

## DETERMINING VERB ARGUMENT STRUCTURE IN COPAINALA ZOQUE\*

Clifton Pye

The University of Kansas

Copainala Zoque (hereafter COP Zoque) is a Mixe-Zoquean (MZ) language spoken in the northern area of the state of Chiapas, Mexico. Copainala is one of about 30 small towns in Chiapas where a few inhabitants still speak a variety of Chiapas Zoque. Søren Wichman (1993) estimates there are currently around a thousand speakers of Copainala Zoque.

Copainala Zoque is sometimes referred to as Wonderly's Zoque after the Summer Institute of Linguistics (SIL) researcher who published a series of papers on the language's phonology and morphology (Wonderly 1951, 1952). Several SIL dictionaries for Chiapas Zoque also exist, including Copainala Zoque (Harrison et al. 1981, Engel & Engel 1987, Harrison & Harrison 1984). These dictionaries provide valuable phonological and morphological sketches of the languages based on Wonderly's research. While these sources provide an excellent overview of several Chiapas Zoque languages, they are far from complete.

I spent a summer last year undergoing a crash course in Copainala Zoque as part of the Mixe-Zoque Documentation Project headed by Terrence Kaufman and John Justeson (cf., Kaufman 1993, Justeson & Kaufman 1993). I worked with two speakers of Copainala Zoque: Heriberto Aguilar Lopez and Reynaldo Estrada Lopez in an effort to elicit as many Zoque words as possible in a two-month period. From the beginning I was struck by the verb argument structure of the language, and particularly, the way in which the productive style of verb compounding affects verb argument structure. I begin by describing the basic morphology and argument structure of simple verbs in COP Zoque, proceed to a description of the use of affixes to alter verb argument structure, and end with a description of verb compounding and its effect on verb argument structure.

### Verb morphology and argument structure

COP Zoque is an agglutinative language with an ergative cross-reference morphology marked on the verb. The subject NP of a transitive clause also carries an ergative case suffix *-ʔs*. COP Zoque has a split ergative morphology in that both transitive and intransitive verbs in dependent clauses use the ergative prefixes to mark the subject. I focus on verbs in root clauses in this paper, and will use the third person ergative cross-referencing morphology to highlight verb transitivity. I provide examples of the basic verb paradigms in (1). One aspect of the transcription system worth noting is that COP Zoque employs a six-vowel system. Five of the vowels are similar to the vowels in Spanish, but the sixth vowel is an unrounded, tense, usually nasalized

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vowel that varies between a mid back and high back position (Wonderly 1951: 108). I use the barred *i* [ī] to represent this sound. Note also that the voicing assimilation and palatal metathesis evident in these paradigms are regular throughout the language. Since my focus in this paper is on the argument structure of the verbs, I present verb forms in the third person form to highlight the transitivity distinctions.

## 1 COP Zoque verb paradigms

a General form	person-stem-aspect-subject-(object)	
a Transitive		
I cure it	ndzoʔyɿpya ʔɿs	[n-tzoʔyɿy-pa ʔɿs Ø]
you cure it	ndzoʔyɿpya mis	[n-tzoʔyɿy-pa mis Ø]
s/he cures it	choʔyɿpya	[y-tzoʔyɿy-pa Ø Ø]
I cure you	ndzoʔyɿpya ʔɿs mij	[n-tzoʔyɿy-pa ʔɿs mij]
you cure me	ndzoʔyɿpya mis ɿj	[n-tzoʔyɿy-pa mis ʔɿj]
s/he cures me	tzoʔyɿpya ʔɿj	[Ø-tzoʔyɿy-pa Ø ʔɿj]
b Intransitive		
I walk	kaʔŋba ʔɿj	[Ø-kaʔŋ-pa ʔɿj]
you walk	ngyaʔŋba mij	[ny-kaʔŋ-pa mij]
s/he walks	kaʔŋba	[Ø-kaʔŋ-pa Ø]

COP Zoque employs a variety of mechanisms for altering the argument structure of its verbs. Most frequently, it allows verb stems to alternate between transitive and intransitive forms by means of a zero derivational alternation like that of English. As in English, some COP Zoque verbs become intransitive by dropping their logical subject, as in (2). Other COP Zoque verbs form intransitive stems by dropping their logical object, as in (3). This phenomenon has led members of the Mixe-Zoque Documentation Project (MZDP) to assign Zoque verbs to two basic classes: 1) an unaccusative (Perlmutter 1978), or T2 class, such as those shown in (2), and an unergative, or T1 class, such as those shown in (3).<sup>1</sup>

## 2 Unaccusative or T2 verbs

a jɿku teʔ pama	b ʔɿksu teʔ ʔɿksɿ
Ø-jak-wɿ teʔ pama	Ø-ʔɿks-wɿ teʔ ʔɿks-ɿ
3Abs-cut-COMP the clothes	3Abs-grind-COMP the shell-NOM
'The clothes cut'	'The corn shelled'

<sup>1</sup>I use the following abbreviations: Erg ergative, Abs absolutive, 3 third person, CAUSE causative, INC incomplete, COMP completive, NOM nominative, PL plural, I intransitive, T transitive, T1 transitive unergative, T2 transitive unaccusative, T3 fixed transitive

## 3 Unergative or T1 verbs

a	jayu teʔ pɪn	b	kɪʔspa teʔ tuwɪ
	Ø-jay-wɪ teʔ pɪn		Ø-kɪʔs-pa teʔ tuwɪ
	3Abs-wɪte-COMP the man		3Abs-bite-INC the dog
	'The man wrote '		'The dog bites

COP Zoque contains at least two other classes of verbs a fixed intransitive class, or I, as in (4), and a fixed transitive class, or T3, as in (5)

## 4 Fixed intransitive or I verbs

a	saʔu	teʔ yomo	b	miʔksu	teʔ ʔuneʔ
	Ø-saʔ-wɪ	teʔ yomo		Ø-miʔks-wɪ	teʔ ʔuneʔ
	Abs-wake-COMP the woman			Abs-move-COMP the child	
	'The woman woke '			'The child moved '	

## 5 Fixed transitive or T3 verbs

a	kyɪtʒu	(teʔ kakawa)	teʔ pɪʔnis
	y-kɪtʒ-wɪ	(teʔ kakawa)	teʔ pɪn-ʔis
	3Erg-drink-COMP (the chocolate)		the man-Erg
	'The man drank (the chocolate) '		
b	ʔyɪsu	(teʔ nyanaj)	teʔ ʔuneʔs
	y-ʔis-wɪ	(teʔ y-nanaj)	teʔ ʔuneʔ-ʔis
	3Erg-see-COMP (the 3Erg-mother)		the child-Erg
	'The child saw (his/her mother) '		

The fixed intransitive verbs require a causative prefix to produce an acceptable transitive sentence

## 6 Transitive forms of fixed intransitive verbs

a	yajsaʔu	teʔ ʔuneʔ teʔ yomoʔs
	yaj-saʔ-wɪ	teʔ ʔuneʔ teʔ yomo-ʔis
	CAUSE-wake-COMP the child the woman-Erg	
	'The woman woke the child '	
b	yajmiʔksu	teʔ kuy teʔ ʔuneʔs
	yaj-miʔks-wɪ	teʔ kuy teʔ ʔune-ʔis
	CAUSE-move-COMP the stick the child-Erg	
	'The child moved the stick '	

c yajkaʔu                    pʔnis    teʔ choʔŋgoya  
 yaj-kaʔ-wʔ                pʔn-ʔis   teʔ choʔŋgoya  
 CAUSE-die-COMP man-Erg the rabbit  
 'The man killed a rabbit'

I chose my examples to highlight differences between COP Zoque and English. Although COP Zoque and English share a zero derivational form of the alternation between transitive and intransitive verbs, there are certain differences in which verbs participate in the alternation and whether they fall into the unaccusative or unergative verb classes.

COP Zoque does not have a productive passive unlike other Zoque languages. However COP Zoque does not require all arguments of the fixed transitive verbs to be expressed, so the examples shown in (5) are equally acceptable without an overt object argument.

I spent a little time over the summer trying to determine if the fixed intransitive verbs could be further divided into unaccusative and unergative sets. My first discovery was that the causative prefix *yaj-* is productive semantically as well as morphologically. Verbs with the *yaj-* prefix always have an indirect causative reading. The sentence in (6a), for example, could also be translated as 'The woman made the child wake'. COP Zoque is one of those languages that uses the causative affix with the verb 'to die' (*kaʔ*). Even the sentence in (6c) allows an indirect causative reading, i.e. 'The man made a rabbit die'. Thus, there is no semantic basis for distinguishing the causative forms of typically unaccusative verbs such as those in (6) from the causative forms of typically unergative verbs like those in (7). There is a temptation to use the translation into English or Spanish as a basis for deciding whether a Zoque verb is unaccusative or unergative. This must be avoided in the absence of language internal evidence from Zoque.

#### 7 Transitive forms of fixed intransitive verbs

a yajmanju                    nyanaʔs                teʔ ʔyunetaʔm  
 yaj-man-j-wʔ                y-nana-ʔis            teʔ y-ʔuneʔ-taʔm  
 CAUSE-go-COMP 3Erg-mother-Erg the 3Erg-child-PL  
 'Their mother made her children go'

b yajwituʔu                    teʔ tyumin            teʔ yomoʔs  
 yaj-wituʔ-wʔ                teʔ y-tumin           teʔ yomo-ʔis  
 CAUSE-return-COMP the 3Erg-money the woman-Erg  
 'The woman made his/her money return'

I have tried a number of other tests as well to see if any resulted in a distinction between different classes of intransitive verbs. Table 1 shows the results of an antipassive test that I tried. Zoque speakers will accept the use of the antipassive suffix *-ʔoy* with some fixed intransitive verbs, e.g. *puʔ* 'leave', *ʔm* 'shit', *ʔoy* 'run', *ʔem* 'swim', *ʔm* 'come' and *maŋ* 'go'. The antipassive suffix most often adds the meaning of doing something at a distance. The antipassive form of the verb *puʔ* 'leave' would be *puʔoy* 'leave someplace distant'. The antipassive forms of some verbs have ideosyncratic readings such as *maʔoy* 'go before'. Other intransitive verbs are

not acceptable with the antipassive suffix, e.g. *kaʔ* 'die', *kun* 'fall', *poʔn* 'tire', *miʔks* 'move', *siŋ* 'swell', *putz* 'rot' and *ʔaŋwaj* 'open'

Table 1 Antipassive test with fixed intransitive verbs

Acceptable	Unacceptable
<i>put</i> 'leave'	<i>kaʔ</i> 'die'
<i>tɪ</i> 'shit'	<i>kun</i> 'fall'
<i>poy</i> 'run'	<i>ʔaŋwaj</i> 'open'
<i>jem</i> 'swim'	<i>miʔks</i> 'move'
<i>min</i> 'come'	<i>siŋ</i> 'swell'
<i>maŋ</i> 'go'	<i>putz</i> 'rot'
<i>ʔy</i> 'cry'	<i>poʔn</i> 'tire'

I have also tried a test using the applicative suffix *-jaj*. The applicative suffix typically promotes the indirect argument of a ditransitive verb to the direct object. Zoque speakers, however, use it with fixed intransitive verbs to indicate an indirect causative reading, e.g., *pyuʔajaj* 'he/she left it', *ʔyʔajaj* 'it made him/her cry'. Zoque speakers find the applicative suffix to be acceptable with most of the fixed intransitive verbs, so this suffix does not seem promising as an unaccusativity test.

Roberto Zavala also recommended trying a cognate object test with the fixed intransitive verbs. Unfortunately, I did not have time to try this test with more than a few of the verbs. This test looks promising, in that unergative verbs such as *cry* or *run* will allow cognate objects, e.g. 'cry a cry' or 'run a run'. If this test does separate the unergative and unaccusative verbs, then it appears that unergative verbs may be best analyzed as underlying transitive verbs since they accept a cognate object. If this turns out to be the case, then Zoque would only have one class of intransitive verbs that are all unaccusative. Obviously more work is needed in this area.

I need to briefly discuss auxiliaries before turning to the verb compounds in Zoque. I provide some examples of the auxiliary construction in (8). Zoque auxiliaries form independent clauses with separate aspect and person marking. In fact, it is only the semantic interpretation of these sentences that suggests an auxiliary reading rather than a complex clausal construction. Verb compounds are distinct from the auxiliary construction in that compounds only use one aspect and person marker. Compounding in Zoque also affects stress assignment. Primary stress is on the penultimate syllable while a secondary stress occurs on the first syllable. Zoque compounds alter the first syllable and thus alter secondary stress placement as well.

### 8 Zoque Auxiliary Constructions

a	<i>maŋba</i>	<i>chtjku</i>	b	<i>minba</i>	<i>chtjku</i>
	<i>maŋ-pa</i>	<i>y-tzɪk-wɪ</i>		<i>min-pa</i>	<i>y-tzɪk-wɪ</i>
	go-INC	3Erg-do-COMP		come-INC	3Erg-do-COMP
	'he/she is going to do it'			'he/she is coming to do it'	

- |   |   |   |   |
|---|---|---|---|
| c | sunba chɨjku<br>sun-pa y-tzɨk-wɨ<br>want-INC 3Erg-do-COMP<br>'he/she wants to do it ' | d | muspa chɨjku<br>mus-pa y-tzɨk-wɨ<br>can-INC 3Erg-do-COMP<br>'he/she can do it ' |
|---|---|---|---|

I present a first set of Zoque verb compounds in (9). These examples provide some idea of the productivity of verb compounding in Zoque. Verb compounds are generally right headed and their meaning can usually be inferred by reading the verb roots in a right to left order. I have supplied an equation to the right of the compounds to show how the argument structure of the compound relates to the argument structures of the individual verbs in the compound. I do not have full information about these compounds in some cases. For example, I do not know whether the verb root *ʔis* in the (9a) belongs to the T1 or T3 group. I do know that it is a transitive verb and indicate this much in the corresponding argument structure equation.

### 9 Zoque Verb Compounds

- |   |  |                                   |
|---|--|-----------------------------------|
| a | waʔnisu<br>Ø-wan-ʔis-wɨ<br>3Abs-sing=try-COMP<br>'He/she tried to sing '                     | wan (I) + ʔis (T) = T1            |
| b | wyatkaʔmu<br>y-wat=kaʔm-wɨ<br>3Erg-cinch=tighten-COMP<br>'He/she tightened it by cinching '  | wat (T2) + kaʔm (T2) = T          |
| c | tzoʔtɸuɨtu<br>Ø-tzoʔt=ɸut-wɨ<br>3Abs-hurt=leave-COMP<br>'He/she left and slipped '           | tzoʔt (T2) + ɸut (I) = T2         |
| d | poyemɨnu<br>Ø-poyeʔ=min-wɨ<br>3Abs-run-come-COMP<br>'He/she came running '                   | poyeʔ (I) + min (I) = I           |
| e | tzhliɸwihtu<br>Ø-tzih=liɸ=wit-wɨ<br>3Abs-hang=flap=walk-COMP<br>'It hung and flapped above ' | tzih (T2) + liɸ (I) + wit (I) = I |

- f chunbuhtu  
 y-tzɨŋ=put-wt                      tzɨŋ (I) + put (I) = T2  
 3Erg-bathe=leave-COMP  
 'He/she bathed and left '
- g chakwituʔu  
 y-tzak=wituʔ-wt                      tzak (T1) + wituʔ (I) = T2  
 3Erg-leave=return-COMP  
 'He/she returned '
- h tzaʔmaɣhamu  
 Ø-tzam =maɣ=jam-wt                      tzam (T3) + maɣ (I) + jam (T3) = T1  
 3Abs-say=go=remind-COMP  
 'He/she remembered '

In general, the verb that heads the compound appears to govern the derived argument structure of the whole compound. This is evidently the case in examples (9a, b, d and e). The other examples present certain difficulties for a straight forward rule of argument structure composition. The compounds in (9c, f and g) are transitive despite being headed by intransitive verbs while the compound in (9h) belongs to the T1 group despite being headed by a T3 verb.

Part of an explanation for this variation may lie in distinguishing between different types of compounding processes in Zoque. I have already pointed to the difference between the compound and auxiliary structures in the language. It may be reasonable to separate a class of adverbial compounds from the true verb compounds. The examples in (10) illustrate how Zoque relies upon some verbs to provide an adverbial modification to the main verb.

#### 10 Adverbial Compounds

- a wyɨʔtwituʔu  
 y-wɨʔt=wituʔ-wt                      wɨʔt 'twist' (T2) + wɨʔtuʔ 'return' (I) = T  
 3Erg-twist=return-COMP  
 'he/she turned it again '
- b kenwituʔu  
 Ø-ken=wituʔ-wt                      ken 'see' (T1) + wituʔ 'return' (I) = I  
 3Abs-see=return-COMP  
 'He/she looked around '
- c tzoʔnɣiʔmu  
 Ø-tzoʔn=kiʔm-wt                      tzoʔn 'jump' (I) + kiʔm 'climb' (I) = (I)  
 3Abs-jump=climb-COMP  
 'He/she jumped up '

- d kengi7mu  
 Ø-ken=ki7m-wt ken 'see' (T1) + ki7m 'climb' (I) = I  
 3Abs-see=climb-COMP  
 'He/she looked up'
- e tɪpki7mu  
 Ø-tɪp=ki7m-wt tɪp (T1) + ki7m (I) = I  
 3Abs-jump=climb-COMP  
 'He/she jumped up'

I have relied on my own intuitions of adverbial modification to distinguish these compounds from those listed in (9). In several cases (e.g., 10f) I have relied upon Wonderly's translations. The examples in (10) show how Zoque uses verbs to specify the manner or direction of an action. The adverbial compounds appear to be headed by the first verb in the compound with the second verb modifying the first. Unfortunately, there does not appear to be a straight forward way to derive the argument structure of the adverbial compound from the argument structure of its parts. Most of the examples in (10) indicate the second verb has exerted its effect on the argument structure of the compound. The example in (10a) is exceptional in this regard.

Copinalá Zoque is exceptional among Mixe-Zoque languages in not displaying a fully productive passive alternation. The productivity of the verb compounding process, though, provides speakers with another option for altering verb argument structure. The examples in (11) and (12) demonstrate compounds that appear to add or delete an argument from the argument structure of the head of the compound. For example, the root *kaʔ* 'die' is a fixed intransitive root and requires a causative prefix to be used in transitive constructions. The compounds in (11a and c) show how verb compounding transforms the argument structure of this root. The examples in (11) suggest the first root is responsible for establishing the argument structure of the compound. This idea is ruled out by the examples in (12) which suggest the final root is responsible.

#### 11 Argument Addition Compounds

- a jy7mga7u  
 y-j7m=ka7-wt jy7m (T2) + ka7 (I) = T  
 3Erg-hang=die-COMP  
 'he/she killed it by hanging'
- b jy7mgi7mu  
 y-j7m=ki7m-wt jy7m (T2) + ki7m (I) = T  
 3Erg-hang=climb-COMP  
 'he/she climbed it by hanging'
- c wyi7tka7u  
 y-wi7t=ka7-wt wi7t (T2) + ka7 (I) = T  
 3Erg-twist=die-COMP  
 'he/she killed it by twisting (its neck)'



- d wyaskoʔtzu  
 y-was=koʔtz-wʔ                      was (T1) + koʔtz (T2) = T  
 3Erg-chew=break-COMP  
 'He/she broke it by chewing '

## 12 Argument Reduction Compounds

- a weʔnbujtu  
 Ø-weʔn=put-wʔ                      weʔn (T2) + put (I) = I  
 3Abs-part=leave-COMP  
 'It parted while leaving '
- b tzʔmwijtu  
 Ø-tzʔm=wit-wʔ                      tzʔm (T1) + wit (I) = I  
 3Abs-carry=walk-COMP  
 'He/she walks everywhere with their stuff '
- c kijpotoju  
 Ø-kip=ʔotoj-wʔ                      kip (T1) + otoj (I) = I  
 3Abs-fight=speak-COMP  
 'He/she argued '

Current accounts of verb argument structure suggest a close relation between argument structure and verb meaning (Grimshaw 1990, Hale & Keyser 1986, Pinker 1989). The Zoque verb compounds are theoretically interesting in that the argument structure of the compound is not a straight forward result of combining the argument structures of the constituent verb roots. Preliminary comparisons across the Mixe-Zoque languages reveal some fascinating differences in verb argument structures. Some of the languages, such as Oluta, have productive passive constructions, and thus, rely upon compounding to a lesser degree. There are also many differences between these languages in the transitivity of cognate verb roots. I will need to do further research to determine the factors responsible for deriving the argument structure of Zoque verb compounds.

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