existential predications. Equative predications are used to express the relation of identification between the arguments of a clause while ascriptive ones describe or attribute a certain property to the referent of the subject expression. An existential predication introduces the referent of an argument by ascribing existence to it; hence, they may be further distinguished as presentative constructions. Non-presentative constructions do not have this function. Existential constructions are a subtype of ascriptive construction separated from other relational predicates by the fact that existential predications are based on an empty locative predicate.

Ascriptive non-presentative constructions are predicable according to the following implicational hierarchy (Hengeveld 1992: 130):

(22) $(x_i)_{Loc} >$ A >   N > $(x_i)_{Poss}$

Each predicate type designates different types of properties: locative predicates designate spatial properties; adjectival predicates denote physical properties while nominal ones encode social properties. Possessive predicates usually designate legal or social conventions (Hengeveld 1992: 130). It should be noted here that nouns may express any type of property, however only social properties may be used predicatively (Hengeveld

1992: 135). Thus, the predicates on the left of the hierarchy express the most concrete properties while those to the right express the most abstract ones. The intermediate predicates, that is, adjectival and nominal predicates, seem to be rather problematic within this hierarchy for adjectives may not only express physical properties but also abstract notions. Hence, Hengeveld (1992) proposes a revised hierarchy based on Stassen's (1992) time-stability scale, which is, in turn, based on Givón's (1984) time-stability scale. In the latter, predicates are ordered according to their stability over time. That is to say, prototypical nouns occupy the most time-stable end of the scale; they are defined as multi-featured bundles of experience whose concreteness and durability properties change relatively slowly over time. At the other end of the scale, verbs are considered to be experiential clusters that denote rapid changes of relatively short duration. In contrast to nouns, verbs are both temporally compact and spatially diffuse (Givón 2001:52). Adjectives, for their part, are located in an intermediate position. They are similar to verbs in that they do not make sense without their noun-coded participants. That is to say, they are not experienced directly. Rather, they are single properties of prototype noun entities, analytically abstracted from those more complex bundles of experience (Givón 2001:53). Consequently, this verb-like property makes them less time-stable; nonetheless, adjectives may also encode somewhat durable but non-physical properties such as good, bad, helpful, content, and relatively temporary states that denote more time-stable properties.

(23)   increasing time-stability
        ===➔
        EVENTS/ACTIONS -------PROPERTIES --------- TIME-STABLE CONCEPTS
                Verbs   Adjectives   Nouns

Stassen (1992) reformulates this scale to include locative predicates:

(24)   increasing time-stability
    ===➔
            Verbs --------   Adverbs ---------- Adjectives --------- Nouns

This scale has the same predicable elements as the ascriptive non-presentative construction implicational hierarchy given in (22):

(25) Verbs -----------Adverbs ---------- Adjectives --------- Nouns

$$(x_i)_{Loc} \quad > \quad A \quad > \quad N \quad > \quad (x_i)_{Poss}$$

The predicability of ascriptive presentative constructions is rather limited. The only types of predicates that are allowed to be used in this manner are possessive and locative predicates. Adjectival and nominal predicates are always non-presentative. Hengeveld (1992) establishes that Burushaski, a language isolate spoken in Pakistan is the only language of his sample that has a presentative possessive predication.

Equative predication constructions, on the contrary, are the most easily predicable type of predication. It is followed by the ascriptive non-presentative predication described above, which, in turn, is followed by its presentative counterpart. This agrees with the following predication hierarchy proposed by Hengeveld (1992):

(26) Equative > Ascriptive Non-presentative > Presentative Non-Existential > Existential
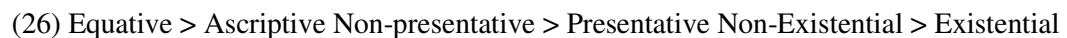
The contiguity of equative and ascriptive non-presentative predications is to be expected since both of them are non-presentative. The difference between them is that in ascriptive predications non-verbal predicates are used predicatively whereas in equative ones they are not. In these constructions, on the other hand, the predicate is a term phrase where

nominal heads and both adjectival and possessive modifiers are used in their distinguishing non-predicative functions (Hengeveld 1992:151).

The manner in which non-verbal predications can be expressed includes any of the following ways: a non-verbal predicate may behave as an intransitive verbal predicate. That is, it allows the same tense, aspect, mood and person marking as an intransitive verb. For example,

(27) Abkhaz   (Spruit 1986 cit. in Hengeveld 1992)

a. Də-psə-w-p$^|$

3SG.SUBJ-dead-PRES DECL

'He is dead'

b. Də-c^{w}a-w-p$^|$

3SG.SUBJ-sleep-PRES DECL

'He is sleeping'

This is known as a zero copula construction. Another type of zero copula predicate is one where the argument term and the predicate are simply juxtaposed (17). The second manner in which a non-verbal predication may be expressed is by means of a copula, which, on the other hand, may be either predicativizing or discriminating (Hengeveld 1992). A predicativizing copula creates members of parts-of-speech that can be used as predicates.The most common types of predicativizing copulas are verb copulas or verbalizing affixes. For instance,

(28) Krongo   (Reh 1985 cit in. Hengeveld 1992)

    a. N-afi   à⁄àŋ   kí-la

    1SG.IMPERF.COP   1SG   LOC-hut

    'I am in the hut'

    b. Àakù   m-àa-nímyà

    1SG.IMPERF.COP   FEM-IMPERF.COP-woman

    'She is a woman'

In (28a), the copula is a verb whereas in (28b) it is an affix. Predicativizing copulas are also members of other parts-of-speech. Discriminating copulas, on the other hand, do not belong to a specific word class. They function more like a sign of non-verbal predication than anything else. Both pronouns and particles may be used in this manner:

(29) Hebrew   (Junger 1981 cit in. Hengeveld 1992)

    Dan (hu)   gadol

    Dan (COP) big

    'Dan is big'

If compared to (29), we can see that the pronominal copula in Hebrew agrees in number and gender with the argument term.

(30) Hebrew   (Junger 1981 cit in. Hengeveld 1992)

    a. Sara   (hi)   mora

    Sara   (COP)   teacher

    'Sara is a teacher'

    b. Yossi   ve   Dan   (hem)   xaverim

    Yossi   and   Dan   (COP)   friends

    'Yossi and Dan are friends'

In this language the pronominal copula may not carry inflectional categories as main predicates do. Their main function is to signal the presence of a non-verbal predication. Particle copulas, on the other hand, do not vary. A more detailed account of pronominal and particle copulas will be given in (§2.2.1).

The syntax of both nominal and adjectival predications will be explained in the following sections.

2.2 The Syntax of Non-verbal Predication

2.2.1 Nominal Predication

Nominal predicate constructions are defined as those in which the predicate designates a class, and in which the subject is considered a member of that class (Stassen 1997: 13). For example,

(31) Russian   (Stassen 1997:62)

Moskva   (O)   gorod

Moscow   (COP)   city

'Moscow is a city'

(32) English

Mary is a teacher

In Russian both the subject and predicate are juxtaposed while in English there is an auxiliary or supportive item. In many languages, these supportive items or copulas have morphosyntactic characteristics of verbs. Juxtapositional constructions contain a zero copula. This is the prototypical nominal encoding strategy (Stassen 1997). Thus, zero copulas will always be used with nominal predicates even if no other predicate category may be encoded in this manner (Stassen 1997:64). Zero copulas also seem to appear in combination with overt copulas. This occurs in Russian, where the presence or absence of a supportive item seems to be governed by present tense:

(33) Russian   (Stassen 1997:64)

a. Ona   (O)   vrač

   3SG.FEM.NOM   (COP)   doctor.SG.NOM

'She is a doctor'

b. On   byl   učenik-om

   3SG.MASC.NOM   COP.MASC.PAST   student-MASC.SG.INSTR

'He was a doctor'

A more restricted parameter is found in Hungarian where zero copula encoding is not only restricted to present tense but also to third person subjects:

(34) Hungarian   (Stassen 1997:65)

    a. A   lanyok   szépek

      ART.PL   girl.PL   beautiful.PL

     'The girls are beautiful'

    b. Én   tanar   vagyok

      1SG   teacher   COP.1SG.PRES

     'I am a teacher'

These data are a clear example of the Dummy Hypothesis (Meillet 1906), which proposes that the copula is a semantically empty device that functions as an 'abstract linking morpheme' (Stassen 1997:65). That is to say, its function is to carry a number of grammatical categories – tense, mood and aspect – that would otherwise be marked on the predicate itself. Wherever these categories are absent or unmarked, a language uses a zero encoding strategy. Nonetheless, under what grammatical conditions does a language use a zero copula instead of an overt one?

When Lyons (1968) noticed that a zero copula is obligatory in the present tense of Russian, he related this phenomenon to the fact that present tense in this language is the unmarked tense-aspect-mood form (Stassen 1997:66). Hence, sentences that are temporally, modally and aspectually unmarked do not need the "dummy" carrier (Lyons 1968). Nonetheless, several objections about this hypothesis have been raised: (i) the data

on which it is based on is genetically biased it is severely restricted to encoding strategies of Indo-European languages. It is also the case that in these languages the present tense is the morphologically unmarked form in the verbal system and the third person is the unmarked person-number-gender form (Stassen 1997:66); (ii) it does not explain why some languages require a zero copula in the present tense (Russian) while others forbid it (English) given that, as stated above, the verbal system in both languages is exactly the same and that the present tense is the unmarked tense form, and (iii) despite the fact that in some Indo-European languages a zero copula is obligatory in third person present nominal predicate constructions, it is not accepted in locative predicates of the same kind. This can be seen in Hungarian:

(35) Hungarian   (Stassen 1997:67)

    a. Péter   O/*van   katona

      Peter   O/*be.3SG.PRES   soldier

      'Peter is a soldier'

    b. A   fa   a   kert   -ben   *O/van

      the tree the garden -in   *O/be.3SG.PRES

      'The tree is in the garden'

Thus, why is the absence of an overt supportive item the prerogative of nominal predicates and not that of, say, locative predicates and why is zero encoding more frequent in nominal predicates than it is in locative predicates? According to the Dummy Hypothesis, all categories of non-verbal predications should be susceptible to zero

encoding in exactly the same manner and to exactly the same degree (Stassen 1997:67). However, this is not the case with locative predicates, as shown in example (35) for Hungarian. And when the restrictions on the distribution of zero encoding posed by the Dummy Hypothesis are claimed to be universal matters fall completely apart. A case in point is Sinhalese, an Indic language with a verbal system that consists of two simple forms: Past and Non-past. Neither of these forms are considered the morphologically unmarked form of the language given that the former is marked by the suffix -aw and the latter by the suffix -nəw. Consequently, an obligatory use of a full copula is predicted by this hypothesis for both the past and non-past forms of Sinhalese. However, this language has an obligatory zero copula in nominal predicates:

(36) Sinhalese   (Stassen 1997:68)

    a. Mahattea   e   -nəw   -a

        gentleman   come   -NONPAST   -INDIC

        'The gentleman comes/will come'

    b. Mahattea   e   -aw   -a

       gentleman   come   -PAST   -INDIC

       'The gentleman came'

    c. UnnΘhee   O   hungak   prəsiddə   kene   -k

       3SG.MASC   COP   very   famous   person   -NOM

       'He is/was a very famous person'

This example shows that zero copulas may occur in languages that do not have unmarked TAM-forms violating the prediction of the Dummy Hypothesis that if a language has a zero copula for nominal predicates, then that zero copula should only occur in the unmarked TAM-forms of that language (Stassen 1997:68). A second prediction of the Dummy Hypothesis according to the studied data is that if a language has a non-verbal encoding strategy of nominal predicates and at least one unmarked TAM form in its verbal system then that unmarked TAM form should have zero encoding for nominal predicates (Stassen 1997:68). This, however, is not always the case. An example is Wolof, a language spoken in Sub-Saharan Africa where nominal predicates require the use of the supportive verb di:

(37) Wolof   (Stassen 1997:72)

  a. Nyeu na

   come INDIC

   '(He) comes/came'

  b. Mangi di dyambūr

   1SG.EMPH COP free man

   'I am a free man'

This pattern can also be seen in other languages of Africa. Hence, the validity of the Dummy Hypothesis as an explanation for the distribution patterns of both zero and overt copulas is severely questioned.

  Full copulas, opposed to zero copulas, are supportive items that function as the carriers of grammatical categories of verbal morphology – tense, aspect and mood – and,

thus, have no lexical meaning: '[the copula] is inserted into predications with non-verbal predicates in order to help express those grammatical distinctions which are otherwise encoded in the verbal predicate' (Dik 1989 cit. in Stassen 1997:66). Full copulas are verbal or non-verbal. Stassen (1997:91) distinguishes four types of verbal copulas: (i) 'See-copulas' are grammaticalized items whose origin is the verb meaning 'to see'; the best known example is that of Kpelle, a Mande language spoken in Western Africa where tense-aspect forms for past or future tense use the supportive item ke whereas the supportive item ‿kaa is used for present tense:

(38) Kpelle   (Stassen 1997:92)

    a. ˈkaa   a   boa

        3SG.OBJ.COP   COMP   knife

      'It is a knife'

    b. e   ke   a   boa

        3SG.SUBJ.PAST   do.PAST   COMP   knife

      'It was a knife'

(ii) Dynamic verb copulas are those that include notions such as 'do/make/build', 'happen/occur', 'go/turn', 'into/come/become', among others, and they designate processes through which something comes about. For example, the copula g/eg of Berber languages such as Tamazight and Shilha is thought to originate from the verb 'do/make/happen'. The same process is found in Tibeto-Burmese languages, where the

copula hpyi[?] means 'become/happen'. This type of copula is also present in Uto-Aztecan languages of North America. A third type of verbal copula is that which goes through a process of (iii) copularization; in this process, a verb with a locative notion specializes as the support item for nominal predicates (Stassen 1997:94). This process is gradual and most verbs of this type that acquire a copular function still retain their function as a locative support verb. Other items, though, may have already lost their locative meaning so that the language in question starts differentiating between nominal and locative support items. This is known as locational takeover and it is defined as the process in which a predicate category of a language employs at least one of the members of the set of support verbs which are used in the encoding of locative predicates in that language (Stassen 1997:57). Finally, copulas may arise through the process of (iv) verbalization. This process is defined as that in which pronouns and discourse particles are reanalyzed as abstract linking morphemes in predicate nominal sentences. Thus, it is a nominal process in nature. This phenomenon appears in Sub-Saharan Africa, in Nilo-Saharan languages, Central America, New Guinea and some languages of Northern and Central India.

Non-verbal copulas, on the other hand, are characterized by the absence of morphological features such as person-number-gender or tense-mood-aspect marking. In contrast to verbal copulas, the origin of non-verbal copulas tends to be that of a 'focus', 'topic/comment' or 'background/foreground' notion (Stassen 1997:76). That is, they originate from items that distinguish how the flow of information takes place in discourse. The process of grammaticalization of non-verbal copulas varies from language to

language. Non-verbal copulas may derive from personal or demonstrative pronouns. These pronominal copulas or pro-copulas (Stassen 1997) function as resumptive subject pronouns in clauses with a topic-comment structure. That is to say, they are items anaphorically related to the subject placed in a sentence-initial topic position. However, a specific pro-copula in a language may be in a different phase of the grammaticalization process than that of another language. For example, a copula may still retain some morphosyntactic characteristics of discourse markers that allow it to appear in other sentence types of the language; on the other hand, the item may have started to be gradually reanalyzed as a linking morpheme between the subject and predicate or it may even have started to appear in other person constructions; for example, in first or second subject constructions. Given that the process of grammaticalization continues, pro-copulas may also become invariable to number and gender or align themselves either morphologically or syntactically with auxiliaries or verbs (Stassen 1997:77).

Non-verbal copulas are found in Arabic, Hebrew or Maltese:

(39) Maltese   (Stassen 1997:78)

   Malta   hi   gzira

   Malta   COP/3SG.FEM   island

   'Malta is an island'

(40) Palestinian Arabic

   Il   rozzal   huwwe   usta:z   mni:h

   DEF   man   COP/3SG.MASC   teacher   good

   'The man is a good teacher'

Here, the copula denotes a third person subject with both number and gender marking. A second type of non-verbal copula is a particle copula. These derive from discourse-oriented categories such as topicalization, backgrounding or contrastive focus for subjects or predicates (Stassen 1997:85). Items that may be grammaticalized as such include 'bleached' temporal or locative adverbs and conjunctions. Particle copulas go through the same grammaticalization process as pro-copulas. This phenomenon is common in many Afro-Asiatic languages.

Nominal predication is thus prototypically characterized by zero encoding or encoding by means of supportive items that originate from non-verbal discourse-marking elements. Whenever the application of either strategy is restricted, present tense is the minimal domain of nominal encoding strategies (33); for a number of languages, this restriction extends to third person present or third person singular present (34). Stassen (1997) proposes that these constraints on the nominal predicate encoding strategy are better understood as a case of identity takeover; that is, the nominal predicate category of a language borrows the encoding strategy of identity statements. These statements are presentational or equational. The former makes the identity of a referent known to the hearer whereas the latter asserts that two expressions refer to the same object. Both types of statements inform the hearer about something concerning his knowledge of the world. Identity statements categorize knowledge of the world into distinct 'mental files. This differs from predicational constructions where no mental file reorganization is required (Stassen 1997: 106). Moreover, a presentational statement instructs the hearer to open a new file while an equational one tends to 'delete' them (Stassen 1997:102). For example,

(41) English

        a. Bill, this is my wife, Trudy

        b. The Morning Star is the Evening Star

Example (41a) is presentational and (41b) is equational. In (41a) the speaker informs the hearer that Trudy should be categorized under the label wife. Hence, he instructs the hearer to open a new file that will store the new piece of information inside the file 'wife'. On the other hand, example (41b) instructs the hearer that there is no need to have two different files for The Morning Star and The Evening Star given that each one refers to the same entity. Thus, it may be stored as one file. Predicational statements, for their part, expand the content of already known information. For instance, in Bill is a teacher we are informed that someone we know, Bill, is also a teacher. Another example is:

(42) Warsaw is the capital of Poland

This sentence has two readings: (i) by describing something as "Warsaw", the speaker refers to the entity that the hearer has probably already filed as "the capital of Poland". Moreover, it is conveying that "the capital of Poland" is "Warsaw"; that is, it conveys a new piece of information and can, thus, be considered as an identity statement. This reading is also known as specificational. In (ii) example (42) is predicational for the speaker's intention is to add new information to an old file that the hearer has already stored in his mind. The purpose is to give a specific characteristic about something else. This, contrarily, is known as a characterizational reading. Both specificational and characterizational terms are studied in Hengeveld (1992). Characterizational statements add content to an already existing mental file whereas specificational statements provide

exhaustive and holistic information about a specific entity. Both identity statements and predicational constructions are either definite or indefinite. Identity statements are also considered definitional whereas predicational constructions classificational.

It is common for both identity statements and class-membership predicates to share the same encoding strategy. Languages in which this has not been attested form a minority (Stassen 1997:105). For example, Kalispel, where identity statements are encoded by the verbal strategy of the language or Estonian, where they are taken over by the language's locative strategy:

(43) Kalispel   (Stassen 1997:106-107)

      a. čin-ˈítš

       1SG-sleep

       'I fell asleep'

      b. čin-ílemíjum

       1SG-chief

       'I am a chief'

  (44) Estonian

      a. mees   on   linna-s

       man   be.3SG.PRES   town-INESS

       'The man is in town'

      b. see   vanahärra   on   öpetaja

       this   old man   be.3SG.PRES   teacher

       'This old man is a teacher'

Identity statements have three distinctive features: (i) they are usually encountered in third-person form; thus, it is expected that the former is the unmarked form for categorizing entities in a given language, (ii) they are not predicational and (iii), identity statements change the conceptual organization of a person's mental files. Given that identity statements build the categorial framework of cognition (Stassen 1997:109) these are thought of as constructions with a high degree of time-stability. Some authors even consider that the specification of time in these constructions is not possible given that they do not allow any overt tense-marking at all. Hence, the lack of temporal marking is tantamount to a zero encoding of identity statements. Languages which do not permit 'timeless' identity statements signal out one tense form as that preferred for identity statements, which is commonly the present tense form.

Given that these characteristics are the same as those for nominal predicates Stassen (1997) proposes that the encoding strategy for this type of predicates derives from that of identity statements. That is, there is an identity takeover of class-membership predication. This means that nominal predicates will be encoded by a zero strategy or a non-verbal copula strategy (Stassen 1997:112). The alternative is for nominal predicates to be encoded by a language's verbal or locative strategy. In some Austronesian languages, for example, nominal predicates are encoded as verbs while identity statements use zero encoding:

(45) Pala   (Stassen 1997:115)

   a. I   te   nongtamat

     3SG   DUR   old man

    'He is an old man'

   b. Húnamat   a   etna   Soi

     Húnamat   ART   mother Soi

    'Húnamat is Soi's mother'

In languages where nominal predicates are taken over by the locative strategy, identity statements retain a nominal one. This phenomenon is prominent in languages of Africa:

(46) Zande   (Stassen 1997:118)

   a. Mì   ni   gùde

     1SG   be   child

    'I am a child'

   b. Kóndó   gúre

     chicken   that

    'That's a chicken'

It should be noted that these are examples of pattern-switching languages; that is, languages that allow the selection of more than one pattern in the encoding of intransitive predication. Their counterpart is single-option languages. Category-switching is a rare phenomenon in nominal predicates. Nonetheless, in languages where it has been found

nominal switching may be of various types: (i) Internal N-Switching, (ii) Nominal N-L-Switching and (iii) other types of N-Switching.

The prototypical nominal strategy may use a zero copula, pronominal or particle copulas or verbal copulas. Each type is a different morphosyntactic manifestation of this strategy, and languages usually select one of these three options. Languages that select two or more of these encoding options though are said to exhibit internal N-Switching. Vietnamese and Shilluk, which is spoken in Africa, are languages that exhibit this phenomenon:

(47) Vietnamese   (Stassen 1997:208)

      a.Ông   ây   thây   thuôc

       gentleman   that   teacher medicine

       'He is a doctor'

      b. Ông   ây   là   lính

       gentleman   that   COP   soldier

       'He is a soldier'

  (48) Shilluk

     a. Yana   rit

      1SG.EMPH   king

      'I am a king'

b. Én   a   rit

   3SG   TOP   king

   'He is a king'

In Vietnamese there is a combination of a zero copula (47a) and a particle copula (47b) while Shilluk exhibits a particle copula (48b) and a pronominal one (48a). Nominal N-L switching occurs in languages where nominal predicates require a locative support verb, which, in turn, functions as a copula. In these languages, the locative support verb is under a process of copularization. There seems to be no semantic or syntactic restrictions on this type of category switching.

(49) Fordat   (Stassen 1997:215)

   a. Jan   ratoe   ia

      Jan   king   3SG

      'Jan is a king'

   b. Ia   n   -naä   tomatta

      3SG   3SG   -be   man

      'He is a man'

   c. Oa   m   -naä   rahan   ralan

      2SG   2SG   - be   house   inside

      'You are in the house'

In this example, the locative verb -naä (49c) competes with the nominal strategy – a non-verbal copula encoding. In (49b) the locative verb functions as a copula. Locative verbs may also compete with a zero encoding strategy. This occurs in Tupi:

(50) Tupi   (Stassen 1997:215)

      a.Yauti   mira   katu

       Yauti   man   good

       'Yauti is a good man'

      b. A -icô   abara-mo

       3SG -be   man-in

       'He is a man'

      c. Pina   o   -ikó   patua   pupé

       hammock 3SG -be   hut   in

       'The hammock is in the hut'

Nominal N-L-Switching may also be expressed on the basis of the semantic opposition temporality-permanency. That is, nominal predicates that denote 'membership of some established functional, professional or ideological group' (Dik 1980 cit. in Stassen 1997) are fulfilled only for a limited amount of time. Conversely, if the predicate denotes a permanent and unchangeable characteristic of the subject then this feature will be seen as something inherent of that argument:

(51) Modern Irish   (Stassen 1997:217)

    a. is   múinteoir   é

      COP   teacher   he

      'He is a teacher'

    b. ta   sé   ina   mmúinteoir   anois

      be.PRES   he   in-his   teacher   now

      'He is a teacher now'

    c. ta   sé   sa   tseomra

      be.PRES   he   in-the   room

      'He is in the room'

A third type of category-switching for nominal predicates is that where this category is taken over by a language's verbal encoding strategy. This type of pattern-switching is marginal if compared to N-L-Switching. An example is Kilvila, an Austronesian language spoken in Eastern Melanesia:

(52) Kilvila   (Stassen 1997:227)

    a. Ku   -guyau

      2SG.NEUTR   -chief

      'You will become chief'

b. Mi -na   -na   bunukwa   na   -vivila   na   -manadweta

     DEM-CLASS-DEM   pig   CLASS-FEM   CLASS-beautiful

     'This is a beautiful sow'

The phenomenon of nominal V-L Switching has also been found in a smaller number of languages than that of nominal N-L-Switching, and it is characterized by the fact that nominal predicates are encoded by the language's verbal strategy; however, they may also be encoded non-verbally with the use of a support verb (53c):

(53) Mojave   (Stassen 1997:228)

a. ˈaha -lʸ   -iva-k

      water-LOC   1SG.SUBJ   -sit-TNS

      'I am sitting in the water'

b. Jim-č   O   -kʷaTE?ide:-k

      Jim-SUBJ   3SG   -doctor   -TNS

      'Jim is a doctor'

c. John   kʷaTE?ide:- č   O   -ido-pč

      John   doctor   -SUBJ 3SG   -be-TNS

      'John is a doctor'

This phenomenon has only been found in languages of the Yuman family. Finally, languages may also exhibit a triple N-Switching. That is, a language has three different strategies for the encoding of nominal predicates. This occurs in Abkhaz:

(54) Abkhaz   (Stassen 1997:231)

    a. W↔y   d↔   -way°↔+p[|]

       that one   3SG.HUM-man-STAT.PRES

       'He is a man'

    b. W↔y   way°↔-s   d↔   -q[|]o-w+p[|]

       that one   man-PRED.CASE   3SG.HUM   -be-STAT.PRES

       'He is a man'

    c. W↔y   Àxra   y   -o   -w+p[|]

       that one   Axra 3SG.MASC   -COP-STAT.PRES

       'He is Axra'

In example (54a) the predicate nominal takes the form of a stative verb. Hence, it is treated on a par with verbal predicates in that it is marked both by person-number-gender and tense-aspect items. This verbal treatment of nominal predicates in Abkhaz denotes a permanent and inherent characteristic of the subject. This quality can also be encoded non-verbally (54b) though. The supportive verb used here, -q[|]o-w+p[|], is also used in the encoding of locative predicates. A locative verb is also required whenever a sentence

expresses a temporary state like a role or function of the subject and a copula is mandatory whenever it expresses an identity statement (54c).

2.2.2 Adjectival Predication

Typological research has shown that adjectives are not a universal category in language. Thus, they are an inherently controversial word class. This is seen best by the fact that while all languages seem to distinguish between nouns and verbs, many languages do not differentiate adjectives as a distinct grammatical category; those that do, however, may either have an open adjective class or a closed set of items that function as property denoting items. English is an example of the first whereas Nkore-Kiga, a Bantu language spoken in Uganda, is an instance of the second with less than twenty "true" adjectives (Wetzer 1996: 16). However, there is a third type of languages in which there is no distinction of adjectives of any kind (Schachter 1985).

Prototypical adjectives are defined by Dixon (1977; 2004) as lexical items that express property concepts. They are classified according to the following "semantic types":

1. DIMENSION: big, large, small, little; long, short; wide, narrow; thick, fat, thin

2. PHYSICAL PROPERTY: hard, soft; heavy, light; rough, smooth; hot, cold; sweet, sour

3. COLOR: black, white, red

4. HUMAN PROPENSITY: jealous, happy, kind, clever, generous, gay, cruel, rude, proud

5. AGE: new, young, old

6. VALUE: good, bad, fine, excellent, delicious, atrocious, poor

7. SPEED: fast, quick, slow

Thus, languages with an open adjective class usually have items that denote concepts of all or most of the semantic types enumerated by Dixon; this also seems to be the case for languages where adjectives are not clearly distinguished. That is, all seven semantic types are predominantly associated with the same parts-of-speech (Wetzer 1996:9), while languages like Nkore-Kiga usually have a small set of adjectives. The age, dimension, value and color semantic types are likely to belong to this adjective class, however small it is (Dixon 1977; 2004). In these languages, physical property concepts are usually encoded as verbs and/or nouns, and human propensity items are typically associated with nouns. This means that languages with a closed set of adjectives do not have items that denote physical properties such as hard, cold or heavy. However, if the adjective class gets larger it is more likely for the language to include physical property items than it is to include human propensity adjectives. Finally, the semantic type speed is categorized depending on the categorization of physical property concepts. That is to say, if physical property concepts are included in the language's adjective class, then so will concepts denoting speed. However, if physical property adjectives are considered verb-like concepts then speed concepts will be associated with adverbs. In languages without a distinctive adjective word class, property concepts are encoded either as nouns or verbs. This separates this type of languages into adjectival-noun languages and adjectival-verb

languages. Imbabura Quechua is an instance of the former while Mandarin Chinese of the latter.

(55) Imbabura Quechua   (Cole 1982:99 cit. en Wetzer 1996)

    a. Juzi   jatun-ta-mi   chari-n

      José   big-ACC-VAL   have-PRES3SG

      'José has a big one'

    b. pay-paj   tayta-ka   chay   wambra-ta-mi   wajta-rka

      he-of   father-TOP   that   child-ACC-VAL   to hit-PAST3SG

      'His father hit that child'

In Imbabura Quechua, adjectives are marked by the accusative marker -ta, which allows them to function as the direct object of the clause, a function usually assumed by nouns (55b). Adjectives may also function as the complement of the copula ka. That is, they appear in the same predicative constructions as nouns do:

(56) Imbabura Quechua   (Cole 1982:99 cit. en Wetzer 1996)

    a. ñuka   wasi-ka   yuraj-mi   ka-rka

      my   house-TOP   white-VAL   COP-PAST3SG

      'My house was white'

    b. Juan-ka   mayistru-mi   ka-rka

      Juan-TOP   maestro-VAL   COP-PAST3SG

      'Juan was a teacher'

In Mandarin Chinese, on the other hand, adjectives behave as verbs when used as predicates:

(57) Mandarin Chinese   (Hopper and Thompson 1984)

   a. tā   hǎo

    3SG good

    'S/he is good'

   b. tā   pǎo

    3SG run

    'She runs'

These examples show that in languages that do not make a clear distinction between adjectives and other word classes, the former tend to show morphological and/or syntactic similarities with nouns or verbs, thus associating more with one of these two major parts-of-speech. Consequently, adjectives are divided into three types of lexical categorizations: (i) adjectives, (ii) adjectival nouns and (iii) adjectival verbs (Schachter 1985). This classification, though, falls short in determining why adjectival concepts are distributed across all three lexical categories and to answer why a language selects a particular strategy in the expression of property concepts (Wetzer 1996).

    This failure, moreover, has led to the imminent refutation of Schachter's proposal and to the further development of an alternative perspective that describes the grammatical relations between property concepts, on the one hand, and nouns and verbs on the other. The "continuum hypothesis", based on data from English, was first proposed by Ross (1972) and it states that adjectives "occupy an intermediate position in a

language independent lexical continuum from Verb to Noun" (Wetzer 1996). The continuum is shown in (58):

(58) VERBS -----------ADJECTIVES --------- NOUNS

                        decreasing verbality
            =============================➔
                        increasing nominality
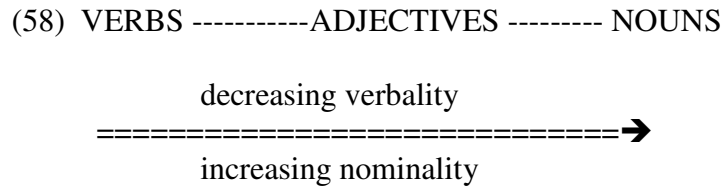
In order to account for the distribution of adjectival concepts across the lexical categories Verb, Adjective and Noun, the continuum hypothesis rejects the former perception of word classes as discrete and unrelated categories and considers them to be non-discrete clusters of properties that tend to show some degree of overlap with both nouns and verbs. Consequently, lexical items lose their verbal characteristics as they advance further to the right end of the scale while acquiring features that are characteristic to prototypical nouns. The degree of decreasing verbality and increasing nominality in adjectival concepts differs from language to language. This hypothesis has been advocated by scholars such as Comrie (1975) and Pustet (1989). Thus, adjectival verbs and adjectival nouns are said to belong to one terminal category or the other if the dividing line between them is drawn, say, between adjectival concepts and nouns for the former and between verbs and adjectival concepts for the latter. This is shown in (59):

(59) VERBS --------   ADJECTIVES --------- NOUNS

        a. Verbs   Adjectival Verbs //   Nouns

        b. Verbs   //   Adjectival Nouns   Nouns

        c. Verbs   //   Adjectives   //   Nouns
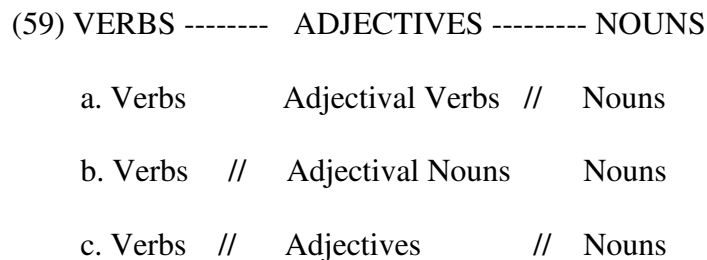
The patterns (59a) and (59b) represent languages with no clear distinction of an adjectival word class (Schachter 1985), and use either verbs or nouns to express properties. Pattern (59c) represents languages like English with a separate class of property denoting items. Languages differ in how and where they make the distinction of all three categories in the continuum; they also tend to distinguish a different number of word classes. That is, a language may distinguish a part of speech that another may not. It should also be noted here that even though adjectives may be considered verb-like in adjectival-verb languages or noun-like in adjectival-noun ones, words expressing property concepts also typically exhibit distinctive properties not shared either by prototypical nouns or prototypical verbs and if a language has an open adjective class these distinctive properties are the ones that will define them as a separate word class.

The explanation given by the *continnum hypothesis* to account for the fact that adjectives tend to display both nominal and verbal characteristics is based on the complexity of the verbal or nominal system of a language. Some languages have a complicated noun system and a rather simple verbal system while others exhibit an opposite pattern; that is, the language's noun system is relatively simple but its verbal system is not. The first are considered object-dominated languages whereas the second event-dominated languages. This is known as the typology of "concept-domination" (Capell 1965 cit. en Wetzer 1996). The cross-linguistic behavior of adjectives can thus be explained by analogy as event-dominated if a language has verby adjectives or object-dominated if it has nouny adjectives. In the first type of languages, the verb class is relatively large since property concepts are included in the same category whereas in the

second it is the noun class that is greatly augmented by the inclusion of property concept words (Wetzer 1996).

Prototypical nouns designate things or concrete objects while prototypical verbs typically designate actions, events or processes. Each parts-of-speech is known to fulfill a specific function within a clause; that is, nouns tend to function as arguments whereas verbs do so as predicates (Pustet 2003). Adjectives function as attributes. For instance,

(60) English

The tall man

However, the attribute denoted by the adjective *tall* in (60) can also be expressed as a predicate. This is shown in example (61):

(61) English

The man is tall

An adjectival predication construction is defined as that which assigns a prototypical property to a person or an object. The question is, are adjectival concepts in predicative constructions verby or nouny? When functioning as attributes adjectives display syntactic properties not shared either by nouns or verbs (Wetzer 1996: 77).

There are three strategies used to encode intransitive verbs and nominal predicates; verby adjectives are compared with the former while nouny adjectives to the latter. These predicate formation strategies are: (i) person marking, (ii) the use of an overt copula, and (iii) zero-marking. Person marking refers to the use of person markers cross-referencing the subject of an intransitive predicate. It is prototypically associated with verbs, and it is

commonly effectuated by means of obligatory pronominal affixes in the verb complex (Wetzer 1996):

(62) Mojave   (Wetzer 1996: 86)

tomatta n-maa

man   3SG-come

'The man comes'

In this language, person agreement is marked by means of a prefix. However, in others it is marked with a suffix. This happens in Barasano, a Tucanoan language spoken in Columbia:

(63) Barasano   (Stassen 1997: 37)

Oko   kedi-a   -ha

water fall-PRES-3SG

'It is raining'

Other person marking strategies are found in different languages. The use of an overt copula is a strategy prototypically associated with nouns. It occurs frequently in ascriptive sentences (§2.1.3), and the function of the copula is to link the nominal to the subject noun phrase allowing it to function as a predicate. Many languages have a verbal copula, English among them. In this language, the copula '*to be*' encodes categories of verbal morphology which would otherwise be marked on the verbal predicate.

(64) English

I am the teacher

Another language with a verbal copula is Finnish:

(65) Finnish   (Wetzer 1996:92)

      ystävä-ni   on   pappi

      friend-1SG.GEN   COP.PRES3SG   vicar

      'My friend is a vicar'

Given that the purpose of the copula is to link the nominal to the subject noun phrase, it is considered here to be a semantically empty device (Hengeveld 1992:43). Copulas can also be non-verbal. Many Semitic languages spoken in the Middle East and Northern Africa use them:

(66) Maltese   (Stassen 1997:78)

      Malta   hi   gzira

      Malta   COP/3SG.FEM   island

      'Malta is an island'

The non-verbal copula in Maltese is pronominal. Jabem, an Austronesian language spoken in Papua New Guinea, also uses copulas of this type:

(67) Jabem   (Wetzer 1996:93)

      a. ka   tonec   nip

       tree   this   coconut tree

       'The tree is a coconut tree'

     b. bômbôm   tonang   eng   kiap

       white-one   that   he   official

       'The white one is an official'

Other languages have copulas that may be omitted. An example is Mongolian:

(68) Mongolian   (Wetzer 1996: 95)

    minu   aqa   blama   (bui)

    I.GEN   elder brother Lama   (COP.PRES)

    'My elder brother is a Lama'

Zero-marking is defined as the absence of overt markers. Both person marking and overt copulas may use this strategy; it is characterized by the mere juxtaposition of the intransitive predicate and its subject noun phrase. For instance,

(69) Russian   (Stassen 1997: 62)

    Moskva   O   gorod

    Moscow   COP   city

    'Moscow is a city'

(70) Guarani   (Stassen 1997: 63)

    Né   O   soldado

    2SG   COP   soldier

    'You are a soldier'

Languages exhibit different patterns in which these verbal and nominal strategies are used. These patterns have also been studied by Stassen (1997). Wetzer (1996), however, divides them into (i) uniform patterns of predication and (ii) different patterns of predication. For example,

(71) Kalispel   (Wetzer 1996:102)

  a. čin-juist

    1SG-walk

    'I walk'

  b. čin-iləmijum

    1SG-chief

    'I am chief'

In Kalispel, both the verbal and nominal predicate must be marked for person with an obligatory prefix. Thus, this language has a uniform predication pattern. Other uniform patterns are those used in Basque and Tagalog:

(72) Basque   (Wetzer 1996:102)

  a. gizon-a   ettori   da

    man-ABS   come   AUX.PRES3SG.ABS

    'The man comes'

  b. hura   gizon-a   da

    3SG.ABS   man-SG.ABS   COP.PRES3SG.ABS

    'He is a man'

(73) Tagalog

  a. nagtatrabaho   ang   lalaki

    IMPERFwork   TOP   man

    'The man is working'

b. maestro   ang   lalaki

teacher   TOP   man

'The man is a teacher'

Non-uniform or differentiation patterns of predication are those where verbal and nominal

predicates receive different formal encodings. These are:

(74) Non-Uniform Patterns of Predication   (Wetzer 1996:102)

V$_{PRED}$	N$_{PRED}$
a. PERS	ZERO
b. PERS	COP
c. ZERO	COP
d. COP	ZERO
e. COP	PERS
f. ZERO	PERS

A language that exhibits pattern (74a) is Tiwi, a language isolate spoken in

Australia:

(75) Tiwi   (Wetzer 1996:102)

a. a-pangulimai

3SG.MASC.NONPAST-walk

'He is walking/he will walk'

b. anginaki   pilimunga

this   road

'This is a road'

Pattern (74b) is found in Big Nambas, a Malayo Polynesian language spoken in Northwest Malekula, Vanuatu:

(76) Big Nambas   (Wetzer 1996: 103)

    a. i-v↔rv↔r

      3SG.REAL-run

      'He runs'

    b. a   uni-ar   i-vʲi   prapar

      REF.PART   mother-their   3SG.REAL-COPbe   sow

      'Their mother is/was a sow'

Yoruba is a language that exhibits pattern (74c):

(77) Yoruba   (Wetzer 1996: 103)

    a. ó   lo

      3SG.SUBJ   go

      'He went'

    b. ó   jé   ènìà

      3SG.SUBJ   COP   person

      'He is a human being'

Finally, pattern (74d) is found in Maranungku, a language spoken in Australia:

(78) Maranungku (Wetzer 1996: 104)

a. tirr wuttar ka-nga-ni wat ayi

   edge sea NONFUT-1SG-go walk PAST

   'I walked to the beach'

b. awa yuwa arrtany

   meat that shark

   'That fish is a shark'

This pattern is somewhat marginal for it applies to very few languages studied by Wetzer (1996) while both pattern (74e) and (74f) are highly marked. Adjectival predicates are considered nouny if they receive the same encoding pattern as nominal predicates. Thus, they have the following encoding patterns:

(79) Patterns of nouny adjectives (Wetzer 1996:116)

N$_{PRED}$	A$_{PRED}$
a. ZERO	ZERO
b. COP	COP
c. COP	COP
d. ZERO	ZERO

That is, if a nominal predicate is encoded by a zero copula then adjectival predicates will also be encoded thus. If, on the other hand, nominal predicates are encoded by an overt copula then so will adjectival predicates. Finnish is an example of the former:

(80) Finnish   (Wetzer 1996: 116)

   a. hän   saapuu

     he   arrivePRES3SG

     'He arrives'

   b. tyttö   on   pieni

     girl   COP.PRES3SG   small

     'The girl is small'

   c. ystävä-ni   on   pappi

     friend-my   COP.PRES3SG   vicar

     'My friend is a vicar'

Adjectives that are encoded by a zero copula occur in Maranungku. The example given
above for this language is repeated here as (81):

(81) Maranungku   (Wetzer 1996: 119)

   a. tirr   wuttar   ka-nga-ni   wat   ayi

     edge   sea   NONFUT-1SG-go   walk   PAST

     'I walked to the beach'

   b. awa   yuwa   arrtany

     meat   that   shark

     'That fish is a shark'

c. mi   ngany   kiruwality

   dog   my   small

   'My dog is small'

Predicate categories that share an encoding strategy also share some morphosyntactic properties. For instance, if adjectival and nominal predicates are both expressed by an obligatory overt copula then the same lexical item functioning as a copula in the former will also function as such in the latter. Moreover, if an adjective is used as the complement of a copula then it should undergo the same grammatical process as nouns do when these are used as such. It should be noted though that this is not always the case for both adjectival and nominal predicates may be accompanied by a different copula or may have different syntactic requirements in order to be used predicatively.

The patterns of predicate formation for verby adjectives are:

(82) Patterns of verby adjectives   (Wetzer 1996:182)

V_{PRED}	A_{PRED}
a. PERS	PERS
b. PERS	PERS
c. ZERO	ZERO
d. COP	COP

Pattern (82d) was not attested in the studied sample. A language with verby adjectives is Guarani:

(83) Guarani   (Wetzer 1996: 183)

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a. o-puka

 3SUBJ-laugh

 'He laughs'

b. i-pukú

 3SUBJ.REF-tall

 'He is tall'

c. kova   pañ

  this-one   priest

 'This one is a priest'

In this example, both the verb and adjective predicate have a person marking pronoun while the nominal predicate is merely juxtaposed. Zero-marking, on the other hand, is found in Yoruba:

(84) Yoruba   (Wetzer 1996: 185)

    a. ó   lo

      3SG.SUBJ   go

      'He went'

    b. ó   ga

      3SG.SUBJ   tall

      'He is tall'

c. ó　　　　jé　　ènìà

3SG.SUBJ　　COP　person

'He is a human being'

Here, nominal predicates are predicated by means of an overt copula while adjectival predicates share the same encoding strategy as verbs.

Languages may also exhibit pattern-switching in adjectival predication. The most commonly attested category-switching form for adjectival predicates is adjectival N-V-Switching, which defines a transitory encoding situation in which adjectives are neither taken over completely by the verbal strategy of a language nor by its nominal strategy (Stassen 1997:158). An example is Biblical Hebrew where adjectival predicates are encoded both by the nominal zero strategy and verbal encoding strategy:

(85) Biblical Hebrew　　　　　　　　　　　　　　(Stassen 1997:158)

a. Zāqēn

old.3SG.MASC.PERF

'He became old'

b. Dāwīd　　mélek　　tôb

David　　king　　good

'David is a good king'

Maori, a Polynesian language, exhibits a second type of adjectival V-N Switching:

(86) Maori   (Stassen 1997:159)

    a. ka   oma   te   kootiro

      INC   run   ART.DEF   girl

     'The girl runs'

    b. kua   mate   taku   hoa

      PERF die   my   friend

     'My friend has died'

    c. he   kiwi   teera   manu

      ART.INDEF   kiwi   this   bird

     'This bird is a kiwi'

    d. ehara   teera   manu   i   te   kiwi

      ART.INDEF this   bird   PART ART kiwi

     'This bird is not a kiwi'

In this language, subject-agreement categories do not agree with the subject. However, verbal predicates must be obligatorily preceded by particles that indicate tense or aspect. This same strategy occurs with locative predicates. Nominal predicates, on the other hand, are tenseless and accept a negative item that verbal predicates do not.

A third type of adjectival N-V-Switching is found in Luo, a Western Nilotic language:

(87) Luo   (Stassen 1997:160)

   a. A -'lwóŋɔ

   1SG-call.NONPERF

   'I call'

   b. Ân   Jâlùò

   1SG.EMPH   Luo

   'I am a Luo'

The verbal strategy to form predicates in this language is by means of person-number-gender prefixes. Nominal predicates, on the other hand, require emphatic pronouns in a zero copula construction. Locative predicates are also encoded in this manner. Adjectival predicates, for their part, are encoded by means of PNG-prefixes, which, on the one hand, allow them to be treated on a par with verbs or by zero encoding, which, on the other hand, aligns them to the non-verbal strategy of nominal predicates:

(88) Luo   (Stassen 1997:161)

   a. À   -bɛ˙r

     1SG   -good.NONPERF

     'I am good'

   b. An   ma   bɛ˙r

     1SG.EMPH   NOMNL   -good.NONPERF

     'I am good'

A second type of adjectival pattern-switching is Adjectival N-L Switching. This refers to adjectival switching between a nominal and a locative predicate encoding strategy. This phenomenon occurs in Spanish:

(89) Spanish   (Stassen 1997:218)

    a. Julia   es   enfermera

     Julia   COP   nurse

     'Juan is a nurse'

    b. Julia   está   de   enfermera

     Julia   be.PRES.3SG   PREP   nurse

     'Julia works as a nurse'

The copula *ser* in Spanish is used as the encoding strategy for nominal predicates and designates a permanent characteristic endowed to the subject. Hence, the adjective predicate in 89(a) denotes a permanent state. Whenever the adjective is predicated by means of the supportive verb estar, which is the construction used for locative predicates, the adjective denotes a temporary characteristic of the subject.

    The least prominent adjectival pattern-switching is the verbal-locative pattern. It occurs in Babungo, a Bantu language spoken in Cameroon.

(90) Babungo   (Stassen 1997:195)

    a. Làmbí   gə   taa   tìwìŋ

      Lambi   go.PERF   to   market

      'Lambi went to market'

    b. Nwé   wē

      3SG.MASC   strong.PERF

      'He is strong'

    c. Nwé   lùu   wē'

      3SG.MASC   COP   strong

     'He is strong'

    d. Nwé   lùu   taa   nìì

      3SG.MASC   COP   in   house

     'He is in the house'

Finally, some languages have been found to exhibit a triple adjectival switching. This means that all three encoding strategies participate in the formation of predicate adjectives, and it has been found to occur in languages of the Tibeto-Burman family.

(91) Classic Tibetan   (Stassen 1997:200)

    a. khyod   čhe-o

      2SG.ABS   big-INDIC

      'You are big'

    b. khyi   čhun-ba   yin

      dog   small-NOMNL   COP

      'The dog is small'

    c. na   phyug-po   yod

      1SG   rich-NOMNL   be

      'I am rich'

2.3. The Syntactic Functions of Copulas and the Verb 'to Be'

2.3.1 Copulas

A copula is defined here as a linguistic element that co-occurs with certain lexemes when they function as the predicate nucleus of a given construction (Pustet 2003:5). For example,

    (92) English

      a. John is a teacher

      b. John is tall

      c. The dog jumped

(93) Mandarin Chinese

    a. Dàmíng   shì   lǎoshī

       Da Ming   COP   teacher

       'Da-Ming is a teacher'

    b. Dàmíng   hěn   gāo

       Da Ming   very   tall

       'Da Ming is very tall'

    c. Dàmíng   zài   pǎobù

       Da Ming   IMPERF   run

       'Da Ming is running'

English requires a copula both in nominal and adjectival predicates and in Mandarin Chinese only nouns in a predicate position receive a copula. However, not all languages have copulas. For example, Tagalog:

(94) Tagalog

    a. nagtatrabaho   ang   lalaki

       IMPERFwork   TOP   man

       'The man is working'

    b. maestro   ang   lalaki

       teacher   TOP   man

       'The man is a teacher'

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Copulas do not add any semantic content to the predicate phrase they accompany. Hence, their function cannot be explained in terms of meaning. They are represented by the following formula, where β represents the category of the predicate (β = A, N, etc) while τ represents the category of the copula (V, Pro, etc). A copula functions as the carrier of tense, mood, and aspect categories.

(95) $(e_1: [\text{copula}_\tau, \text{pred}_\beta (\alpha_1 \dots \alpha_n)] (e_1))$

$(\beta \neq V)$

Moreover, a copula used in a non-verbal predication, if the language uses copulas at all, is not part of the construction's main predicate (Hengeveld 1992:30). Scholars of different theoretical orientations have proposed three hypotheses in order to account for copulas based on the fact that these items are only encountered in a predicate position: (i) to function as a linker between the subject and predicate; (ii) to function as a syntactic 'hitching post' to which verbal inflectional categories can be attached to and (iii) to function as a predicator added to lexemes that cannot function as predicates on their own (Pustet 2003:2).

According to the first hypothesis, also known as the linker hypothesis, a copula is likened to a linking verb and its main function is to relate the subject and predicate of a clause. However, in most languages with a copula not all lexemes are linked to the subject when used as a predicate nucleus. This can be seen in Mandarin Chinese where nominal predicates require copulas (93a) but adjectival predicates do not (93b). Moreover, other languages do not have copulas (94). The second hypothesis is the Dummy Hypothesis (§2.2.1). Here, copulas are considered 'semantically empty' devices

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(§2.1.3). This means that their sole purpose is to carry categories of verbal morphology incompatible with the predicate nucleus of the construction they appear in and, consequently, do not add any meaning to the clause. Stassen (1997) and Lyons (1968) support this hypothesis. Nonetheless, the copula in Mandarin Chinese cannot be combined with categories of verbal morphology because Mandarin is an isolating language and lacks any morphologically marked categories of the kind (Pustet 2003:2). Thus, how is the copula in this language accounted for? Moreover, there are also languages where an inflectional category is encoded in the lexical nucleus (Pustet 2003:3). Turkish is a case in point, where person affixes are directly attached to predicate nucleus:

(96) Turkish   (Pustet 2003:4)

     (ben)   satıcı-y-ım

     1SG   seller-COP-1SG

     'I am a seller'

The attachment of verbal inflectional categories to a predicate in this language is not restricted to a specific parts-of-speech (Pustet 2003). This phenomenon also occurs in Classical Nahuatl:

(97) Classical Nahuatl   (Pustet 2003:4)

     ni-teūc-tli

     1SG.SUBJ-lord-NPS.SG

     'I am a lord'

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In this example, the prefix ni- denotes 'first person singular subject' and the suffix –tli expresses the inflectional categories of 'non-possessed status' and number. A third hypothesis that tries to clarify the use of copulas in various languages is the predicator hypothesis, which states that copulas allow certain lexemes to function as predicates where they cannot function as such on their own. This hypothesis, however, cannot account for the fact that the adjective predicate in English requires a copula while its Mandarin Chinese counterpart does not. Moreover, it does not explain why the predicate in Classic Nahuatl is capable of forming predicates on its own while that of the corresponding predicate in English is not.

Curnow (2001) defines copula constructions as the most basic type of construction, and they are used to encode meanings of identity and class membership or classification. An example of each is given in (98):

(98) English

a. That man is my father

b. Maria is a teacher

A construction is less basic if two or more noun phrases have the same referent or encode the same information (Curnow 1999). Both noun phrases of a copula clause are referred to copula subject (CS) and copula complement (CC) respectively. Semantic relations of existence, location and possession are also encoded by copula clauses in many languages. Dixon (2010) adds the semantic relations of attribution, e.g. *this man is clever* and benefaction. For instance, *this present is for John's birthday*. A copula must occur in a construction with two core arguments: (CS) and (CC) (Dixon 2010). This is true for all

types of semantic relations encoded by copula constructions except existential clauses. For example, in French *Deus est* the copula occurs with an obligatory (CS) argument but no (CC) argument. This type of construction, however, is not a copula clause but an intransitive one (Dixon 2010).

Curnow (2001) also distinguishes four strategies used by languages to encode the previous semantic relations in copula constructions: (i) verbal copula constructions, (ii) particle copula constructions, (iii) inflectional copula constructions and (iv) zero copula constructions. Each strategy is attested for in Stassen (1997). A verbal copula construction is found in English (98) and Polish (99):

(99) Polish   (Comrie 1997:40 cited in Curnow 2001)

       ten   chlopiec   jest   moim   uczniem

       this.NOM   boy.NOM   is   my.INSTR   pupil.INSTR

       'This boy is my pupil'

Particle copula constructions are found in Modern Irish:

(100) Modern Irish   (Doherty 1996:2 cited in Curnow 2001)

       is   dochtir   è

       COP   doctor   he.ACC

       'He is a doctor'

Particle copulas differ from verbal copulas in that they do not inflect for any category. An inflectional copula construction is found in Turkish or Pipil, where the copula complement is treated as a verb:

(101) Pipil   (Campbell 1985:54 cited in Curnow 2001)

ni-ta:kat

1SG.SUBJ-man

'I am a man'

(102) Turkish   (Curnow 1999:4)

ben ˆgretmen-im

I teacher-1SG

'I am a teacher'

In a zero copula construction, both the copula subject and copula complement are simply juxtaposed. Hence, no overt morphological markers indicate the nature of the relationship between them (Curnow 1999):

(103) Watjarri   (Douglas 1981:238 cited in Curnow 2001)

pakarli maparnpa

man.ABS sorcerer.ABS

'The man is a sorcerer'

(104) Modern Hebrew   (Junger 1981:122 cited in Curnow 2001)

Sara mora

Sara teacher

'Sara is a teacher'

Dixon (2010) classifies zero copula constructions as verbless clauses; that is, the copula slot is left blank. Like copula clauses, verbless clauses have two core arguments: (i) a verbless clause subject (VCS) and (ii) a verbless clause complement (VCC). The semantic relations denoted by these types of clauses are (a) identity, (b) attribution, (c) possession and (d) benefaction. Both (CS) and (VCS) arguments can be noun phrases or complement clauses if the language in question allows such a construction. Hence, they have the same structural possibilities as the (S), (A), and (O) arguments of intransitive and transitive clauses (Dixon 2010). Likewise, if an argument is functionally umarked that argument will be (S), (CS) or (VCS). This is true for nominative-accusative languages where the most agent-like argument (A) of a transitive clause is functionally unmarked as (S) and the corresponding arguments of copula or verbless constructions. In ergative-absolutive languages, both (CS) and (VCS) will be aligned with (S) and (O). Table 1 describes the case-marking patterns for copula constructions:

	Copula Subject	Copula Complement
Verbal Copula Construction	as S	(a) as S (b) unmarked (c) other case (equative)
Particle Copula Construction	unmarked	unmarked
Inflectional Copula Construction	as S	unmarked
Zero-copula Constructions	as S	unmarked

Table 1. Case-marking patterns for copula constructions (Curnow 1999).

Higgins (1979), for his part, classifies copular sentences into three types: (i) predicational, (ii) specificational and (iii) identificational. Roy (2006) adds a fourth type: (iv) identity. An example of each is given in (105):

(105) English   (Roy 2006:12)

        a. Paul is tall   (predicational)

        b. That is John   (identificational)

        c. The problem is John   (specificational)

        d. Clark Kent is Superman   (identity)

The syntactic characteristics of each type of construction have been dealt with elsewhere. However, it is worth mentioning here that a predicational copular sentence is the only one that expresses a subject-predicate relation between its arguments and is, consequently, the one that most interests us here. The subject has a specific referent and the predicate states a property of that referent. Another example is *John is a philosopher*. Specificational sentences delimit a domain and their predicates identify a member of that domain. There is no referential subject here of any kind. Identity statements, on their part, express an identity relation between the arguments involved and, hence, do not involve a non-verbal predicate at all (Roy 2006:12). Finally, an identificational sentence *identifies* two referents.

Copulas may be a free or bound morpheme (Pustet 2003); they are classified into verbal or non-verbal copulas. A full account of the types of copulas has been given in

(§2.2.1). Lexical items are grammaticalized as copulas either by means of a process of (i) copularization or (ii) auxiliarization. Hengeveld (1992) enumerates the following as items that may undergo either one of these processes: (i) positional verbs and localizing copulas, (ii) pronouns, (iii) semi-copulas and (iv) existential verbs. This will be addressed to for Yoreme/Mayo in (§3.3.1).

2.3.2 Verb 'to be'

In studying copular sentences, scholars have proposed a distinction between predicative and equative forms of the verb 'to be' (Roy 2006). Each is identified by the types of arguments found in the constructions they appear in. The verb 'to be' of predication takes two arguments: (i) a subject and (ii) a predicate, which can be realized as a NP, AP or PP (Roy 2006:29). This form of the English copula does not have any semantic content and merely functions as a means to apply the predicate to the subject. This is in accord with the Dummy Hypothesis (§2.2.1). The copula of equation, on the other hand, takes two referential expressions as its arguments, and encodes a semantic relationship of identity between both of them. Here, the copula is equivalent to the mathematical sign '='.

Williams (1983) and Partee (1984, 1986), for their part, propose that there is only one form of the English copula 'to be', whose main function is predicative. Here, the copula serves as a link between the subject term and the predicate. Thus, the copula indicates that the property denoted by the complement holds for the external argument x (Geist 2008). Partee (1984) represents this function of the copula by the following formula:

(106) be$_{Pred}$: λP λx [P(x)]

Hence, the structure of a predicational sentence according to this theory is represented by:

(107) a. John is a teacher   (Geist 2008:6)

        b. [$_S$ [$_{DP}$John]   [is   [$_{NP}$ a teacher]]]

                    ↓   ↓   ↓

        c.   (**john**)   λP λx [P(x)]   λy [TEACHER(y)]

Example (107b) represents the syntactic structure of (107a) while (107c) specifies the semantic content of each syntactic constituent. If we combine the predicate NP [a teacher] with the copula, we get an expression that denotes the property of being a teacher. That is, [λP λx [P(x)]] (λy [TEACHER(y)]) ≡ λx [TEACHER(x)]; (122c) is obtained thereafter by replacing x with the subject argument John, which, in turn, renders the following formula:

(108) [$_S$ John is a teacher]: [λx [TEACHER(x)]] (**john**) ≡ [TEACHER (**john**)].

Unlike predicational sentences, equative sentences assert that both arguments have the same referent. Thus, equative sentences are analyzed as constructions where both the subject and predicate are referential entities treated by an operation of "typeshifting" that allows referential expressions of type (e) to be shifted into expressions of type <e,t> (Roy 2006:31). An example is Cicero is Tully, where:

(109) a. ident: λx λy [y = x]

b. ident (**tully**): λy [y = **tully**]

(110) a. be$_{Pred}$: λP λx [P(x)]

b. [is Tully]: [λP λx [P(x)]] (λy [y = **tully**]) ≡ x [**tully** = x]

c. [$_S$ Cicero is Tully]: [λy [y = **tully**]] (**124jaría**) ≡ **124jaría = tully**

That is, (110a) is treated by an ident operation that shifts the type of complement that the copula can take; in other words, it converts the post-copular referential argument into the property of being identical to Tully. The relation of identity is encoded here in the shifted meaning of the second argument. A full account of this phenomenon is given in Williams (1983), Partee (1984) and (1986), and Chierchia (1984).

A third hypothesis is that there is no verb 'to be' at all; hence, any instances of 'to be' in English are tense features incompatible with non-verbal predicates.

Avgustinova (2006), for her part, classifies copular 'to be' as an (i) inflectional copula or an (ii) assembling operator according to its function; her classification is based on the following data from Russian:

(111) Russian   (Avgustinova 2006)

a. On   gord   rezul'tatami.

He.NOM.SG.M   proud.PRD-ADJ.SG.M   results.INST.PL

'He is proud of the results'

b. On   durak | tolstyj | vysokogo rosta.

He.NOM.SG.M   fool.NOM.SG.M | fat.NOM.SG.M | high height.GEN

'He is a fool | fat | of a high height (i.e. tall)'.

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c. On   brat   Maksima.

   He.NOM.SG.M   brother.NOM.SG.M   Maksim.GEN

   'He is Maksim's brother'.

d. Boris   na   sobranii.

   Boris.NOM   at   meeting.LOC

   'Boris is at a meeting'.

e. Za   uglom   (est')   125jaría125e

   behind corner.SG.M.INST   (is)   store.NOM.SG.M

   'There is a store around the corner'.

f. U Kati   (est') samovar.

   At Katia.GEN   (is)   samovar.NOM.SG.M

   'Katia has a samovar'.

An inflectional copula is defined as an item that occurs with lexically/morphologically predicative categories while an assembling operator puts together two non-verbal and lexically non-predicative categories (Avgustinova 2006:3). Moreover, assembling operators are divided into copular-functor and copular-predicator operators. Further divisions are shown in the following graph:

(112) Hierarchy of Copula Types (Avgustinova 2006)
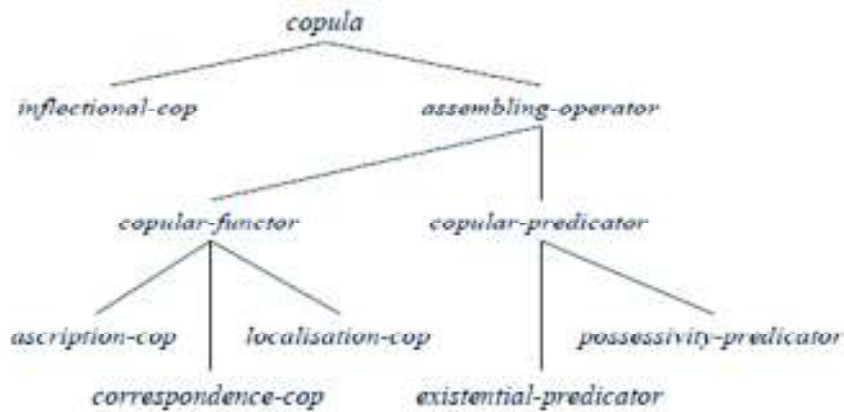
In ascriptive predications, the copula identifies the subject with the content of the non-verbal predicate; these constructions are either classificational or attributive. A correspondence copula is that which holds a relation of correspondence between the subject and its complement; this is also known as an identificational or equative predication. In this type of construction, Russian accepts an overt copula in present tense indicative:

(113) Russian   (Avgustinova 2006)

Boris	est'	brat	Ivana
Boris.NOM.SG.M	is	brother.NOM.SG.M	Ivan.GEN

'Boris is Ivan's brother'

Locative predications also consist of a subject argument and a non-verbal predicative complement. However, the existing relation between both arguments is one of location not identity. The predicate here takes the form of a temporal adverbial. In this type of construction, Russian does not accept an overt copula in present tense:

(114) Russian

  a. Koncert   segodnja

    concert   today

    'The concert is today'

  b. *Koncert   est'   segodnja

     concert   is   today

     'The concert is today'

Existential predications, for their part, ascribe existence to a given subject. The copula in this type of construction functions as a predicator not a functional item. Moreover, existential constructions only have one argument, the one said to exist and whose existence is predicated. The assembly operator, on the other hand, introduces a relation of possession if the subject and non-verbal predicate denote a possessor and a possessed entity. In Russian, the possessed entity is related to the predicate by means of a preposition; in this case, U. The copula here also functions as a predicator (195). Inflectional copulas in this language concern any copula found in past or future tense constructions.

According to this hypothesis, the copula denotes the type of relation between the corresponding arguments. Consequently, this raises the question concerning the semantic contribution of the copula to each of these interpretations. And if it does contribute some meaning, how does this contribution take place? Devitt (1990) argues that a copula adds semantic content to the clause it appears in or encodes a specific reading depending on

the grammaticalization phase which it is going through. Grammaticalization is defined here as the process in which lexical items develop into grammatical morphemes through parallel and gradual processes of phonological erosion and semantic generalization (Devitt 1990:111). The idea here is that the semantic content of the lexeme is not lost entirely in the process of grammaticalization, and that some of it is still recoverable through its behavior when functioning as a grammatical item. Moreover, according to Rude (1978) the meaning of these items seems to be structured along a continuum. Based on a sample of thirteen languages, this author adds that any copular morpheme is polysemous to another if both of them are continuous within this continuum. For example, both the Spanish copula '*estar*' and the Turkish copula enclitic '*-dir*' can be traced back historically to the verb meaning 'to stand' in each language (Rude 1978); '*estar*' is used to denote a temporary state of being while '*-dir*' functions as an epistemic modal. The difference in meaning between both of them is accounted for by the fact that the Spanish copula is considered to be in an earlier stage of grammaticalization than its Turkish counterpart. That is, the further a lexical item advances to the right of the scale further loss of meaning. The path of semantic evolution in copulas proposed by Devitt (1990) is given in (115):

(115) Proposed Path of Semantic Evolution in Copulas

128

Postural
Verbs   Locative   Existential   Copula   Epistemic
          Verbs   Verbs   with a   Modal
                                       Temporary
                                       Sense
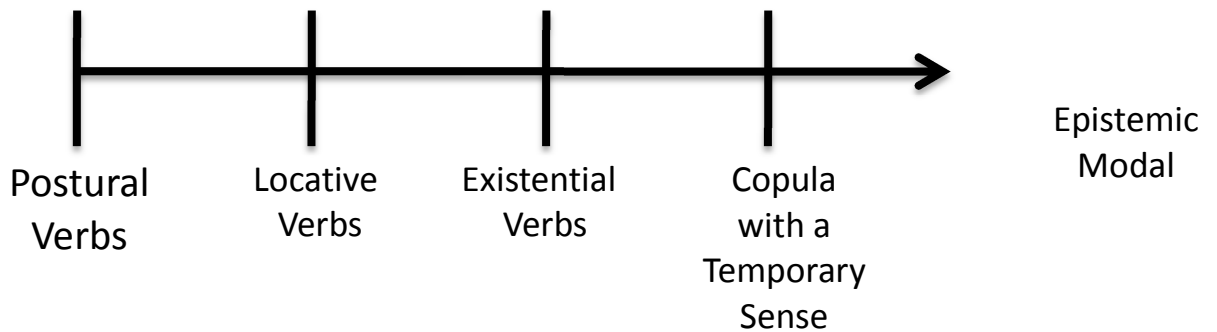
This path is unidirectional; when an item functions as a modal it has lost all semantic content. Evidence for this evolutionary path is given by the fact that some copulas have been found to originate from posture or locative verbs. An example is Spanish, as stated above; however, Portuguese also has a set of copulas identical to those of Spanish. Irish and Scots Gaelic, for their part, have grammaticalized the Proto-Indo-European root *sta*, meaning 'to stand' into a locative verb. The past tense of the English copula too is derived from the locative stem of Proto-Indo-European *vas-* meaning 'to dwell, to stay'. Languages that use the same verb for location and existence are hypothesized to view existence as a locative expression that is not specified for location (Devitt 1990:106). Hengeveld (1992) makes a similar claim for existential clauses in English. Mandarin Chinese, on the other hand, has a 'be-like' verb used with locative predicates:

(116) Mandarin Chinese

Lǐsǐ   zài   hǎi-biān

Lisi   at   ocean-side

'Lisi is at the ocean side'

Another source for copulas is deitic particles and personal pronouns. Hengeveld (1992) classifies this type of copula as discriminating while Stassen (1997) denominates them non-verbal copulas (§2.2.1). Mandarin Chinese has a copula of this type required in nominal predicates (92a). Copulas that derive from posture or locative verbs tend to express a temporary state, show a verb-like behavior and to function as auxiliaries in complex constructions whereas those derived from particles or pronouns tend to express a relation of identity and to have defective verbal paradigms (Devitt 1990:109).

The continuum of meaning in the copula according to Rude (1978) is shown in the following graph:

(117) Hypothetical Continuum of Meaning
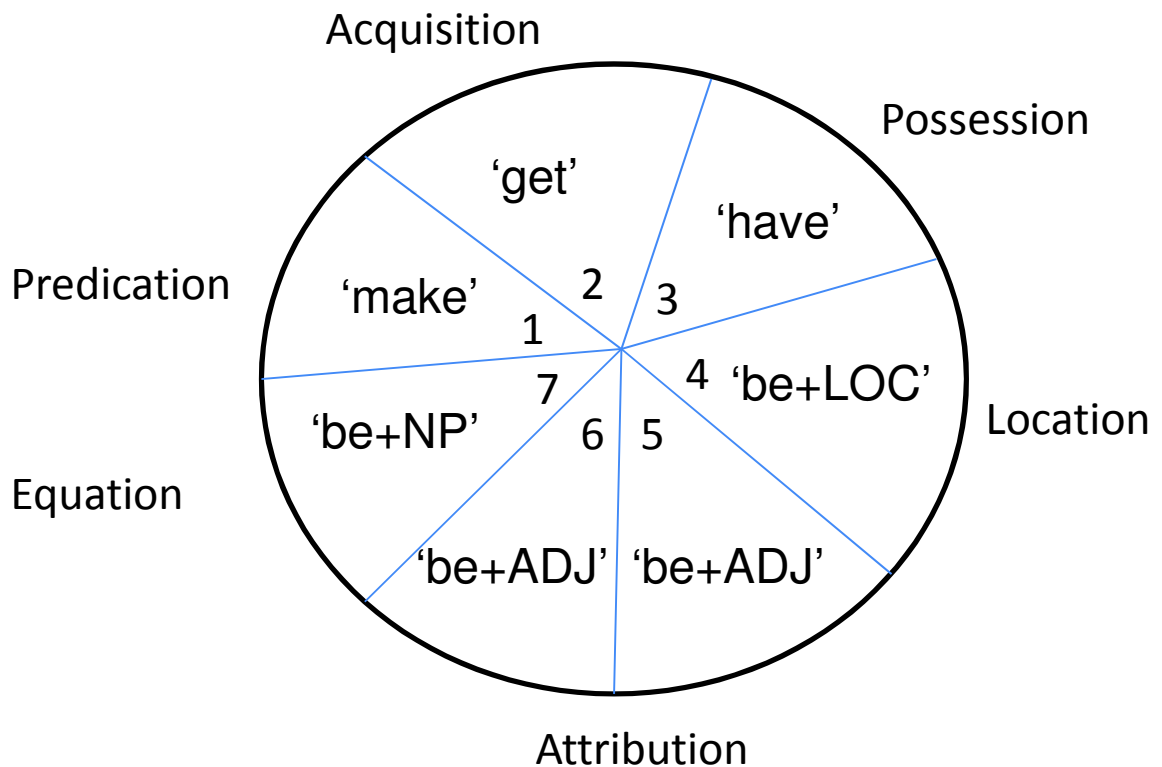
Examples from English are given in (118):

(118) English

       a. John made a table   ('make' in the sense of produce)

       b. John got a book from Mary   ('got' in the sense of receive)

       c. John has a book

       d. John is in California

       e. John is happy today (Temporary)

       f. John is tall   (Permanent)

       g. John is a doctor

'Make' sometimes expresses the meaning of 'get' (118a) while 'get' and 'have' are polysemous in that both can mean 'receive' or 'have'(119b). For example,

(119) English   (Rude 1978:206)

       a. John made (got) good grades

       b. I got a book

Twi, spoken in Ghana, does not distinguish between possession and location:

(120) Twi

       Kofi   wɔ   efie

       Kofi   has/LOC   house

       'Kofi has/is in the house'

Mandarin Chinese distinguishes attribution from location by the means of a copula:

(121) Mandarin Chinese

    a. Qiang   Sheng   zai   tai-bei

       Qiang   Sheng   LOC   Taipei

       'Qiang Sheng is in Taipei'

    b. Qiang   Sheng   hen gao

       Qiang   Sheng   tall

       'Qiang Sheng (is) tall'

Spanish divides the copula of attribution in temporary and inherent properties:

(122) Spanish

    a. Juan   está   enfermo

       John   COP   sick

       'John is (temporarily) sick'

    b. Juan   es   enfermo

       John   COP   sick

       'John is (permanently) sick'

Unlike adjectival predication in Mandarin Chinese, nominal predicates in this language do require a copula:

(123) Mandarin Chinese

ta   shí yí ge-yí-sheng

3SG   COP   doctor

'He is a doctor'

Finally, Twi equals the verb 'to make' with an identity copula:

(124) Twi

a. Kofi   yΣ   ⌊s⌋fo⌋

Kofi   COP   priest

'Kofi is a priest'

b. Kofi   yΣ   abodoo

Kofi   make   cornbread

'Kofi made cornbread'

CAPÍTULO 3

Predicacion nominal y adjetival en mayo

Este capítulo describe predicación nominal y adjetival en la lengua mayo. El análisis se

basa en los trabajos teórico-funcionales de Hengeveld (1992), Wetzer (1996) y Stassen

(1997) y se propone describir los aspectos morfosintácticos más importantes de ambas

construcciones intransitivas. De igual manera, se pretende delimitar cuestiones relevantes

a predicación no-verbal en esta lengua y a crear las bases para continuar con estudios

pertinentes a la temática en un futuro.

CHAPTER 3

The syntax of nominal and adjectival predication in yoreme/mayo of Sonora and Sinaloa

3.0 Introduction

This chapter describes nominal and adjectival predication in Yoreme/Mayo of

Sonora and Sinaloa. It is divided into three sections, the first of which defines parts-of-

speech in the language. The following sections describe both nominal and adjectival predication according to the definition of nouns and adjectives described in (§3.1.1).

3.1 Parts-of-Speech in Yoreme/Mayo

3.1.1 Definition

Dixon (2004) distinguishes three parts-of-speech in the languages of the world: nouns, verbs and adjectives. The criteria used to identify word classes vary from language to language, despite the fact that some of these criteria tend to overlap. Evans (2000) differentiates three types of criteria: (i) syntactic criteria, for instance, that verbs function as the head of a clause and determine the structure of the clause's arguments; (ii) morphological criteria, e.g., the fact that nouns usually inflect for number and gender and (iii) semantic criteria, which refer to the fact that nouns tend to denote entities, verbs to describe actions, processes and states, and adjectives to express properties. This same distinction of criteria is made by Givón (1984; 2001), who defines syntactic criteria according to the position that words of a particular class tend to occupy in a clause, morphological criteria as the types of morphemes typically affixed to a particular word class in the language, and semantic criteria as the types of meaning usually associated to each parts-of-speech. The third type of criteria, according to Givón (1984), are the most universal and generic type to identify word classes within a specific language.

Dixon (2004) adds that nouns are defined according to semantic criteria that refer to concrete objects such as HUMANS, BODY and other PARTS, FLORA, FAUNA, CELESTIAL BODIES, ENVIRONMENT, ARTIFACTS, among others. Their syntactic

function is to occupy the argument slot of a clause while their semantic function is to designate animate beings, both human and non-human alike, things and places. Their function in discourse is to refer. Prototypical verbs, on the other hand, function as predicates and, consequently, as the head of the clause. They express actions, processes and states. Hence, semantic characteristics associated with them include: MOTION, REST, states of AFFECTION, and GIVING, ATTENTION, or SPEAKING actions, etcetera (Dixon 2004). Finally, prototypical adjectives denote properties, attributes or states. Syntactically, they function as modifiers of a noun or as predicates and are associated to semantic types such as DIMENSION, AGE, VALUE, COLOR, PHYSICAL PROPERTY, HUMAN PROPENSITY and SPEED (Dixon 2004:3). The first four are referred to as core semantic types while the remaining three are considered peripheral semantic types associated with this word class. In languages with a small adjective class, peripheral concepts are usually encoded either as verbs or nouns or adverbs according to the behavioral pattern outlined in Dixon (1977; 2004). Other semantic types associated with adjectives include DIFFICULTY, SIMILARITY, QUALIFICATION, QUANTIFICATION and NUMERALS (Dixon 2004).

In addition, Croft (1991: 93) proposes that each word class may be defined in terms of a semantic class and a pragmatic function. For instance, adjectives are defined as words that belong to the prototypical semantic class of properties and that function primarily as modifiers of head nouns.

Syntactic Category	NOUN	ADJECTIVE	VERB
Semantic Class	Object	Property	Action
Pragmatic Function	Reference	Modification	Predicate

Table 1. Semantic Class, Pragmatic Function and Syntactic Categories (Croft 1991).

An example is given in Table 2:

	Reference	Modification	Predication
Objects	**vehicle**	vehicle's; vehicular	be a/the vehicle
Properties	whiteness	**white**	be white
Actions	destruction; to destroy	destroying, destroyed	**destroy**

Table 2. Semantic and Pragmatic Functions of Parts-of-Speech (Croft 1991).

Adjectives modifying a head noun in a noun phrase function as such in their unmarked form and occur in their marked form when functioning as a predicate or as possible referents. The same is true for nouns and verbs. The marked form of each parts-of-speech is either by the use of auxiliary verbs or derivative morphemes (Croft 1991).

Hengeveld (2004), on the other hand, proposes a predicate hierarchy where a category "is more likely to occur as a separate parts-of-speech the more to the left it is on the hierarchy". The hierarchy is shown in (1):

(1) Predicate Hierarchy

Verb > Noun > Adjective > Adverb

Thus, he defines each word class as the following: A verb (V) is a lexeme that can be used as the head of a predicate phrase, a noun (N) is a lexeme that can be used as the head

of a referential phrase while an adjective (A) is a lexeme that can be used as a modifier within a referential phrase, and a manner adverb (Madv) is a lexeme that can be used as a modifier within a predicate phrase (Hengeveld 2004). Languages that have separate lexeme classes, like English, have a differentiated parts-of-speech system while languages that do not are differentiated into two types of languages: flexible and rigid languages. In the first type, members of one class may occupy two different syntactic slots. That is, they may function either as nouns or adjectives while the second type of languages does not have items that function as modifiers of referential phrases. Hence, these types of languages have to resort to alternative strategies in order to denote properties.

The identification of parts-of-speech in Yoreme/Mayo of Sonora and Sinaloa developed here is thus based on the criteria proposed by these authors. In current literature of Yoreme/Mayo, the definition of word classes is highly influenced by Spanish grammar, which distinguishes up to nine word classes (Alarcos Llorach 1994); see Almada Leyva 1999). However, none of these so-called parts-of-speech of Yoreme/Mayo has been questioned by scholars of the language to date. Here, the question is made and the effort to give an account of at least two word classes in Yoreme/Mayo, that is, nouns and adjectives, which are, as is known, pertinent to the phenomenon of non-verbal predication, is attempted. The syntactic characteristics of verbs will be outlined briefly for the sake of completeness and as a point of comparison between verbal and non-verbal predication when thus required. The description intended here, however, is not exhaustive and the analysis made is a first attempt to describe what happens in Yoreme/Mayo of Sonora and Sinaloa concerning the definition of parts-of-speech.

3.1.2 Nouns

The prototypical syntactic function of nouns is to occupy the argument slot of a predicate (Bhat 1994). Hence, they tend to function as the subject of a clause. The discourse function of words in this category is to identify speech-act-participants. That is, they usually denote things, persons or places. The syntactic criteria used to identify them from other parts-of-speech include the aforementioned possibility of them functioning as subjects; however, they may also occupy the position of a direct object, as shown in (2b) below or that of indirect objects. In both transitive and intransitive clauses of Yoreme/Mayo of Sonora and Sinaloa the subject is found in the form of a: (i) proper name, (ii) a noun phrase (DET + N), (iii) an independent pronoun, and (iv) a common noun:

(2) Yoreme/Mayo of Sinaloa

a. Manwe   yepsa-k   (Fieldwork 2010)

 Manuel   to come-PERF

 'Manuel came'

b. Juan in   ču⌐u-ta   me⌐a-k (Fieldwork 2010)

 John 1SG.GEN dog-ACC   to kill-PERF

 'John killed my dog'

c. xu   ču⌐u kotče   (Fieldwork 2010)

 DET.SG dog   to sleep

'The dog is sleeping'

d. a|apo   aaw   ubba-ka   (Fieldwork 2010)

     3SG.SUBJ   3SG.REFL   to bathe-PERF

'He bathed'

(3) Yoreme/Mayo of Sonora

     paare   tioopo-w   sii-ka   (Freeze 1989:69)

     religious father   temple-DIR   to go-PERF

'The priest went to the temple'

It is possible to omit the third person singular subject:

(4) Yoreme/Mayo of Sonora   (De Wolf 1999:142)

     tu|isi   a|ane

     good   to be.COP

'(He/She) is good'

A second distributional criterion for this word class is that nouns tend to be preceded by determiners (2c). The determiner slot may not only be occupied by an article, which is marked for number, but also by a demonstrative adjective (Almada Leyva 1999) as shown in (5):

(5) Yoreme/Mayo of Sonora   (Almada Leyva 1999: xix)

a. imiˈi   bawa   may   kiwwa

DEM.SG   soup   very   delicious

‘This soup is very delicious’

b. xuˈu   uusi   buaana

DEM.SG   boy   to cry

‘That boy is crying’

Determiners agree either with singular or plural head nouns (6):

(6) Yoreme/Mayo of Sonora   (Almada Leyva 1999: xix)

a. xu-me   kowwim

DET-PL   pig.PL

‘The pigs’

b. xuˈu-me   wakas-im   may   awwi

DEM-PL   cow-PL   very   fat

‘Those cows are very fat’

Nouns may also be modified by adjectives. Attributive constructions in Yoreme/Mayo of Sonora and Sinaloa, according to Almada Leyva (1999), may have either a (A + N) or (N + A) word order. For example,

(7) Yoreme/Mayo of Sonora   (Almada Leyva 1999: xix)

    a. tósali   seewa

      white   flower

      'white flower'

    b. uusi   obe'era

      boy   lazy

      'lazy boy'

Adjectives agree in number with their head noun's determiner (Almada Leyva 1999). If the adjective precedes the plural noun, it does not receive an overt marker for number. However, if it follows the noun, it does (8):

(8) Yoreme/Mayo of Sonora   (Almada Leyva 1999: xix)

    a. xu-me   toloko   wikichim

       DET-PL   grey   bird.PL

       'The grey birds'

    b. xume   usi   muksiachim

       DET.PL   boy   mischievous.PL

       'The mischievous boys'

Finally, in Yoreme/Mayo, nouns are followed by postpositions, which indicate oblique cases such as locative and instrumental (§1.2.3.4):

(9) Yoreme/Mayo of Sonora   (Almada Leyva 1993:25)

   xu   kukku sebo|ora   kutta-po   muuku-k

   DET.SG   cicada   stick-LOC   to die-PERF

   'The cicada died on the stick'

(10) Yoreme/Mayo of Sonora   (De Wolf 1997: 71)

   kutta-y |a|a   beeba-k

   stick-INST   3SG.OBJ   to hit-PERF

   'He hit him with a stick'

Morphological criteria used to identify a nominal word class in a language include number, gender and case markers. Yoreme/Mayo, though, does not have a morphological distinction for gender. Consequently, the language uses terms like jammut 'female' and o|ow 'male' in the form of compounds to distinguish the biological sex of an animate being. For instance,

(11) Yoreme/Mayo of Sonora and Sinaloa   (Fieldwork 2010)

   xu   ču|u o|ow

   DET.SG   dog   male

   'The dog (male)'

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The overt marker for number is -m/-im:

(12) Yoreme/Mayo of Sonora   (De Wolf 1997:70)

    a. ayes-im

      fox-PL

      'foxes'

    b. yoreme-m

      man-PL

      'men'

The only exception to this is -t; to pluralize a word ending in -t, the final consonant goes through a process of palatalization: -t → -č:

(13) xammut → xammučim 'women'   (De Wolf 1997:70)

Palatalization is known as one of the most common sound changes that may occur in the languages of the world, and it is defined as a change in a consonant's place of articulation to a palatal position (Bhat 1974). According to this author, the environment triggering palatalization is usually a front vowel, a palatal semi-vowel or a palatal consonant. Palatalization consists of three processes: (i) tongue fronting, (ii) tongue raising and (iii) spirantization (Bhat 1994:53); these processes may occur separately or combined according to the type of palatalization that is taking place.

Morphological markers for number vary according to two parameters (Haspelmath 2011: 34): (i) animacity and (ii) obligatory occurrence of plural marking. An apparently

exception-less generalization is that human nouns are more likely to have plural marking than non-human (especially inanimate) nouns (Haspelmath 2011: 34), and this is shown in the examples above. However, in Yoreme/Mayo the contrast between animate-inanimate is not relevant for plural marking:

(14) Yoreme/Mayo of Sinaloa   (Fieldwork 2010)

    xu   kawwi   may buru   tetta-m   jipure

    DET.SG   mountain QUANT   rock-PL   to have

    'The mountain has a lot of rocks'

Other nouns are inherently plural. For instance,

(15) Yoreme/Mayo of Sonora   (Fieldwork 2010)

    a. xu   xammut   taskarim   joowa

      DET.SG   woman   tortilla.PL   to do

      'The woman is making tortillas'

    b. juˈu   yoreme puusim   siali-m   jipure

      DEM.SG   man   eyes.PL   green-PL   to have

      'That man has green eyes'

Thus, it is always obligatory to add the morphological marker for number when necessary.

Yoreme/Mayo has a nominative-accusative case alignment (§1.2.3.4):

(16) Yoreme/Mayo of Sinaloa   (Fieldwork 2010)

    a. xu   ili   usi-O   ye'ewe

      DET.SG   DIM boy.NOM   to play

     'The little boy is playing'

    b. xu   yoreme-O   ču'u-ta   me'a-k

      DET.SG   man.NOM   dog-ACC   to kill-PERF

     'The man killed the dog'

That is, the sole argument of an intransitive verb (S) is marked the same way as the most agent-like argument (A) of a transitive clause while the most patient-like (P) is marked differently:

  (17)
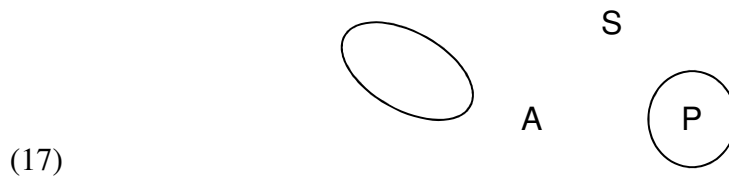
Indirect objects are also marked with accusative -ta:

(18) Yoreme/Mayo of Sinaloa   (Fieldwork 2010)

    Juan   senu   sewa-ta   a Maria-ta   a'-mika

    John   NUM   flower-ACC   to Maria-ACC   3SG.OBJ-to give

    'John gave a flower to María'

Here, the indirect object is marked by the Spanish preposition a, despite the accusative marker suffixed to the noun, while the third person object pronoun is indexed to the verb. This type of indexation is only observed in bi-transitive verbs. The uniqueness of this example, given that a similar one was not found in the data collected for this work, may be a result of the consultant's particular idiolect. Yoreme/Mayo de Sonora and Sinaloa distinguishes genitive, locative, trans-locative, instrumental and comitative cases (§1.2.3.4).

According to Dixon (2004) nouns refer to entities such as:

1. HUMANS: atchay 'father', naana 'grandmother', taata 'grandfather', ayye 'mother', uusi 'boy', waayi 'younger sister', jammut 'woman', yoreme 'man', yori 'white man'

2. BODY and other PARTS: puhba 'face', ottam 'bones', puusim 'eyes', yekka 'nose', wokkim 'feet', kobba 'head', mamam 'hands'

3. FLORA: abaso 'bush', sewam 'flowers', juyya 'tree; woods'

4. FAUNA: chuˈu 'dog', wiikit 'bird', totori 'chicken', koowi 'pig', kabbay 'horse', waakas 'cow', koboˈori 'turkey', kutchu 'pescado', maaso 'deer'

5. CELESTIAL BODIES: meecha 'moon', chokkim 'stars', taˈa 'sun', buere chokki 'Venus'

6. ENVIRONMENT: buiyya 'land', batwe 'river', kawi 'mountain', jeeka 'wind', ba'am 'water', yukke 'rain'

7. ARTIFACTS: sotoˈori 'pot', kúčirim 'knife', sillapo 'chair'

3.1.3 Verbs

Verbs in Yoreme/Mayo of Sonora and Sinaloa are intransitive (16a), transitive (16b) and bi-transitive (18). Bi-transitive verbs are far less common than both intransitive and transitive verbs. Items within this grammatical category function as the predicate of a clause, and denote a specific action or process. Morphological criteria to differentiate this word class include tense-aspect-mood (TAM) markers. For instance,

(19) Yoreme/Mayo of Sonora   (Almada Leyva 1999: xxii)

    a. inapo   hibʷa-O

      1SG.SUBJ   to eat

     'I eat'

    b. inapo   hibʷa-k

      1SG.SUBJ   to eat-PAST

     'I ate'

    c. inapo   hibʷa-nake

      1SG.SUBJ   to eat-FUT

     'I will eat'

The past and future tenses in Yoreme/Mayo are distinguished from the present in that the first and second are morphologically marked while the third is not (Almada Leyva 1999). Aspectual markers include the distinction between perfective and imperfective actions and that which occurs between inchoative, progressive and completed actions:

(20) Yoreme/Mayo of Sonora   (De Wolf 1997: 103)

a. ka-nn-a⌐a   bit-la

   NEG-1SG-3SG   to see-PERF

   'I have not seen him/her'

b. a⌐apo   hi⌐ibwa-i   (De Wolf 1997:140)

   3SG.SUBJ   to eat-IMPERF

   'He/She was eating'

e. híkkaih-tu-k   (De Wolf 1997:127)

   hear-PROG-PAST

   'He made himself heard'

(21) Yoreme/Mayo of Los Capomos, Sinaloa

.   a. tu:ka-ne   e⌐eči-taite-k   (Freeze 1989: 111)

   yesterday-1SG.SUBJ   to sow-INC-PAST

   'I started sowing yesterday'

b. e⌐ni-ta:-po-ne   e⌐eča-su   (Freeze 1989:111)

   now-day-LOC-1SG.SUBJ   to sow-CP

   'I finished sowing today'

It should be noted here that De Wolf (1997) glosses the morpheme -la in (20a) as perfective aspect. However, a similar marking in other studies of Yoreme/Mayo or in

ones of other languages of the family, especially Yaqui, has not been found. The prototypical function of this morpheme is as an adjectivizing suffix. This will be discussed more thoroughly in (§3.3.1).

Mood markers in Yoreme/Mayo include:

(22) Yoreme/Mayo of Sonora   (De Wolf 1997:137)

  a. tu˹ur-eye

    good-IRR

    'That would be good'

  b. a˹apo   yebih-rokka   (Collard and Collard 1962:207)

    3SG.SUBJ   come-QUOT

    'He said that he would come'

  c. hi˹ibwa-baare   (Collard and Collard 1962:208)

    eat-INTEN

    'I want to eat'

A second criterion to distinguish verbs as a word class is the number of arguments that the verb requires in order to be grammatically acceptable. That is, any nominal element that has a grammatical relation with the verb (Payne 1997). This is also known as the valence of the verb. The valence-changing operations associated with verbs are themselves related to transitivity. That is to say, an intransitive verb describes a state, property or situation that only involves one participant while a transitive verb is that

which describes a relation between two participants, and where one of them acts upon the other. Bi-transitive verbs require three arguments:

(23) a. P (x)

b. P (x, y)

c. P (x, y, z)

Intransitive verbs tend to code states, events or actions and their subject may be an agent, patient or dative. A prototypical transitive event is defined by (i) agentivity; that is, having a deliberate, active agent, (ii) affectedness, or having a concrete, affected patient and (iii) perfectivity, which involves a bounded, terminated, fast-changing event in real time (Givón 2001:109). In bi-transitive constructions, the subject is typically an agent and one of the objects a patient; the indirect object, for its part, may code a variety of semantic roles (Givón 2001). Valence-changing operations change the number of arguments required by the verb. An example is causative constructions, which in Yoreme/Mayo of Sonora and Sinaloa are morphological. The morphological marker for this type of expression is -tua. For instance,

(24) Yoreme/Mayo of Los Capomos, Sinaloa   (Freeze 1989: 119)

a. ili   uusi   kotče-k

   DIM   boy   to sleep-PAST

   'The boy slept'   P(x)

b. María   a[|]-koči-tua-k   ili   usi-ta

   Maria   3SG.OBJ-to sleep-CAUS-PAST   DIM   boy-ACC

   'Maria made the little boy go to sleep'   P(x, y)

Prototypically, the verb in (24a) needs one argument, P(x), where (x) denotes the person who sleeps. However, in (24b) the verb's structure is (x, y) where (x) denotes the agent of the cause while the subject noun phrase of the intransitive clause is now marked with the accusative -ta. Other valence-changing operations are passives, applicatives, reflexives and reciprocals. Passives and applicatives are also morphologically marked in Yoreme/Mayo while reflexives and reciprocals tend to be found in the form of bound pronouns. However, the complete description of the valence-changing operations mentioned above is not in accordance with the purposes of this thesis. Their importance here lies in that as valence-changing morphemes they can only be attached to verbs, and thus serves as a criterion to distinguish this word class from others.

Derivative processes are a third criterion used to identify verbs. De-nominal verbs are primarily found with the causative -tua (Félix 2009):

(25) Yoreme/Mayo of Sinaloa   (Félix 2009)

   a. sanko 'clothes' → sanko-tua 'to get dressed'

   b. tepojti 'iron' → tepojti-tua 'to hammer'

   c. tewam 'name' → tewa-tua 'to name'

However, de-verbal verbs are more commonly found:

(26) Yoreme/Mayo of Sonora   (Almada Leyva 1999)

   a. a:če 'laugh' → a:če-tua-k 'to make laugh'

   b. ba[|]arutte 'to sweat' → barútti-tua 'to make sweat'

   c. béete 'to burn' → beet-ia 'the fire burns'

   d. jibua 'to eat' → jibua-tua 'to make eat'

This process is quite common in Yoreme/Mayo. De-adjectival verbs, for their part, tend to be derived by means of conversion; that is, the process in which a determinate parts-of-speech acquires the characteristics of another grammatical category without changing its superficial form. For instance,

(27) bette 'heavy' →   bette 'is heavy'

This will be addressed to in (§3.3.1).

Semantic criteria used to identify verbs as a grammatical category are (Dixon 2004):

1. MOTION: siika 'to go', yepsak 'to come', werama 'to walk', weyye 'to walk'

2. REST: ximyoore 'to rest', toote 'to lie down', teeka 'to lie down', kattek 'to be sitted'

3. states of AFFECTION: musawle 'to like; adore', waatia 'to love'

4. GIVING: miika 'to give', mabeta 'to receive'

5. ATTENTION: xikkaxa 'to listen'

6. SPEAKING: aawa 'to ask; to say', nooka 'to talk'

3.1.4 Adjectives

3.1.4.1 Differentiation from nouns

Adjectives are different from nouns in that their main function is to modify the head noun of a noun phrase; their function as the predicate of a clause is defined as the secondary use of adjectives (Bhat 1994: 19), where they tend to lose their prototypical

characteristics as modifiers and take on those of the category to which their function has extended. Nouns, on the other hand, function as arguments of a clause by identifying the participants of an action. That is, they name a certain object or person and distinguish it from others of the same kind. As a result, prototypical adjectives tend to denote a single property whereas nouns generally suggest a cluster of properties (Bhat 1994: 23). Givón (2001:69) refers to this as the 'cluster-effect' of nouns, which is totally absent in adjectives (§3.1.2). If used as modifiers, on the other hand, nouns tend to lose this property and to function more as adjectives.

(28) Yoreme/Mayo of Sinaloa   (Fieldwork 2010)

     a. bette   tetta

       heavy   rock

       'The heavy rock'

     b. xu-me   taskarim   tatta-m

       DET-PL   tortilla.PL   hot-PL

       'The hot tortillas'

     c. číčči 'saliva' → čiče꞉era 'slimy; slobbery'

     d. kéeka 'scabies' → keka꞉ara 'scabby'

When used as modifiers, adjectives denote a specific property that restricts the reference of the head noun. That is, in (28a), any rock that is not heavy is not referred to

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here as well as those tortillas that are no longer hot in (28b). Conversely, if something is surrounded by saliva in some way or if it is simply reminiscent to it then it is considered to be slobbery and slimy (28c); likewise, anyone or anything that has scabies is said to have the property of being scabby (28d).

The fact that adjectives denote a single property allows them to function with degree modifiers in comparative and superlative constructions (Bhat 1994:25):

(29) Yoreme/Mayo of Los Capomos, Sinaloa   (Freeze 1989: 138)

a. aˈapo   čeˈ   ka: uˈte   ino   beppa

    3SG.SUBJ   more   NEG   fast   1SG.REFL   POSP

    'He is slower than me' (lit. less fast)

b. em   usia   beppa   čeˈ   ka: uˈte   a:po

    2SG.GEN   son   POSP   more   NEG   fast   3SG.SUBJ

    'He is slower than your son' (lit. less fast)

c. aˈapo   čeˈ   te:be   ino   beppa

    3SG.SUBJ   more   tall   1SG.REFL   POSP

    'He is taller than me' (lit. more tall)

d. aˈapo   čeˈ   te:be   em   usia   beppa

    3SG.SUBJ   more   tall   2SG.OBJ   son   POSP

    'He is taller than your son' (more tall)

This is not true for prototypical nouns, where it is not possible to determine which feature is being compared:

(30) Yoreme/Mayo

*a'apo	če'	ka:	uusi	ino	beppa
3SG.SUBJ	more	NEG	boy	1SG.REFL	POSP

'He is less boy than me'

This function, according to Bhat (1994), is of little importance to nouns, as can be seen by the ungrammaticality of (30), and virtually non-existent in verbs. In addition, denoting a single property also allows adjectives to serve as the basis of exclamation remarks.

Another distinction between nouns and adjectives is that introducing a participant is the main purpose of the first while the denotation of a certain property is what demands priority for the second. That is, an adjective gives prominence to the property itself (Bhat 1994:30). And this is crucial to identify the referent of a noun phrase.

A third difference between nouns and adjectives is that the function of a modifying adjective is prior to the participant-identification function of nouns or noun phrases (Bhat 1994:23). That is, the property that the adjective denotes is necessary for the identification of the participants of a clause. Hence their freedom within a clause is more restricted than that of a noun. Moreover, adjectives differ from nouns in that they may not be topicalized or emphasized.

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The semantic criteria by which adjectives are defined according to Dixon (2004) are:

1. DIMENSION: bweuru 'big', ilitchi 'small', tebbe 'long', ilikki 'few', bueeka 'thick', wakila 'thin', among others.

2. AGE: bemela 'new', oˈola 'old', beˈeme 'young'

3. VALUE: tuˈuri 'good', ka tuˈuri 'bad'

4. COLOR: sikili 'red', siali 'green', sawari 'yellow', tósali 'white', chukuli 'black'

5. PHYSICAL PROPERTY: bette 'heavy', tatta 'hot', sebbe 'cold', chiˈicha maachi 'dirty', baari 'wet', wakia 'dry'

6. HUMAN PROPENSITY: aranokchiˈi, 'liar'

7. SPEED: uˈte 'fast'

3.1.4.2 Differentiation from intransitive verbs

Adjectives are different from verbs in that as modifiers of nouns they are subordinate to the items they modify while verbs are independent in their function as predicates and take nouns as their arguments. Semantically, adjectives tend to denote properties that do not change while verbs describe actions that are prototypically transient. This semantic characteristic, however, is derived from the fact that it is necessary for adjectives to denote a permanent property in order to assist the nouns they modify in identifying the participant, while verbs indicate actions that are not always performed. In addition, these two types of word classes are different in the way they are used within a clause. That is, adjectives are usually used in their unmarked form when they function as modifiers of

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nouns but require the use of auxiliaries or affixes when used as predicates. Conversely, verbs function as predicates in their bare form and need to be changed to participles or other derived adjectives in order to occur within a noun phrase (Croft 1991).

(31) Yoreme/Mayo of Sinaloa   (Fieldwork 2010)

a. aˀapo   buyte

3SG.SUBJ   to run

'He/She runs'

b. María may lotti-la

Maria very tired-ADJR

'Maria is very tired'

3.1.4.3 Identification with nouns

Adjectives and nouns are similar in that they tend to share to a greater or lesser extent any of the following characteristics: (i) taking the same set of inflectional affixes for gender, number and case; (ii) having the same set of derivational affixes; (iii) denoting a property when used in an adnominal position or the possessor of that property when occurring in the head-noun position, and (iv) they require the use of an auxiliary whenever they are used as predicates (Bhat 1994: 165). The acceptance of nominal inflectional markers has been found to occur in languages where a clear distinction between nouns and adjectives is lacking.

Some examples of adjectives in a modifying position in Yoreme/Mayo of Sonora and Sinaloa with regard to the criterion of taking the same set of affixes for PNG markers (Bhat 1994:165) can be observed in (32):

(32) Yoreme/Mayo of Sonora   (Neyoy 1994)

a. xu   wóhi-O   wakila-O   tótori   sikiri-ta   hib^{w}a-k

DET.SG   coyote-NOM   thin-NOM   chicken   red-ACC   to eat-PERF

'The thin coyote ate the red chicken'

b. xu   wohi-O   wakila-O   tuysi   tebawreka

DET.SG   wolf.NOM   thin-NOM   very   be.hungry

wanay   xu-ka   ču'u   awi-ta   hib^{w}a-k

so   DET-ACC   dog   fat-ACC   to eat-PERF

'The thin wolf was very hungry so he ate the fat dog'

c. tampora   bweuru-ta   bebba-y   wepu   paariseero

drum   big-ACC   to hit-IMPERF   NUM   fariseo

'A fariseo was hitting the big drum'

The nominal characteristics seen in the attributive adjectives shown here are case-marking and number agreement. The accusative case marker -ta in (32a) distinguishes the object of the clause from its subject, which in turn is marked by the nominative case. However, the position of the object marker – affixed to the modifying adjective and not to

the nuclear noun – suggests the possibility that it may be modifying the entire object noun phrase *tótori sikirita*, and is thus functioning as a relative clause similar to *the chicken that is red*. This is also observed in (32b) where the object noun phrase would refer to something like *the dog that is fat*. Moreover, the postnominal position of the modifying adjectives in these examples also suggests that the prototypical attributive function of these items may change to one of restriction by means of the contrast between a prenominal and postnominal order of constituents. The nominative zero-marker modifies the corresponding noun phrase in a similar fashion. However such an issue is beyond the scope of the analysis proposed here and thus requires further research. The marked position of postnominal adjectives is also found in adjectival predication. Attributive constructions have a prenominal modifying adjective:

(33) Yoreme/Mayo of Sonora   (Fieldwork 2010)

    a. xu   bemela   kaari

      DET.SG   new   house

     'The new house'

    b. xu   kaari   bemela

      DET.SG   house   new

     'The house is new'

The accusative marker on the determiner in (32b) agrees with the same marker on the adjective while the subject receives the zero-marker for the nominative case. Example (32c) differs from (32a) simply in the order of constituents of the clause.

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The second nominal characteristic found in adjectives is number agreement. For example,

(34) Yoreme/Mayo of Sonora   (Nenoy 1994)

    a. xu-me   yoreme-m   ento   yorem   jiaki-m

      DET-PL   yoreme-PL   CONJ   yoreme   yaqui-PL

            yori   tot-tosari-m-mak   nassua-k

            man   RED-white-PL-COM   fight-PERF

      'The yoreme and yaqui fought with the white men'

    b. xu-ka-m   kurux   buewru-ta   wé-werea

      DET-ACC-PL   cross   big-ACC   RED-carry

      'They are carrying the big crosses'

    c. yun   wakasim   wa-wakira-m   werea-y

      many   cow.PL   RED-thin-PL   walk-IMPERF

      'Many thin cows were walking'

The morphological marker for number in Yoreme/Mayo cannot be combined with -ta for the accusative case. This can be seen in example 34(a) where the plural marker -m identifies the direct object.

Adjectives and nouns, in languages that distinguish both word classes clearly, tend to use different derivational affixes for deriving adjectival and nominal stems. For example,

(35) Yoreme/Mayo of Sonora   (deverbal nouns)

   a. banna 'to make atole'+ -ri = bannari 'atole'

b. ba|arutte 'to sweat' + -ria = ba|aruttiria 'sweat'

c. xiawa 'to say' + -i = xiawi 'voice'

d. natemae 'to ask' + -wame = natemaewame 'question' (lit. what is asked)

e. kočče 'to sleep' + -Vla = koče|ela 'sleepyhead'

f. etta 'to sow' + -leero = etleero 'farmer'

g. aranóki|iči 'to lie'/ 'liar' + -a = aranóki|ičia 'lie'

(36) Yoreme/Mayo of Sonora   (denominal nouns)

a. ba|a 'water' + -ri = baari 'humidity'

b. kuččsu 'fish' + -leero = kuččuleero 'fisherman'

c. teeni 'mouth' + -ria = temberia 'lip'

d. tóppa 'stomach' + -Vra = tópa|ara 'big belly'

(37) Yoreme/Mayo of Sonora   (denominal adjectives)

a. číčči 'saliva' + -Vra = čiče|era 'slimy; slobbery'

b. kéeka 'scabies'+ -Vra = keka|ara 'scabby'

In these examples, the set of affixes used to derive nouns from verbs in Yoreme/Mayo is completely different from that used to derive adjectives. Examples of adjectives derived from verbs will be studied further in (§3.3.1). The set of affixes used to derive nouns from other nouns is similar only in one suffix, which derives adjectives from nouns and indicates a small liking of these two grammatical categories within Yoreme/Mayo.

3.1.4.4 Identification with intransitive verbs

According to Bhat (1994), the criteria used to claim that adjectives form a subgroup of verbs in several languages of the world include: (i) the occurrence of roughly the same set of inflectional affixes when used as predicates, (ii) the occurrence of the same type of nominalizing, adjectivalizing and adverbializing processes for referential and modifying uses, and (iii) the occurrence of the same type of derivational processes. Languages, however, differ in the way that these differences are displayed.

The fact that adjectives may take verbal inflectional affixes in some languages is perhaps the most important feature that has allowed scholars to propose that adjectives and verbs are members of the same category. When used in an adnominal position, both adjectives and verbs tend to require the addition of an adjectivalizing affix or participle for such a function (Bhat 1994:191). The most commonly cited language in which adjectives are classified as verbs is Mandarin Chinese; however, studies concerning the position of adjectives in other languages have also been conducted. The main interest is to determine if this word class assimilates or differentiates itself from verbs. Most of the data studied concerns adjectives in a modifying position. The conclusions arrived at may be seen in Post (2008) and Palancar (2006) just to mention a few and the reader is referred to these for further study.

3.2. The Syntax of Nominal Predication in Yoreme/Mayo of Sonora and Sinaloa

Givón (2001:51) defines nouns as multi-featured bundles of experience that tend to denote concrete and compact entities. Their prototypical function is to occupy the

argument slots for a predicate and to designate the participants of an action described by a verb. Nouns tend to assume the grammatical roles of subject, direct object and indirect object (§3.1.2). Nonetheless, another grammatical role that they may assume is that of predicate. For instance (38), where one constituent predicates that the other is a member of a specific social group:

(38) Yoreme/Mayo of Sonora and Sinaloa   (Fieldwork 2010)

    Juan-O   (O)   maixto

    John-NOM (COP) teacher

    'John is a teacher'

Nominal predicates in Yoreme/Mayo function as such by means of an auxiliary or supportive item; in this case, a zero copula. Verbal predicates, for their part, are grammatically independent non-supportive predicates:

(39) Yoreme/Mayo of Sonora   (Neyoy 1994)

    xu-me   yoreme-m   kamma-m   e'eča-y

    DET.PL   man-PL   pumpkin-PL   to SOW-IMPERF

    'The men are planting pumpkins'

This is in accordance with the Auxiliary Criterion (Stassen 1997), which states that if a language allows non-supportive predicates these will always assume the form of event predicates. On the contrary, if a predicate needs an auxiliary item of some kind then that predicate is non-verbal.

Hengeveld (1992) classifies non-verbal predications according to the semantic differences of their predicates into the following types: (i) ascriptive, (ii) equative and (iii) existential predications (§2.1.3). Ascriptive predications (38) may express a semantic relation of property (A), designate that the referent of the subject noun phrase belongs to a class of objects (N) or introduce the referent of an argument by ascribing existence to it. Existential clauses are also classified as ascriptive presentative constructions (Hengeveld 1992). Nominal and adjectival predicates do not have this function, and are classified as ascriptive non-presentative constructions. In addition, existential clauses are characterized by an empty locative predicate. Non-presentative constructions are predicable according to the following implicational hierarchy:

(40) $(x_i)_{Loc} > A > N > (x_i)_{Poss}$ (Hengeveld 1992:130)

That is, if a language allows a noun to occupy the predicate slot of a clause then any category to the left of the hierarchy may also occupy this position. Yoreme/Mayo of Sonora and Sinaloa expresses nominal and adjectival predications by means of bare predicates in zero copula constructions. Equative constructions are the most easily predicable type of predication (Hengeveld 1992), and they express a relation of identification between the arguments of the clause. The types of predicates in this type of constructions are known as referential predicates (Hengeveld 1992), which may be definite or indefinite; the first identify the arguments of a construction as the same entity while the second classify the argument as a member of a group or class. Hence, the syntactic relation expressed in constructions with a semantic relation of identification is not predicational while that of a class membership or inclusion predication is (§2.2.1).

Nominal predication in Yoreme/Mayo of Sonora and Sinaloa is expressed by means of a zero copula construction (Stassen 1997) with a dependent-marking pattern. That is, the subject argument of a nominal predication is marked for nominative case as the subject noun phrase of both an intransitive clause (41a) and a transitive clause (41b) of Yoreme/Mayo. In addition, the argument of the predicate is obligatory in a similar fashion as those of (41a-b). Here, the verb functions as the nucleus of the construction while the nominal phrases as the dependent constituents of the clause.

(41) Yoreme/Mayo of Sonora   (Neyoy 1994)

    a. a˩apo-O   tubukte-y

      3SG.SUBJ.NOM   to jump-IMPERF

     'He was jumping'

    b. Juan-O   kutta-m   čuktia-nake

     John-NOM   wood-PL   to cut-FUT

     'John will cut wood'

Nominal predication has a rigid SV word order reminiscent to the word order of intransitive clauses (§1.2.3.3):

(42) Yoreme/Mayo of Sonora and Sinaloa   (Fieldwork 2011)

    a. xu   ili   uusi   ye ̓ewe

      DET.SG   DIM   boy   to play

    'The little boy is playing'

          S   V

    b. in   abachi (O)   kutchuleero

      1SG.GEN   brother (COP)   fisherman

    'My brother is a fisherman'

          S   V

In (§3.1.2) the internal structure of noun phrases in Yoreme/Mayo of Sonora and Sinaloa was examined, and according to the data presented in this section the order of constituents of a noun phrase in this language is rigid. Determiners and demonstratives are pre-nominal and adjacent to the noun. Numerals and quantifiers tend to occupy the same position. For instance,

(43) Yoreme/Mayo of Sonora   (Neyoy 1994)

    a. xu   cu ̓u   kotče

      DET.SG   dog   to sleep

    'The dog is sleeping'

    [DET   N]

b. sextul   woy   yoreme-m   bem   buia-m   banya-y

una.vez   NUM   man-PL   3PL.GEN   land-PL   to water-IMPERF

'Once, two men were watering their lands''

[NUM   N]

c. xu-me   tiniran   paxko-po   yun   yoreme-m   ama   a'ane-y.

DET-PL   Trinity   party-LOC   many   man-PL   there   to.be.at-IMPERF

'There were many men in the party of the Trinity'

[QUANT   N]

However, the word order of attributive phrases is less rigid (Almada Leyva 1999):

(44) Yoreme/Mayo of Sonora   (Almada Leyva 1999: xix)

a. tosali   seewa

white   flower

'white flower'

b. uusi   obera

boy   lazy

'lazy boy'

This pattern will be studied more thoroughly in (§3.3.1). Nonetheless, suffice it to say here that (44a) is the unmarked pattern for these constructions while that of (44b) is marked in the sense that it may also denote a predicative construction. That is, *the boy is*

lazy. The position of the noun phrase within the clause is also is less rigid. This can be seen clearly both in (43b), where the clause has an SOV word order and in (43c) where the subject is found between the locative phrase and the verb. The subject noun phrase of the intransitive clause, on the other hand, can only occupy the initial position of the clause. The subject of nominal predications may also be expressed by means of an independent pronoun:

(45) Yoreme/Mayo of Sonora and Sinaloa   (Fieldwork 2010)

a'apo   (O)   ili   uusi

3SG.SUBJ   (COP)   DIM   boy

'He is a little boy'

Marked constructions of nominal predications are also expressed by means of a zero copula construction (Hengeveld 1992), where any tense-aspect-mood marker is suffixed directly to the lexical predicate:

(46) Yoreme/Mayo of Sonora   (Almada Leyva 1999: xvii)

seewa-y

flower-IMPERF

'It is blooming'

(47) Yoreme/Mayo of Sonora and Sinaloa   (Fieldwork 2011)

in   abachi   kutču-leero-tu-baare

1SG.GEN   brother   fish-AGT-VERBLZR-FUT

'My brother will be a fisherman'

The structure of nominal predications in Yoreme/Mayo of Sonora and Sinaloa is thus [NP_ARG (COP) NP_PRED], where the subject is followed by the predicate while the copula is expressed by a O morpheme (38). The predicate in present tense does not show any overt verbal markers. Hence, it is considered the morphologically unmarked form of the language (§2.1.1). In marked constructions, the lexical predicate receives any tense-aspect-mood markers that are necessary. For instance, the nominal predicate in (46) receives an imperfective aspect marker while in (47) the verbalizer -tu must be attached to the noun in order to assume the role of a predicate. The modal of intention -baare has a future connotation (De Wolf 1997:127).

Tense in Yoreme/Mayo is also denoted by means of temporal adverbs:

(48) Yoreme/Mayo of Sinaloa   (Fieldwork 2010)

    a. itapo   ka   beja   maixto-m

     1PL.SUBJ   NEG ADV   teacher-PL

    ‘We were teachers’ (lit. we are not teachers now)

    b. Peero   yooko   maixto

    Peter   tomorrow   teacher

    ‘Peter will be a teacher’ (lit. Peter tomorrow teacher)

Here, the negative particle ka plus the adverb beja in (48a) function as the tense carriers while the temporal adverb yooko ‘tomorrow’ in (48b) assumes the same function.

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Nominal predicates denote social properties (§2.1.1), and they are characterized by taking a single argument that is expressed as the grammatical subject of the copular construction. This structure is similar to the one shown by intransitive predicates:

(49) Yoreme/Mayo of Sonora and Sinaloa   (Fieldwork 2010)

    a. xu   ili   uusi   ye'ewe

      DET.SG DIM   boy   to play

     'The little boy is playing'

    b. a'apo   (O)   meriko

      3SG.SUBJ (COP)   doctor

     'He/She is a doctor'

According to this hypothesis, then, both (49a) and (49b) have the following structure:

    (50) P(x)

Intransitive predicates are characterized by the fact that the argument in subject position must be assigned a thematic role; in this case, an agentive role. However, nominal predicates are thought to have no thematic structure at all (Francis 1999) thus preventing their argument from receiving a thematic role. Moro (1991) further claims that in fact the main clause subject of these constructions does not have a thematic role. Nonetheless, the post-copular, zero-copula, NP *meriko* 'doctor' in (49b) is not a referential NP because it describes a state and the participants involved in it; moreover, it expresses the relation pertaining to the subject of the construction and its predicate.

This does not occur with identificational copular clauses, which identify *two* referents. Identificational constructions are defined as clauses in which a deitic pronoun is obligatory. This obligatoriness correlates to the fact that the predicate in an identificational construction is not a predicate at all but a referring noun phrase (Doron 1983:118). For example,

(51) Yoreme/Mayo of Sinaloa   (Fieldwork 2010)

   xu˥u   juppa

   DEM.SG   mezquite

   'That is a mezquite'

Hence, both noun phrases in (51) are arguments and cannot occupy a predicate slot. Stassen (1997: 108) adds that identity statements, according to his terminology, are either (i) presentational or (ii) equational (§2.2.1). That is, the first makes the identity of a referent known to the hearer while the second asserts that two expressions refer to the same object. Nominal predicates, on the other hand, assign a semantic role to their subject; they do not receive one. In terms of referenciality, thus, the types of noun phrases found both in predicational and identificational constructions can be classified according to Table 3:

	NP	COPULA	NP
EQUATIVE	Referential	Copula	Referential
PREDICATIONAL	Referential	Copula	Non-referential
SPECIFICATIONAL	Non-referential	Copula	Referential

Table 3. Types of Noun Phrases in Predicational and Identificational Clauses (Mikkelson 2005).

Moreover, the differences between each noun phrase in a clause according to definiteness (d) and specificity (s) are outlined as follows:

	NP	COPULA	NP
PREDICATIONAL	**[+d / +s]**	COP	**[-d / -s]**
SPECIFICATIONAL	[+d / -s]	COP	[+d / +s]
IDENTIFICATIONAL	**[+d / +s]**	COP	**[+d / -s]**
EQUATIVE	[+d / +s]	COP	[+d / +s]

Table 4. Differences between noun phrases of predicational and identificational clauses (Ihsane and Puskas 2001).

Some examples are:

(52) Yoreme/Mayo of Sonora and Sinaloa   (Fieldwork 2010)

    a. a׀apo   (O)   meriko   [PREDICATIONAL CONSTRUCTION]

       3SG.SUBJ   (COP)   doctor

       'He/She is a doctor'

b. xu˩u   o˩ow   (O)   meriko   [IDENTIFICATIONAL CONSTRUCTION]

DEM.SG   man   (COP)   doctor

'That man is a doctor'

Definiteness selects one object in a class of possible objects and specificity refers to pre-established elements in discourse. In the case of nominal predicates (52a) then we can see that the predicate classifies the subject as a member of a class but does not select an object of that class [-d]. Furthermore, it does not specify its referent [-s]. The subject noun phrase, on the other hand, does select an individual from a group of individuals [+d] and specifies its referent [+s]. The identificational statement in (52b) has a definite and specific subject noun phrase by selecting a member of a class and specifying which member it is referring to, while the second constituent presents new information about the subject without specifying the referent. Non-specific noun phrases cannot be linked to previous discourse, and hence denote novelty of reference (Sung 2010).

Other examples of identificational constructions in Yoreme/Mayo are:

(53) Yoreme/Mayo of Sinaloa   (Fieldwork 2010)

a. xu˩u   (O)   maixto

DEM.SG (COP)   teacher

'That is the teacher'

b. xu⌐u　　(O)　　　Juan

DEM.SG　(COP)　　　John

'That is John'

Example (53b) shows that proper names may occupy the position of a referential predicate (Hengeveld 1992); nonetheless, these items may also function as the predicates of nominal predications:

(54) Yoreme/Mayo of Sonora and Sinaloa　　　　　　　(Fieldwork 2010)

　　a. inapo　　(O)　　　Juan

　　1SG.SUBJ　(COP)　　John

　　'I am John'

　　b. a⌐apo　　(O)　　Maria

　　3SG.SUBJ　(COP)　Maria

　　'She is Maria'

The encoding strategy for both types of constructions is that of a zero copula. An alternative is a verbal encoding strategy:

(55) Yoreme/Mayo of Sonora　　　　　　　　　　　　(Almada Leyva 1999:3)

　　a. inapo　　　　ajaria

　　1SG.SUBJ　　　COP.to be

　　'It is me'

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Evidence of a confirming item is observed in nominal predications. These constructions tend to answer questions such as *is he a teacher*? Or *is he John*? For example,

(56) Yoreme/Mayo of Sinaloa   (Fieldwork 2011)

    a. inapo   tekipanoa-leero   jajaria

     1SG.SUBJ   work-AGT   CONFIRM

     'I am a worker'

    b. inapo   maixto   jajaria

     1SG.SUBJ   teacher   CONFIRM

     'I am a teacher'

    c. Juan   jajaria

     John   CONFIRM

     'It is John'

Identity statements may also be expressed thus:

(57) Yoreme/Mayo of Sinaloa   (Fieldwork 2011)

    a. xuˈu   Juan   jajaria

     DEM.SG   John   CONFIRM

     'That is John'

    b. xuˈu   maixto   jajaria

     DEM.SG   teacher   CONFIRM

     'That is the teacher'

However, given the phonological similarity between the copula of (55) and the confirming item in these expressions one is inclined to question if they are not indeed the same item. This item does not appear in any marked constructions of both nominal predications and identificational statements that were elicited. Nonetheless, it is of interest to determine its accurate function by means of further research.

A third type of nouns that may function as a predicate in both nominal predications and identificational constructions are possessed nouns. For example,

(58) Yoreme/Mayo of Sinaloa   (Fieldwork 2011)

a. aˈapo   in   ayye

3SG.SUBJ   1SG.GEN   mother

'She is my mother'

b. aˈapo   Juan-ta   wayye

3SG.SUBJ   John-GEN   sister

'She is John's sister'

Yoreme/Mayo of Sonora and Sinaloa allow both nominal and pronominal possessors. The former receives an overt genitive marker while the latter exhibits an inherent genitive case. Identity statements also accept possessive phrases as their second constituents:

(59) Yoreme/Mayo of Sinaloa   (Fieldwork 2011)

    a. xuˈu   oˈow   in   paa

       DEM.SG   man   1SG.GEN   father

    'That man is my father'

    b. xuˈu   ili   jammut   in   akoro

       DEM.SG   DIM   woman   1SG.GEN   sister

    'That little girl is my sister'

    c. xuˈu   in   paa

       DEM.SG   1SG.GEN   father

    'That is my father'

According to Stassen (1997:109) identity statements and nominal predications tend to share the same encoding strategies. Identity statements are characterized by an (i) unmarked third-person form, (ii) are not predicational and (iii) tend to change the conceptual organization of a person's knowledge of the world (§2.2.1). Moreover, they do not allow any type of overt marking and are thus considered to have zero-marking, which is tantamount to the zero copula marking of nominal predicates in present tense studied thus far. Hence, nominal predicates show an encoding strategy of *identity takeover* (§2.2.1). That is, they make use of the encoding strategy of identity expressions in order to compensate for the fact that they do not have an encoding strategy of their own (Stassen 1997). This property allows them to assimilate to adjectival predicates (§3.3).

Identity takeover is also observed in marked constructions of nominal predications:

.

(60) Yoreme/Mayo of Sonora and Sinaloa   (Fieldwork 2011)

    a. xuˈu-me   ili   usim   kutču-leero-m-tu-baare

       DET-PL   DIM   boy.PL   fish-AGT-PL-VERBLZR-FUT

      'Those little boys will be fishermen'   [IDENTIFICATIONAL CONSTRUCTION]

    b. xuˈu   oˈow   agricultor-tu-ka-y

       DEM.SG   man   farmer-VERBLZR-PAST-IMPERF

      'That man was a farmer'   [IDENTIFICATIONAL CONSTRUCTION]

    c. inapo   agricultor-tu-baare

       1SG.SUBJ   farmer-VERBLZR-FUT

      'I will be a farmer'   [PREDICATIONAL CONSTRUCTION]

    d. in   ayye   arajika-tu-ka-y

       1SG.GEN   mother   steamstress-VERBLZR-PAST-IMPERF

      'My mother was a streamstress'   [PREDICATIONAL CONSTRUCTION]

Possessive phrases in predicate position also receive TAM markers:

(61) Yoreme/Mayo of Sonora and Sinaloa   (Fieldwork 2011)

a. xuˈume   ili   usim   in   battomaˈala-m-tu-baare

   DEM.PL   DIM   girl.PL   1SG.GEN   goddaughter-PL-VERBLZR-FUT

   'Those girls will be my goddaughters'   [IDENTIFICATIONAL CONSTRUCTION]

b. xuˈu   in   nana-tu-ka-y

   DET.SG   1SG.GEN   grandmother-VERBLZR-PAST-IMPERF

   'That was my grandmother'   [IDENTIFICATIONAL CONSTRUCTION]

Thus, nominal predicates in Yoreme/Mayo borrow or take over the encoding strategy of identity statements by suffixing TAM markers directly onto the lexical predicate of the construction. Present tense expressions receive a zero copula.

The presence of the postposition bennasi 'like/similar to' was observed both in identificational constructions and nominal predications of Yoreme/Mayo:

(62) Yoreme/Mayo of Sinaloa   (Fieldwork 2011)

a. iˈi   oˈow   ettaleero-ta   bennasi

   DEM.SG   man   farmer-ACC   POSP

   'That man is a farmer'   [IDENTIFICATIONAL CONSTRUCTION]

b. Juan   kutchuleero-ta   bennasi

   John   fisherman- ACC   POSP

   'John is a fisherman'   [PREDICATIONAL CONSTRUCTION]

The structure of these expressions differs from the zero copula construction in that the former describes "what someone does" (Roy 2004) suggesting a state rather than a

property whereas the constructions in (62) denote a "defining characteristic" of the subject. That characteristic, moreover, is the object of the postposition. Equative sentences also accept an object of the postposition:

(63) Yoreme/Mayo of Sinaloa   (Fieldwork 2010)

xu   ta'a   chooki-ta   bennasi

DET.SG   sun   star-ACC   POSP

'The sun is a star'

Constructions such as these and their morphosyntactic structure both in Yoreme/Mayo and Yaqui is a topic that should be studied more thoroughly in the grammar of these two languages.

A zero copula encoding strategy is also observed in verbal predicates of Yoreme/Mayo:

(64) Yoreme/Mayo of Sonora and Sinaloa   (Fieldwork 2010)

a'apo   O   yepsa

3SG.SUBJ   (COP)   to come

'He is coming'

Zero copulas in verbal predicates are identified by (i) the lack of person marking affixes attached to the verb and (ii) by the absence of auxiliary or supportive items

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(Wetzer 1996). Overt TAM markers suffixed to the verbal predicate are found in constructions such as the following:

(65) Yoreme/Mayo of Sonora and Sinaloa   (Fieldwork 2010)

a. itapo   yepsa-k

   1PL.SUBJ   to come-PERF

   'We came'

b. Manwe   yepsa-k

   Manuel   to come-PERF

   'Manuel came'

c. xu   yoreme   yepsa-k

   DET.SG   man   to come-PERF

   'The man came'

d. empo   yebi-nake

   2SG.SUBJ   to come-FUT

   'You will come'

e. xu   yoreme   yebi-nake

   DET.SG   man   to come-FUT

   'The man will come'

Future tense is also expressed by means of the desiderative morphological mood marker
-baare

(66) Yoreme/Mayo of Sonora and Sinaloa   (Fieldwork 2011)

inapo   sim-baare

1SG.SUBJ   to go-FUT

'I want to go/ I am going to go/I will go'

The subject in verbal predications may be expressed by a (i) personal pronoun, (ii) a proper name or (iii) a noun phrase. The suffixation of verbal inflectional categories to a non-verbal lexical predicate (60) thus assimilates nominal predications in Yoreme/Mayo to intransitive verbal predicates. Hence, this language exhibits uniform encoding strategies (Wetzer 1996) for both intransitive and nominal predicates. Copulas were not observed in the studied data pertaining to nominal predication for Yoreme/Mayo of Sonora and Sinaloa.

3.3 The Syntax of Adjectival Predication in Yoreme/Mayo

According to Dixon (2004), adjectives have two functions in the grammar of any language: (i) to modify a head noun in a noun phrase, and (ii) to denote that something has a certain property. When functioning as modifiers, adjectives refer to a specific quality or property that helps focus on the referent of the head noun in a noun phrase (Dixon 2004:10); as a predicate, an adjective may denote that something has a given property by means of two strategies: (i) as an intransitive verb [see examples (85a and 85b) in (§2.2.2) for Guarani] and (ii) as the complement of a copula [see example (63) in

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the same section for English]. Less prototypical functions of adjectives include those where the adjective functions (iii) as the 'parameter of comparison' in comparative constructions, which are usually themselves extensions of their primary function as modifiers of head nouns and (iv) as verb modifiers.

In (§3.1.4) adjectives were differentiated from nouns and verbs in Yoreme/Mayo of Sonora and Sinaloa, and a brief sketch of this word class as modifiers of a noun phrase was outlined. Thus, the description of an adjective's prototypical function in this language will not be addressed to here. The purpose, on the other hand, is to describe both the morphosyntactic and semantic characteristics of adjectives in a predicate position. A typological review of adjectival predication was given in (§2.2.2). The third and fourth functions of adjectives described by Dixon (2004) are irrelevant to non-verbal predication.

Adjectives in Yoreme/Mayo may be classified into simple and derived adjectives. This classification is similar to the one proposed by Dedrick and Casad (1999) for Yaqui. For instance,

(67) Yoreme/Mayo of Sinaloa   (Fieldwork 2010)

    a. xu-me   narasso-m   ka   buassi

      DET-PL   orange-PL   NEG   ripe

    'The oranges are not ripe'

The adjective in this example may also function as a noun, which in turn means *wise* or *learned*. Thus, it is a clear example of conversion. Another example of conversion is bette 'heavy':

(68) Yoreme/Mayo of Sonora and Sinaloa   (Fieldwork 2010)

     xuˈu-me   tetta-m   may   bette

     DEM-PL   rock-PL   very   heavy

     'Those rocks are very heavy'

Other derived adjectives are those that end in -Vra, which tend to origin from nouns:

(69) Yoreme/Mayo of Sonora   (Almada Leyva 1999)

     a. číčči 'saliva' + -Vra = čičeˈera 'slimy; slobbery'

     b. kéeka 'scabies' + -Vra = kekaˈara 'scabby'

     c. čobbe 'hips' + -Vra = čobbera 'someone who has big hips'

     d. ette 'lice' + -Vra = ettera 'someone who has lice'

     e. kobba 'head' + -Vra = kobbara 'someone who has a big head'

This type of adjectives may also be derived from verbs:

(70) Yoreme/Mayo of Sonora   (Almada Leyva 1999)

     kotče 'to sleep' + -Vra = kotčeˈera 'sleepy head'

Hence, it is a very productive morpheme in the language. Another morpheme that derives adjectives is -li ~ -ri:

(71) Yoreme/Mayo of Sonora

     a. baˈa 'water' + -ri = baari 'wet'   (Fieldwork 2010)

b. xusa-ri-m   suppe-k   (Almada Leyva 1999)

brown-PL   shirt-to have

'He has a brown shirt'

c. čo-ri-k   puxba-k
  wrinkle-ACC   face-to have
  'He has a wrinkled face'

d. ba⎜a 'water' + -li = baali 'fresh'

The predicates jusarim 'brown' and čorik 'wrinkle' in examples (71b) and (71c) are possessive. That is, they are clear examples of possessive predications in which the noun is incorporated to the verb, and the adjective is simply modifying the head noun. Thus, these examples are not clear examples of non-verbal predications.

A third derivative morpheme is -i, which derives adjectives from verbs:

(72) Yoreme/Mayo of Sonora   (Almada Leyva 1999)

    a. buanna 'to cry' + -i = buanni 'wet'

    b. bičite 'to peel' + -i = biiči 'naked'

De-verbal adjectives also occur in Yaqui (Dedrick and Casad 1999; Alvarez 2008). These forms are known as passive participials (Haspelmath 1994). That is, they are oriented toward the affected patient of the verb (Alvarez 2007a). According to this author, Yaqui derives de-verbal adjectives by means of four suffixes: -la; -i; -ri and -ia. All except -ia have been attested for in Yoreme/Mayo. Examples ending in -Vra were not given for Yaqui.

Adjectives ending in -la tend to denote states derived from telic verbs. For example,

(73) Yaqui   (Alvarez 2008)

    a. yejte 'to get up; to sit' → yejte-la 'to be up; to be seated'

    b. watte 'to fall' → watti-la 'is fallen down'

In Yoreme/Mayo, this morpheme is found in:

(74) Yoreme/Mayo of Sonora

    a. María may lotti-la   (Fieldwork 2010)

      Maria very tired-ADJR

      'Maria is very tired'

    b. juyya   totti-la   (De Wolf 1997:174)

      tree   tilt-ADJR

      'The tree is tilted'

The verbal base for these adjectives tends to be intransitive; in addition, the subject noun phrase is an affected patient. Hence, it would seem that -la is a morpheme that suffixes itself both to syntactically intransitive verbs and semantically telic ones. However, cases in which the base is transitive/intransitive have been found.

The suffix -i usually has a transitive verb base, whose subject is an active agent. For instance:

(75) Yaqui   (Alvarez 2008)

    a. tajta 'to hit' → tajti-i 'to be hit'

b.bwasa 'to cook' → bwas-i 'cooked'

Examples for Yoreme/Mayo are given in (72). In this language, the verbal base may be intransitive (71a). In the case of -ri, the verb is also transitive while its subject noun phrase is an agent. Thus, constructions with -ri/-i differ from those with -la in that the former tend to be transitive while the latter intransitive. Alvarez (2008) classifies them as P-oriented resultatives and S-oriented resultatives respectively. A complete account of resultative constructions may be found in Comrie (1981) and Nedjalkov (2001) as well as in Alvarez (2008) for Yaqui.

Adjectival predication is defined as the construction that assigns a prototypical property to a person or an object. According to Wetzer (1996), there are three strategies to do so: (i) person marking, (ii) the use of an overt copula and (iii) zero-marking (§2.2.2). Yoreme/Mayo of Sonora and Sinaloa express adjectival predicates by means of a zero marking or zero copula strategy:

(76) Yoreme/Mayo of Sonora and Sinaloa   (Fieldwork 2010)

   a. xu   ka:ri   (O)   bemela

      DET.SG   house   (COP)   new   (AGE)

      'The house is new'

   b. in   ka:ri   (O)   tosali

      1SG.GEN   house   (COP)   white   (COLOR)

      'My house is white'

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c. may   awwi   (O)   Peero

   very   fat   (COP)   Peter   (DIMENSION)

   'Peter is very fat'

d. xuˈu   jammut (O)   musaˈala   maachi

   DEM.SG   woman   (COP)   pretty   (VALUE)

   'That woman is very pretty'

This is similar to the encoding strategy of nominal predicates, where the juxtaposition of both the subject and the predicate does not express an overt copula or any TAM markers:

(77) Yoreme/Mayo of Sonora and Sinaloa   (Fieldwork 2010)

   Juan   (O)   maixto

   John   (COP)   teacher

   'John is a teacher'

The order of constituents of adjectival predications in Yoreme/Mayo is (N + A), which differs from their attributive counterparts (A + N):

(78) Yoreme/Mayo of Sonora and Sinaloa   (Fieldwork 2010)

   a. xu   bemela   ka:ri

      DET.SG   new   house   (AGE)

      'The new house'

   b. xu   tósali   ka:ri

      DET.SG   white   house   (COLOR)

      'The white house'

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c. may   bweuru   mo˩obe˩eri

   very   big   hat   (DIMENSION)

   'The big hat'

Adjectives of less prototypical 'semantic types' according to Dixon's (1977; 2004) seminal work on the subject are shown in (79):

(79) Yoreme/Mayo of Sonora and Sinaloa   (Fieldwork 2010)

   a. xu   tetta   bette

      DET.SG   rock   heavy   (PHYSICAL PROPERTY)

      'The rock is heavy'

   b. may   bette   tetta

      very   heavy   rock

      'The heavy rock'

   c. xu   sanko   baari

      DET.SG   clothing   wet

      'The clothing is wet'

   d. may   baari   sanko

      very   wet   clothes

      'The wet clothes'

e. xu   wako╎ori   tatta

   DET.SG   pan   hot

   'The pan is hot'

f. tatta   wako╎ori

    hot   pan

    'The hot pan'

g. inapo   alheyya   (HUMAN PROPENSITY)

    1SG.SUBJ   to be.happy

    'I am happy'

h. xu-me   xamuchim   alheyya-y

    DET-PL   woman.PL   to be.happy-IMPERF

    'The women were happy'

i. Juan-ta   ayye   ko╎okore

    Juan-GEN   mother   to be sick

    'Juan's mother is sick'

j. a╎apo   ko╎okore-y

    3SG.SUBJ   to be sick-IMPERF

    'He was sick'

k. lawti 'fast' →laulautia 'slow'   (SPEED)

l. buyte 'run'→buybuyte 'very fast'

According to these examples, human propensity items in Yoreme/Mayo are characterized by the suffixation of overt TAM markers. This means that marked constructions with these items are constructed in a similar fashion as intransitive clauses and may thus be classified as stative verbs.

To function as adjectives, these verbs need the adjectivizing morpheme -ri:

(80) Yoreme/Mayo of Sonora   (Fieldwork 2011)

xu   wohi   may   alhéaka-ri

DET.SG   coyote   very   to be.happy-ADJR

'The coyote is very happy'

The presence of the intensifier in constructions where the adjective functions as a predicate can also be found in examples such as:

(81) Yoreme/Mayo of Sonora   (Neyoy 1994)

a. xu   peero-ta   bisikleeta   may   ilitchi

DET.SG   Peter-GEN   bicycle   very   small

'Peter's bicycle is very small'

b. em   wakas-im   may   wa-wakira-m

   2SG.GEN   COW-PL   very   RED-thin-PL

   'Your cows are very thin'

This intensifier is also observed in identificational constructions:

c. xu|u   bo|o   may tebbe   (Neyoy 1994)

   DEM.SG   road   very long

   'That road is very long'

The intensifier *may* 'very' is restricted to expressions that are both adjectives and gradable (Kennedy and McNally 2005). Gradable adjectives are the only ones accepted in comparative sentences (§3.1.4), and they express the relation between persons and degrees. Degree refers to several intervals ordered along some dimension or scale (Kennedy and McNally 2005). Thus, in (81) the intensifier 'very' adds the semantic connotation that the subject noun phrase has both a higher degree of the property denoted by the adjectival predicate. That is, in (81a) the de-verbal adjective *ilitchi* 'small' denotes that the subject noun phrase has the maximal degree of the property small and the minimal one of *bweuru* 'big'. The same is true for (81b) where the thinness of the cows, for instance, increases and their fatness decreases. Thus, an increase or decrease of degree implies an increase or decrease of quantity. This relation is also observed in (81c).

Speed items, the last prototypical 'semantic type' proposed by Dixon (2004) for adjectives differ in Yoreme/Mayo from other semantic types in that they are the only ones derived by means of reduplication. In the examples shown here, these bases may be adjectives (79k) or verbs (79l), the first of which functions as an intensifier while the

second is a derivative process in which the resulting item is a de-verbal adjective. However, another possibility is that this de-verbal adjective becomes an item of the adjective word class by means of conversion while the reduplicated base is an indicator of intensification. Reduplication is defined as a word formation process in which the stem of a word or part of the stem is repeated. A word may have full or partial reduplication, and it may occur at an initial, medial or final position. The linguistic productivity of the process varies from language to language.

According to Alvarez and Martínez Fabián (2005: 175), reduplication in Yaqui may be (i) verbal; (ii) nominal; (iii) adjectival; (iv) adverbial or (v) suffixal, and its main functions are to indicate primarily (i) plural markers; (ii) aspectual markers, or (iii) to function as a process of verbalization. Dedrick and Casad (1999:264) add a fourth function: (iv) to attribute intensity to an event or process. For the purposes set out here we will only consider verbal and adjectival reduplication.

Verbs are the most easily reduplicated grammatical category in Yaqui (Alvarez and Martínez Fabián 2005). Semantic notions commonly associated to them are plural marking as well as habitual or intensive aspect. An example of the first is:

(82) Yaqui   (Alvarez and Martínez Fabián 2005:179)

   a. aˈapo   yéwe

      3SG.SUBJ   to play:PROG

      'He is playing'

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b. bempo ye-yéwe

    3PL.SUBJ   RED-to play:PROG

    'They are playing'

A form of habitual reduplication occurs in:

    (83) Yaqui   (Alvarez and Martínez Fabián 2005:179)

    túuse   'to grind' →   tu-tutsé 'to be in the habit of grinding'

Adjectives in Yaqui display reduplication in the following form:

    (84) Yaqui   (Alvarez and Martínez Fabián 2005:191)

    a. huˈu-me   chu-chukui   bocha-m   bwe-bwé-re

      DET.PL   RED-black   shoe-PL   RED-big-PL

      'The black shoes are big'

    b. hu-me   libro-m   si-siki-m

      DET-PL   book-PL   RED-red-PL

      'The red books'

The reduplicated base in this grammatical category has an inflectional function.

    In Yoreme/Mayo, intensification is the most commonly expressed relation by means of reduplication. According to Kajitani (2005), the meaning properties of reduplicated forms may be expressed according to the following hierarchy:

(85) Augmentation→Intensification ⇨ [Attenuation → Diminution]

Augmentation is universally preferred over intensification in every studied language in Kajitani (2005); the same goes for attenuation and diminution. This means that reduplication primarily expresses increase rather than decrease; if a language expresses intensification by means of reduplication than augmentation is also expressed hence. This however is not the same for diminution because not all languages express the former through reduplication despite the fact that intensification is expressed in that manner. If a language expresses intensification then it tends to express attenuation as well. The same is true for augmentation and diminution. This, it should be noted, is a general tendency found to occur in the sample of languages studied in Kajitani (2005).

Speed items may also appear in a predicate position:

(86) Yoreme/Mayo of Sonora   (Fieldwork 2010)

    xu   masso   may   buy-buyte

    DET.SG   deer   very   RED-run

    'The deer is very fast'

Stassen (1997), based on Dixon (1977; 2004), Pustet (1989) and Wetzer (1996), proposes that property concepts are predicated according to the following hierarchy:

(87) The Adjective Hierarchy

HUM. PROP. › PHYSICAL › DIMENSION › VALUE › MATERIAL

                            COLOR   AGE   GENDER

                            FORM

It should be noted that this author adds the categories material, gender and form to the semantic dimensions of property-concept predicates. The further to the right a semantic type is, the less likely it is to be encoded verbally. Hence, if a language has an adjectival split at some point in the hierarchy, all the categories to the left will be encoded verbally while those on the right will receive a non-verbal encoding (Stassen 1999:169).

Human propensity items function as the predicate of a construction in Yoreme/Mayo by means of the nominal zero copula encoding strategy:

(88) Yoreme/Mayo of Sonora and Sinaloa   (Fieldwork 2010)

    inapo   (O)   alheyya

    1SG.SUBJ   (COP)   to be.happy

    'I am happy'

Marked expressions in Yoreme/Mayo for this "semantic type" are encoded by means of TAM markers on the lexical predicate:

(89) Yoreme/Mayo of Sinaloa   (Fieldwork 2010)

    in   ayye   tukabiako   tokti   en   omti-nake

    1SG.GEN mother   yesterday everything LOC be.angry-FUT

    'My mother will be very angry'

(90) Yoreme/Mayo of Sonora   (De Wolf 1997: 126)

    xu-me yoreme-m   kaa   allée-taiti-nake

    DET-PL   man-PL.NOM NEG be.happy-INC-FUT

    'The men will not be happy anymore'

According to these examples, the predicates in (89) and (90) are not instances of adjectival predications but intransitive clauses that denote a state in which the subject noun phrase finds itself. The subject assumes the semantic role of patient. Thus the categorial split for property predicates in Yoreme/Mayo is found between human propensity items and physical property ones, and is in accordance with the fact that in an adjectival split language human propensity items tend to be encoded as verbs by receiving TAM markers (89). The fact that these types of predicates according to the data presented here are the only ones encoded as verbs in Yoreme/Mayo makes the split even stronger (Stassen 1997:169), and may thus be classified as stative predicates that designate emotional or physical states of animate entities. Nonetheless, human propensity item predicates in this language are perfectly grammatical with degree markers such as *may*:

(91) Yoreme/Mayo of Sonora and Sinaloa   (Fieldwork 2010)

    a. aˈapo   may   alheyya

       3SG.SUBJ   very   to be.happy

      'He is very happy'

    b. xu   ili   uusi   may   siroka

       DET.SG   DIM   boy   very   to be.sad

      'The little boy is very sad'

That is, human propensity items are losing their verbal properties to acquire the semantic properties of gradability and intensification of adjectives. This makes us question where human propensity items are found in the continuum verb-adjective-noun discussed in

(§2.2.2). And to a greater extent, adjectives as a word class in Yoreme/Mayo. Are adjectives in this language *verby* or *nouny* (Wetzer 1996)?

Physical property items also function as predicates by means of a zero copula encoding strategy:

(92) Yoreme/Mayo of Sonora and Sinaloa   (Fieldwork 2010)
    a. xu   tetta   (O)   bette
      DET.SG   rock   (COP)   heavy
      'The rock is heavy'

    b. xu   sanko   (O)   baari
      DET.SG   clothing   (COP)   wet
      'The clothing is wet'

In marked constructions, these types of predicates denote verbal inflectional categories by means of adverbial markers or by the presence of TAM markers on the lexical predicate:

(93) Yoreme/Mayo of Sonora and Sinaloa   (Fieldwork 2011)

    a. xu-me   ba'am   soto'ori bexa ka   tatta

      DET-PL   water   pot   ADV   NEG   hot

      'The water in the pot was hot' (lit. The water in the pot is not hot now')

    b. xu   cučhiri bexa   ka   may   buawwi

      DET.SG knife   ADV   NEG   very   sharp

      'The knife was very sharp' (lit. The knife is not sharp now)

c. tuuka-po   sebbe-baare

   tonight-LOC   cold-FUT

   'Tonight will be cold'

Human propensity adjectives may also be expressed thus:

(94) Yoreme/Mayo of Sinaloa   (Fieldwork 2010)

   a. María   bexa   ka   siroka

      Maria   ADV   NEG   be.sad

      'Maria was sad' (lit. Maria is not sad now)

   b. emposu   ko|okore   tukabiako
       2SG.SUBJ   sick   yesterday
       'You were sick'

Adjectives of dimension also receive overt markers on the lexical predicate:

(95) Yoreme/Mayo of Sinaloa   (Fieldwork 2011)

   a. xu   xuyya   bweuru-tu-ka-y

      DET.SG tree   big-VERBLZR-PAST-IMPERF

      ·The tree was big'

   b. ilitchi-tu-baare   xu   xuyya

      small-VERBLZR-FUT   DET.SG   tree

      'The tree will be small'

Adverbial markers were also observed in this type of adjectives:

(96) Yoreme/Mayo of Sinaloa   (Fieldwork 2011)

    a. Juan-ta   kaari   ka   bexa   bweuru

    John-GEN   house   NEG   ADV   big

    'John's house was big'

    b. xuꞌu   xuyya   ka   bexa   tebbe

    DEM.SG tree   NEG   ADV   tall

    'That tree was tall'

Color adjectives are also encoded by means of a nominal zero copula encoding strategy in present tense and by the affixation of TAM markers on the lexical predicate in marked constructions:

(97) Yoreme/Mayo of Sinaloa   (Fieldwork 2011)

    a. in   kaari   tosali

    1SG.GEN house   white

    'Mi casa es blanca'

    b. Juan-ta   kaari   tosali-tu-ka-y

    John-GEN   house   white-VERBLZR-PAST-IMPERF

    'John's house was white'

c. xu   sewa-m   sawali-tu-baare

   DET.SG   flower-PL   yellow- VERBLZR-FUT

‘The flowers will be yellow’

The presence of TAM markers on the lexical predicate is a verbal encoding strategy

also observed in constructions of value adjectival predications:

(98) Yoreme/Mayo of Sonora and Sinaloa   (Fieldwork 2011)

   a. xu-me   mansana-m   may   kiwwa-tu-ka-y

      DET.SG-PL   apple-PL   very   delicious-VERBLZR-PAST-IMPERF

      ‘The apples were very delicious’

   b. xu   boawamta   kaa   tuˈuri-tu-ka-y

      DET.SG   food   NEG   good-VERBLZR-PAST-IMPERF

      ‘The food was bad’ (lit. The food was not good)

Adjectives denoting age also display this behavior:

(99) Yoreme/Mayo of Sonora and Sinaloa   (Fieldwork 2011)

   a. xu   xammut (O)   may   oˈola

      DET.SG   woman   (COP)   very   old

      ‘The woman is very old’

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b. xu   kaari   o'ola-tu-ka-y

   DET.SG   house   old- VERBLZR-PAST-IMPERF

   'The house was old'

c. xu-me   sewa-m   maata-m   bemela-tu-baare

   DET-PL   flower-PL   plant-PL   new- VERBLZR-FUT

   'The flowers of the plant will be new'

Adjectival predicates are similar to nominal predicates by the fact that they do not have an encoding strategy of their own (Stassen 1997). Hence, they may be encoded either as verbs or as class-membership predicates. Stassen (1997) refers to this phenomenon as verbal or non-verbal takeover. It is rare, though it has been attested, that adjectives align themselves with locatives to the exclusion of the other two categories. No language has shown that adjective predicates have an exclusive encoding strategy (Stassen 1997). Nominal takeover or the use of a nominal encoding strategy within adjectival predication in Yoreme/Mayo is attested for by the use of a zero copula encoding strategy in present tense, where the relationship between both constituents of the clause is not stated clearly by any morphological markers (100). According to Dixon (2010), zero copula or verb-less clauses such as these are characterized by the fact that the most agent-like argument (A) is the structurally unmarked (nominative) constituent of the clause.

(100) Yoreme/Mayo of Sonora   (Fieldwork 2010)

   a. xu   totoroˈora-O   kukusu

   DET.SG   rooster-NOM   to sing

   'The rooster is singing'

   b. xu   wiikit-O   bweuru

   DET.SG   bird-NOM   big

   'The bird is big'

A nominative-accusative case alignment is also observed in nominal predications (§3.2). Nonetheless, zero copulas may also appear in combination with overt copulas (Stassen 1997). This is observed in constructions of adjectival predication for Yoreme/Mayo, where property denoting concepts may function as predicates by means of (i) a second type of zero copula construction in which the presence of overt TAM markers is observed on the predicate nucleus (98) or (ii) an overt copula (101):

(101) Yoreme/Mayo of Sonora   (Almada Leyva 1999: 117)

   aˈapo   mejikat   kattek

   3SG.SUBJ   very.tall   AUX/COP

   'He is very tall'

Auxiliary or supportive items were not observed in nominal predications of Yoreme/Mayo. Copularization is defined as the process where alternative lexemes function as copulas (Hengeveld 1992). Copulas in Uto-Aztecan languages tend to

originate from verbs that denote some kind of movement, posture or existential content (Stassen 1997). These include, for example, (i) positional verbs and localizing copulas, (ii) pronouns, (iii) semi-copulas and (iv) existential verbs. According to Hengeveld (1992), a copula has two main functions in non-verbal predications: (i) to allow a non-verbal predicate to function as the main predicate of the expression, and (ii) to function as the carrier of tense-aspect-mood categories. Thus, copulas do not add any semantic content to the predicate phrase they accompany. This process is quite common in the languages of the world (Devitt 1990). For example, posture verbs, such as kattek 'to be seated' for Yoreme/Mayo (87) may go through an initial gradual loss of semantic content by denoting the location of a person or an item [see (115) in §2.3.2]:

(102) Yoreme/Mayo of Sinaloa   (Fieldwork 2012)

  a. batwe   xela   kattek   in   kaari

     river   close   AUX/COP   1SG.GEN   house

     'My house is close to the river'

  b. in   kobba   mobe'eri   ino-kattek

     1SG.GEN   head   hat/cap   1SG.REFL-AUX/COP

     'The hat is on my head'

  c. inapo   kosina-po   ama   kakte

     1SG.SUBJ kitchen-LOC   there   AUX/COP

     'I am in the kitchen'

Semantic relations of existence and location are encoded by copula clauses in many languages of the world. Locative constructions are characterized by two key concepts: (i) figure and (ii) ground. Talmy (1983) defines the former as the entity that we are trying to find and the latter as the place in which the figure is found. For instance, in (100c) the figure is the personal pronoun *inapo* while the noun *kosinapo* functions as the ground. Both items are stationary objects. A locative construction thus denotes the relation between figure and ground. Newman (2002:7) considers that the use of posture verbs to describe the location and spatial configuration of inanimate entities is an extension of their main function. That is, to describe human postures. Nonetheless, this extended function of posture verbs is clearly observed both in (102a) and in (102b) where the position of the house in the first example with regards to the soil it is located on or the position of the hat on top of a person's head in the second are reminiscent to the human posture of sitting. Other positions of inanimate items pertaining to human postures can be seen in the following:

(103) Yoreme/Mayo of Sonora

    a. ma acheetam   buiyya-po   booka   (Burnham 1984)

       machete   soil-LOC   to lie down

       'The machete is on the floor'

    b. bem   kuadéerno-m   waixwa   tóote-k   (Almada Leyva 1993)

       3PL.GEN   notebook-PL   inside   to lie down-PERF

       'Our notebooks are inside'

c. xu   ta'a   ama   kattek

   DEM.SG   sun   there   to be seated

   'The sun is over there'

d. imi'i   kattek,   in   jiabsi

   DEM.SG   to be seated   1SG.GEN   heart

   'My heart is over here'

e. in   exkuéela   ama   kattek

   1SG.GEN   school   there   to be seated

   'My school is over there'

   Posture verbs are primarily characterized by codifying information about the dimensions as well as both the horizontal or vertical position of the figure (Berthele 2004). In (103b), for instance, the meaning of the verb extends to denote that the notebooks are in a horizontal position inside the facilities of an educational institution; in (103c) the verb kattek denotes that the sun is found in a vertical position with respect to the horizon, which is similar to the position of sitting down. The same situation is found in the following examples where the verb kattek denotes that the items are in a vertical position with respect to the ground; i.e., literally, sitting on the ground. Objects that have a horizontal orientation are encoded by means of the verb tootek 'to lie down' (103a). In

the case of inanimate entities encoded by the verb kikte 'to stand', the items assimilate to a human being standing up and, by extension, to human feet.

The grammaticalization process in which posture verbs or locative verbs loose semantic content may lead to the acquisition of an existential connotation (Devitt 1990). An example is a'ane, the prototypical locative verb of Yoreme/Mayo:

(104) Yoreme/Mayo of Sinaloa   (Fieldwork 2011)

    a. xu   chu'u   mesa-po   betuku   ka   ama   a'ane

       DET.SG   dog   table-LOC   underneath   NEG   there   AUX/COP

       'The dog was underneath the table' (lit. the dog is not underneath the table)

    b. Sonora-po   ento   Sinaloa-po-te   yun   yoreme-m   a'ane

       Sonora-LOC   CONJ   Sinaloa-LOC-INTR   many   yoreme-PL   AUX/COP

       'There are many yoremes in Sonora and Sinaloa'

The use of kakte or a'ane differs primarily on the animacity of their subject noun phrases. That is, a'ane does not accept an inanimate argument:

(105) Yoreme/Mayo of Sonora   (Fieldwork 2011)

    ** xu   soto'ori   mesa-po   betuku   ka   ama   a'ane

       DET.SG   pot   table-LOC   underneath   NEG   there   AUX/COP

       'The pot was underneath the table' (lit. the pot is not underneath the table)

Languages that use the same verb for both locative and existential predications are said to consider the latter as an extension of the former, which in the case of an existential clause does not have a specified location.

Both a locative and existential a'ane is observed in Dedrick and Casad (1999) for Yaqui:

(106) Yaqui   (Dedrick and Casad 1999)

    a. tuká-ne   huya-u   a'ane-n

     yesterday-1SG.SUBJ   woods-DIR   AUX/COP-PCN

     'Yesterday I was in the woods'

    b. hai-sa   empo   a'ane-n

     INTERR   2SG.SUBJ   AUX/COP-PCN

     'Didn't you know that I was here?'

TAM markers may be suffixed to the auxiliary item:

(107) Yoreme/Mayo de Sonora   (Nenoy 1994)

     tuysi   yun   pariseero-m   ama   a'ane-y

     many   fariseo-PL   there   AUX/COP-IMPERF

     'There are many fariseos'

The semantic bleaching of an item may continue to the point where it has the temporary function of a copula:

(108) Yoreme/Mayo of Sonora   (De Wolf 1999:142)

   tu'isi   a'ane

   good   to be.COP

   '(He/She) is good'

It is worthwhile to mention here in parenthesis that given the semantic nature of the relationship expressed both in locative and existential clauses the verbal items functioning as copulas are not entirely without meaning and are, thus, not undisputed examples of non-verbal predication.

The prototypical locative verb in Yoreme/Mayo for an inanimate subject is oꞋore:

(109) Yoreme/Mayo of Sonora and Sinaloa   (Fieldwork 2012)

    a. xu   sotoꞋori   mesa-po   oꞋore

      DET.SG   pot   table-LOC   AUX/COP

      'The pot is on the table'

However, this verb may also have an existential connotation:

(110) Yoreme/Mayo of Sonora   (Burnham 1984)

    imiꞋi   naiki   taskarim   oꞋore

    here   NUM   tortillas   AUX/COP

    'There are four tortillas here'

According to De Wolf (1997:175), copulas are only found in examples of adjectival predication of Yoreme/Mayo of Sonora and Sinaloa. The structure of these constructions is [PREDICATE – COPULA]. However, it is of interest to ask ourselves how these items' meanings have weakened in order to assume this function. The examples given by this author are:

(111) Yoreme/Mayo of Sonora   (De Wolf 1997:171)

    a. xuˈu   xammut   musaˈala   maachi

      DEM.SG   woman   pretty   COP

      'That woman is very pretty'

    b. tuˈuri-si   tawane

      good-ADVR   COP

     'It will be good (the food)'

    c. xunnera-si   aˈane

      ugly-ADVR   COP

     'It is ugly (the weather)'

    d. yooli-si   ˈa-ˈaayu

      wild-ADVR   3SG.OBJ-COP

     'He is getting wild'

The copula of (111a) also appears in examples such as (112):

(112) Yoreme/Mayo of Sonora and Sinaloa   (Fieldwork 2010)

    a. xu   kaari   ka   čiča   maachi

      DEM.SG   house NEG   dirty   COP

      'The house was dirty' (lit. the house is not dirty)

The prototypical function of this item is as an intransitive verb meaning 'to see' or 'it appears (113a). Nonetheless, it may also function as a postposition (113b):

(113) Yoreme/Mayo of Sonora   (Neyoy 1994:149)

    a. yorem   yori-si   maachi-tu-nake-y

       man   white.man-ADVR   to see-VERBLZR-FUT-IMPERF

    'The yoreme (man) will appear as a white man'

    b. siroka   maachi   (Almada Leyva 1999:112)

       sad   POSP

    'He seems sad'

According to Bybee (2002) nouns and verbs may lose their lexical content and become prepositions, postpositions, auxiliaries or other grammatical forms. The proposed grammaticalization path here is verb › adposition › copula. This is also observed in Yaqui, where maachi has a prototypical intransitive function meaning 'to appear':

(114) Yaqui   (Dedrick and Casad 1999:65)

    a. hai-sa   maachi   huuˈu   em   saˈawa

       INTERR   to appear   DEM.SG   2SG.GEN   sore

    'How is your sore? / How does it appear?

b. eme|e |a|a   hunneiya   waka|a   kaa-ye-|a-mači-a-|ii-aa-m-ta

2PL.SUBJ   3SG.OBJ   to know   DEM.ACC   NEG-out-3SG.OBJ-to appear-VR:IN-DSD-NZL-ACC

‘You know the one who does not want to appear?’

However, it may also function as a transitive verb:

(115) Yaqui   (Dedrick and Casad 1999:65)

ito-u   ye-|a-mači-a-k   enchi-m   a|a   hoa-u

1PL.OBJ-DIR   out-3SG.OBJ-to appear-VR-PERF   2SG.SUBJ-PL   3SG.OBJ   to do-GND

‘He revealed to us that you did it’

An existential maachi is observed in (116). This function was not found in Yoreme/Mayo:

(116) Yaqui   (Dedrick and Casad 1999:65)

hammuč-im   kaita   naya-|a-mači

woman-PL   NEG   to burn-EV-to have

‘The women have no firewood’

According to Dedrick and Casad (1999) the noun phrase hammučim ‘women’ as expressed in (116) is expected to function as the object of the postposition maachi. However, instances in which this item takes adverbial, adjectival or stative verb complements in existential constructions have been found (Dedrick and Casad 1999).

Overt markers for verbal inflectional categories in constructions such as (111a) are suffixed directly to the lexical predicate:

(117) Yoreme/Mayo of Sinaloa   (Fieldwork 2012)

    xu   ili   xammut   musaˈala-tu-baare

    DET.SG   DIM   woman   pretty-VERBLZR-FUT

    'The little girl will be pretty'

Existential clauses in Yoreme/Mayo occur with the locative verbs aˈane (92b) and oˈore (110), and the intransitive verb weyye, meaning 'to walk' or 'to move':

(118) Yoreme/Mayo of Sonora and Sinaloa   (Fieldwork 2010)

    a. mamni   wakasim   etta-po   weyye

      NUM   cow.PL   plantation-LOC   AUX/COP

      'There are five cows in the plantation'

    b. wepu   sotoˈori   en   mesa-po   weyye-y

      NUM   pot   LOC   mesa-LOC   AUX/COP-IMPERF

      'There was a pot on the table'

Moreover, this verb may assume the function of a copula similar the English verb 'to be':

(119) Yoreme/Mayo   (Fieldwork 2010)

    xu   paxko   ketune   weyye

    DET.SG party   still   to be

    'The party is still going on'

A causative maachi in Yaqui has also been identified:

(120) Yaqui   (Dedrick and Casad 1999:65)

kokko-wa-me   kaa tu˩uri,   bʷan-mači

death-NMZL-PL   NEG good   to cry-to make

'Death is not good, it makes one cry'

Buelna (1989) glosses this item as an equivalent to the English suffix '-able/-ible', adding that its main function is to denote that the subject of the construction it appears in has the capacity to carry out an action or process. This is what Dedrick and Casad (1999) denominate as the capacitative function of maachi:

(121) Yaqui   (Dedrick and Casad 1999:65)

kari-ta   ne-haiwa   haksa   ne   tua   a˩a   ten-mači

house-ACC   1SG.SUBJ-to hunt   INTERR   1SG.SUBJ   ADV   3SG.OBJ   to find-able

'I am looking for a house. Where can I find one?'

Constructions with the intransitive verb taawa 'to stay' in Yoreme/Mayo receive TAM markers such as the following:

(122) Yoreme/Mayo of Sonora and Sinaloa   (Fieldwork 2010)

a. inapo   imi˩i   ka   tawwa-k   tuuku

1SG.SUBJ   here   NEG   to stay-PERF   yesterday

'I did not stay here yesterday'

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b. inapo   im⌐i   tawa-nake

   1SG.SUBJ   here   to stay-FUT

   'I am going to stay here'

c. ama-w   taawa-k   (Almada Leyva 1999:176)

    there-DIR   to stay-PERF

    'He stayed behind'

No examples of taawa 'to stay' functioning as an auxiliary item were given for Yaqui. However, its function in several types of constructions in this language needs further research.

The prototypical existential verb in Yoreme/Mayo is a⌐ayu 'to have':

(123) Yoreme/Mayo de Sonora   (Neyoy 1993:89)

   a. batči   a⌐ayu-taite-k

      corn   to have-INC-PERF

      'There is starting to be corn'

   b. yun   juyya   ama   ayu-ka-y

      a lot tree   there   to have-PAST-IMPERF

      'There were a lot of trees'

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c. en   kosina-po   kutchu   ama   ayka   (Fieldwork 2011)

   LOC   kitchen-LOC   fish   there   to have.PERF

   'There is fish in the kitchen'

d. jittasu   ama   a│ayu-k   (Almada Leyva 1999)

   What   there   to have-PERF

   'What is there?'

Yaqui also shows overt TAM markers for this intransitive verb:

(124) Yaqui   (Dedrick and Casad 1999:64)

   a. soda-m   │intok   sebe-ka   ama   aayu-k

      soda-PL   CONJ   cold-being there   to have-PERF

      "And there are cold sodas there"

   b. tekkil   ne-u   aayu-k

      work   1SG.SUBJ-DIR   to have-PERF

      'I have work'

Hence, the grammaticalization processes of posture verbs, the locative verbs a│ane and
o│ore, and the intransitive verb maachi as well as the verb a│ayu 'to have' into auxiliary or
supportive items occurring in non-verbal predications of both Yoreme/Mayo and Yaqui is

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twofold: (i) semantic and (ii) synactic. The possible grammaticalization path that each

item is currently undergoing may be seen in the following graphs:

(125) Proposed Path of Semantic Evolution in Copulas   (Devitt 1990)

Postural Verbs   Locative Verbs   Existential Verbs   Copula with a Temporary Sense   Epistemic Modal
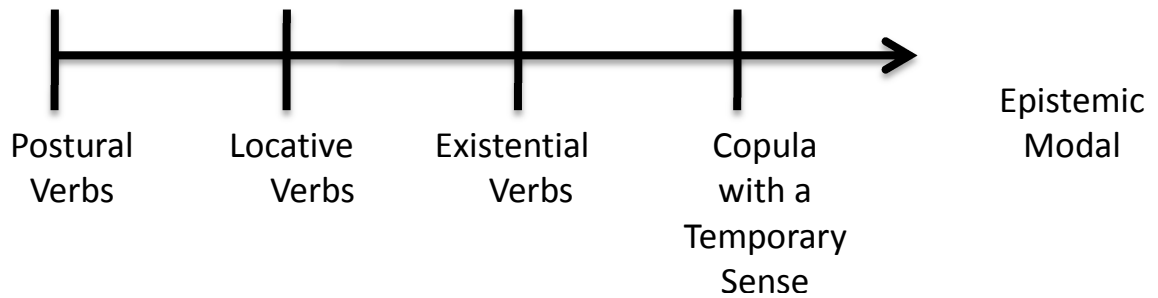
(126) Syntactic Grammaticalization Path of Copulas   (Bybee 2002)

Verb   Adposition   Copula
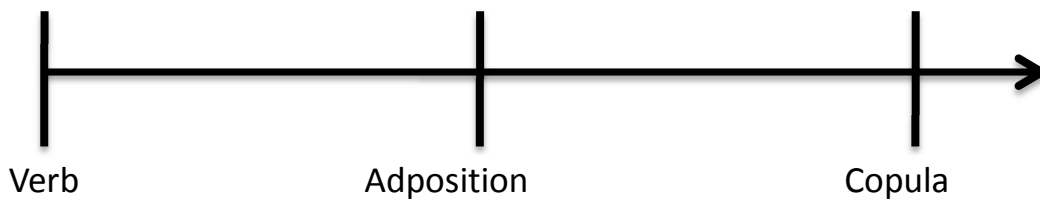
The position that each verb is currently found in according to the data presented

here for Yaqui (Y) and Yoreme/Mayo (M) can be seen in Table 5:

VERBS	Posture Verbs	Locative Verbs	Existential Verbs	Copulas	Epistemic Modals
tootek/kattek	X $_{(Y/M)}$	X $_{(Y/M)}$			
a'ane		X $_{(Y/M)}$	X $_{(Y/M)}$	X $_{(Y/M)}$	
weyye			X $_{(M)}$	X $_{(M)}$	
o'ore		X $_{(M)}$	X $_{(M)}$		
a'ayu			X $_{(Y/M)}$		
maachi			X $_{(Y)}$		

Table 5. Possible grammaticalization path for auxiliary items in Yaqui and Yoreme/Mayo.

The syntactic functions that these items may assume as they undergo the process of grammaticalization are summarized in Table 6:

VERBS	Verb	Adposition	Copula
tootek/kattek	X $_{(Y/M)}$		
a'ane	X $_{(Y/M)}$		
weyye	X $_{(M)}$		
o'ore	X $_{(M)}$		
a'ayu	X $_{(Y/M)}$		
maachi	X $_{(Y/M)}$	X $_{(Y/M)}$	

Table 6. Syntactic Evolution of Auxiliary Items in Yoreme/Mayo (M) and Yaqui (Y).

The subjects of posture verbs tend to be animate. However, as their function extends to the description of the spatial configuration of the figure in locative constructions their subjects are also inanimate. This differs from prototypical locative verbs in Yoreme/Mayo, where a'ane is used for animate subjects and o'ore for inanimate ones. According to the graph in (125) posture verbs in Yoreme/Mayo have begun to acquire the syntactic characteristics and semantic content of locative verbs but have retained their prototypical function of describing human postures. The semantic content of the locative verbs a'ane and o'ore has extended to an existential connotation, and in the case of a'ane to that of a temporary copula similar to Spanish 'estar'.

A temporary sense has also been observed for weyye 'to walk' in Yoreme/Mayo. Examples for neither an existential nor a temporary sense of weyye 'to walk' were observed in the data studied of Yaqui. The prototypical existential a'ayu retains its

function as a verb in both Yoreme/Mayo and Yaqui. None of these items has reached the point where they lack the semantic content of an epistemic modal.

The verb maachi in both Yoreme/Mayo and Yaqui is the only item that has recategorized into an adposition while the rest retain their syntactic functions as verbs. This means that according to (126) maachi is closer to functioning as a copula than any of the other verbs that have grammaticalized into supportive items in these languages despite the gradual loss of semantic content observed in the examples above. However, the existence of copulas in languages of the Yaqui-Mayo sub-branch of Uto-Aztecan languages (Dakin 2004) is still a topic of much debate. This is due to the fact that some scholars have stated that Yaqui and consequently languages of the same sub-branch do not have any copulas, and that the verbs functioning as supportive items in constructions such as the above are functioning not as copulas but as auxiliary verbs. This seems in accordance with both graphs (125) and (126) and with the examples for both Yaqui and Yoreme/Mayo shown above; nonetheless, further work on the topic is necessary in order to determine the importance of these items in Yaqui and Yoreme/Mayo.

CONCLUSIONS

This thesis is a study of both nominal and adjectival predication in Yoreme/Mayo of Sonora and Sinaloa. The purpose of the work was threefold: (i) to describe how non-verbal predications are expressed in Yoreme/Mayo; (ii) to determine which is the distribution of the encoding strategies observed in the data of nominal and adjectival predications, and (iii) to study the function of copulas or copula-like items in these constructions. The conclusions of this study are listed as follows:

1. In Yoreme/Mayo a nominal predication is expressed by means of an auxiliary or supportive item – zero copula – in present tense, where both constituents of the clause are merely juxtaposed. The order of constituents of these expressions tends to be SV (§3.2).

2. Marked constructions are characterized by the suffixation of the verbalizer -tu and additional verbal categories to the lexical predicate. This type of construction is also known as a zero copula construction (Hengeveld 1992).

3. The structure of nominal predications is [NP$_{ARG}$ (COP) NP$_{PRED}$]. That is the lexical predicate takes a single argument that is expressed as the grammatical subject of a copular construction.

4. A third strategy observed in the studied data is the use of adverbial tense markers. This contrasts from verbal predications where any necessary TAM markers are attached to the verb. Thus, the use of adverbial markers is primarily a non-verbal encoding strategy (§3.2).

5. Nominal predication in Yoreme/Mayo of Sonora and Sinaloa is expressed by means of *identity takeover*. That is, a nominal predication in this language borrows the encoding strategy of *identificational statements*; these are characterized by: (i) an obligatory deictic; (ii) an unmarked third person form; and (iii) do not allow any type of overt marking. This zero marking strategy is tantamount to the zero copula strategy found in nominal predications (§3.2).

6. The predicate slot for nominal predications may be occupied by (i) nouns denoting social properties (Hengeveld 1992), (ii) proper names and (iii) possessed nouns.

7. Adjectival predicates require the verbalizer -tu in order to function as verbs in predicate constructions. However, they differ from nominal predications in that they make use of overt copulas both in unmarked and marked constructions (§3.3).

8. The observed word order for adjectival predications in Yoreme/Mayo is SV (N+A), which contrasts with the (A+N) order of constituents of attributive expressions. Adjectives of dimension, age, value and color may occupy both a modifying and predicative position (§3.3). Peripheral "semantic types", on the other hand, display different distributional patterns: Physical property items tend to have derived forms and may function as both modifying adjectives or predicates while human propensity items are encoded as verbs and thus receive the respective tense-aspect-markers (78g-j). When

functioning as modifying adjectives, these items must be accompanied by an adjectivizing suffix (79). Speed items tend to acquire the properties of the class into which physical properties are classified (Dixon 2004). Items of this "semantic type" are usually derived from verbs by means of reduplication.

9. Reduplication may be used as an inflectional process to denote a grammatical function (78k) or derivatively to create new lexical items (78l). When used as the former, the reduplicated form tends to denote an (i) increase of quantity (augmentation) or (ii) an increase of degree (intensification).

10. Human propensity items function as the predicate of a construction by means of a nominal encoding strategy; these constructions tend to denote a state in which the subject noun phrase finds itself. Thus, it assumes a semantic role of patient. Overt TAM markers are suffixed to the lexical predicate. Moreover, human propensity predicates do not alternate between the prenominal position of attributive phrases and the postnominal one of predicate constructions hence assimilating themselves to intransitive predicates (§3.3).

11. Physical property adjectives also function as predicates by means of a nominal zero copula construction in which the subject and predicate are simply juxtaposed in the unmarked form and by the presence of overt TAM markers suffixed to the lexical predicate in marked constructions.

12. Physical property items may express tense or aspect by means of adverbial markers, which contrasts significantly with verbal patterns of predication. Thus, the use of adverbial markers is primarily a non-verbal encoding strategy. Adverbial tense markers were also observed in human propensity items meaning that these verbs are losing their verbal properties to acquire the semantic properties of gradability and intensification of adjectives (§3.3).

13. Adjectives of dimension, color, value and age express verbal categories such as tense and aspect by the suffixation of the verbalizer -tu and additional TAM markers to the lexical predicate (§3.3).

14. Adjectives in Yoreme/Mayo function as predicates by means of three encoding strategies: (i) a zero copula construction in which the argument and predicate are simply juxtaposed; (ii) a second type of zero copula construction that allows overt TAM marking on the lexical predicate and (iii) an overt copula.

15. Auxiliary items in Yoreme/Mayo may take the form of posture verbs, which primarily express information about the dimensions and position of a figure. The most commonly used posture verbs as auxiliary or supportive items in Yoreme/Mayo are kattek 'to be seated', kikte 'to stand up' and tootek 'to lie down'.

16. Prototypical locative verbs in this language may also be used in existential clauses. The location of an animate subject is expressed by the verb aʼane

while that of an inanimate subject is denoted by o'ore. The semantic bleaching of a'ane has reached a point where it functions as a copula similar to English 'to be' or Spanish 'ser'. This was not observed for o'ore. A third verb that has acquired both an existential and copula function in Yoreme/Mayo is weyye 'to walk' or 'to move'.

17. Auxiliary items were only observed in examples of adjectival predication. The verbs seen to occupy this position are: (i) posture verbs, (ii) a'ane (animate); (iii) o'ore (inanimate), (iv) maachi, (v) taawa and (vi) aayu; the prototypical function of maachi in Yoreme/Mayo is as a verb meaning 'to appear' and as a postposition. In Yaqui, this item may also function as a transitive verb, an existential verb, as a causative morpheme and as a suffix meaning '-able/-ible'; taawa 'to stay' was not observed as an auxiliary item in Yaqui. However, its presence in this position needs further research both in Yaqui and Yoreme/Mayo.

18. Yoreme/Mayo of Sonora and Sinaloa are characterized by uniform encoding strategies for verbal, nominal and adjectival predications.

19. Adjectives in Yoreme/Mayo tend to be verby (Wetzer 1996).

CONTRIBUTIONS

The contributions of this work are outlined as follows:

1. In Yoreme/Mayo a nominal predication is expressed by means of an auxiliary or supportive item – zero copula – in present tense; marked constructions are characterized by the suffixation of the verbalizer -tu and

additional verbal categories to the lexical predicate. This encoding strategy is also observed for adjectival predications.

2. Both nominal and adjectival predications in Yoreme/Mayo use adverbial tense markers. This contrasts from verbal predications where any necessary TAM markers are attached to the verb.

3. Adjectival predicates differ from nominal predications in that they make use of overt copulas both in unmarked and marked constructions (§3.3).

4. The observed word order for adjectival predications in Yoreme/Mayo is SV (N+A), which contrasts with the (A+N) order of constituents of attributive expressions.

5. Yoreme/Mayo of Sonora and Sinaloa are characterized by uniform encoding strategies for verbal, nominal and adjectival predications.

6. Adjectives in Yoreme/Mayo tend to be verby (Wetzer 1996).

FURTHER WORK

The data presented in this thesis for nominal and adjectival predication in Yoreme/Mayo of Sonora and Sinaloa is extensive but not exhaustive. Research must continue in related topics such as:

1. Locative, existential and possessive predications, which are relevant to non-verbal predication. Data pertaining to possessive predications in Yaqui and other languages of the Tara-Cahitan sub-branch of Uto-Aztecan languages studied in Muchembled (2010), for instance, may serve as a starting point to continue research in this topic.

2. The grammaticalization paths of auxiliary items in locative, existential and possessive predications.

3. The semantics of non-verbal predications in Yoreme/Mayo of Sonora and Sinaloa.

4. Comparative studies of data pertaining to different varieties of Yoreme/Mayo regarding non-verbal predication: (i) Yoreme/Mayo of Sonora and (ii) Yoreme/Mayo spoken in (a) the valley of Sinaloa, (b) the mountainous region of this state and that of (c) the coast.

5. Comparative studies regarding non-verbal predications in Yoreme/Mayo and Yaqui.

6. Diachronic studies concerning data documented for Tehueco, and its relation to both Yoreme/Mayo and Yaqui.

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