# On rare typological features of the Zamucoan languages, in the framework of the Chaco linguistic area



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# The Zamucoan family



**Ayoreo** ca. 4500 speakers

**Old Zamuco** (a.k.a. Ancient Zamuco) spoken in the XVIII century, extinct

Chamacoco (Ibitoso, Tomarâho) ca. 1800 speakers

# The Zamucoan family

The first stable contact with Zamucoan populations took place in the early 18th century in the reduction of San Ignacio de Samuco.

The Jesuit Ignace Chomé wrote a grammar of Old Zamuco (*Arte de la lengua zamuca*).

The Chamacoco established friendly relationships by the end of the 19th century.

The Ayoreos surrended rather late (towards the middle of the last century); there are still a few nomadic small bands in Northern Paraguay.

# The Zamucoan family



### Main typological features

- -Fusional structure
- -Word order features:
- SVO
- Genitive + Noun
- Noun + Adjective

### Zamucoan typologically rare features

- Nominal tripartition
- Radical tenselessness
- Nominal aspect
- Affix order in Chamacoco 3 plural
- Gender + classifiers
- 1 person ø-marking in Ayoreo realis
- Traces of conjunct / disjunct system in Old Zamuco
- Greater plural and clusivity
- Para-hypotaxis

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All Zamucoan languages present a morphological tripartition in their nominals.

The base-form (BF) is typically used for predication. The singular-BF is (Ayoreo & Old Zamuco) or used to be (Cham.) the basis for any morphological operation.

The full-form (FF) occurs in argumental position.

The indeterminate-form (IF) is used in the same syntactic contexts as the FF, but refers to a nonspecific referent.

Examples from Ayoreo

FORMS: FULL BASE **INDETERMINATE** 'neck' etabi etabit etabi**tic** etabi**cho** etabi**tigo** etabi<mark>dode</mark> PL 'trench' erui eru**tic** eruc erugode erucho erutigo PL acadí acadi<mark>c</mark> acadi**tic** 'pupil' acadigode acadicho acaditigo PL 'girl' gapu**a** дари gapu**rac** gapudie gapui gapurigui PL

Nominal tripartition Derivation from the singular-BF in Ayoreo

gachidi 'pet/vehicle', BF gachit

→ M gachisôri / F gachito 'owner of pet/vehicle'
charidi 'resting place, sit', BF charit

→ M charisôri / F charito 'one who sits'
garani 'origin', BF garât

→ M garasôri / F garato 'creator'

*guejnai* 'completed, destroyed', BF *guejnac* → M *guejnangôri/-sôri* / F *guejnato* 'destroyer' *achêrai* 'grabbed, attacked', BF *achêrac* → M *acherangôri* 'tempest, strong wind'

#### Ayoreo: Nominal predication with/without overt copula

**1) Jnani** catad-ab-i deji enga small-DIM-MS.FF 3.there\_is COORD tu **Tiritai**. i-pis-i 3.name-ELAT-MS.FF COP Tiritai 'There was a very tiny man, whose nickname was Tiritai.' 2) Cajire to! **Arocojna-quedejna**! look too alligator.MS.BF-different.MS.BF Arocojna-quedejna-i deji ne! alligator.MS.BF-different-MS.FF 3.there\_is there 'Look there! It's an alligator! There's an alligator right there!'

3) Dita-i tu yu nga cuchape yu eeehh! killing\_weapon-MS.FF COP 1S COORD big.MS.BF 1S EXCL
'I am the killing weapon and I am powerful!!!'

## The indeterminate-form

(1) Old Zamuco (Chomé 1958: 164) Ca y-a-tic uz. NEG 1S-child-MS.IF EXIST 'I don't have any son.' (2) Ayoreo (QCCB, II: 45) Que i-boca-raque cuse enga ch-ijna d-ojo-die. NEG 3-gun-FS.IF EXIST and 3-bring RFL-arrow-FP.FF 'He does not have his gun, and he brings his arrows.' (3) Chamacoco (Ciucci 2013: 473) ¿L-ati-rãk chihi? 3-mother-FS.IF 3.EXIST.IRLS

'Does he/she have a mother?' (lit.: 'Is there his/her mother?' )

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# Radical tenselessness

- Müller (2013) found 9 "tenseless" languages in her South-American corpus:

Baure, Mapuche (i.e. Mapudungun), Mocovi, Nasa Yuwe (or Paez), Pilaga, Trumai, Tsafiki (or Colorado), Urarina, Yanam.

- However, they simply lack devices to morphologically convey temporal notions, but do present (in some cases even abundant) aspectual, modal as well as evidential devices.
- Thus, they are tenseless in the same way as, e.g., Chinese, or Classical Arabic, or Biblical Hebrew are.

# Radical tenselessness

- As far as Ayoreo, Old Zamuco and Chamacoco Hbitoso are concerned (NB: we leave aside Tomarâho), they definitely are "radical tenseless" languages, for they lack any morphological device to express temporal and aspectual notions.
- Such notions are merely conveyed by adverbs, which may be optionally used depending on context requirements.
- Radical tenselessness is a highly rare feature. Maybrat, spoken in New Guinea (Dol 1999) is the only other example known to us.

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### Nominal aspect

"No language presents nominal aspect, while there are several examples of nominal tense and nominal mood." (Nordlinger & Sadler 2004:)

However, Ayoreo presents a striking counterexample: the habitual suffix -*be*/-*me* (FS), -*bei*/-*mei* (MS.FF), -*bec*/-*mec* (MS.BF), first described in the Higham *et al*.'s dictionary.

## Nominal aspect

- From Higham's *et al.* (2000)
- oide, PL oidedie (F) 'what is carried or used' → oidebe, PL oidebedie (BF oidebe, pl oidebei) 'what is customarily carried or used'
- *uru*, PL *uruode* (M) 'word' → *urubei*, pl *urubeode* (BF *urubec*, pl *urubecho*) 'what is customarily said'
- *aquiningai*, PL *aquiningane* (M) 'meeting place'
   → *aquiningamei*, *aquiningameone* (BF *aquiningamec*, PL *aquiningamecho*)
   'customary meeting place'

# Nominal aspect

### From fieldwork:

- *iguidebe* 'usual dress'
- acadisôrimei 'usual teacher'
- mochapibei 'usual/preferred bed'
- dajebec 'habitual path'
- pibosebei 'what one usually eats / favorite food'
- yicharidebei 'the place where I usually sit'
- urôsobei 'habitual pain'
- \* *tiebe* 'habitual river'
- ?tamocobei 'the dog that one often encounters'.

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### Affix order in Chamacoco 3P verb inflection

- Universal tendency:

Person markers precede number markers irrespective of their position with respect to the root (Trommer 2003; Mayer 2009)

The Chamacoco 3P verb inflection is a violation of this generalization (Ciucci & Bertinetto, to appear):

ts-amur (3)  $\rightarrow$  o-ts-amur (3P) 'to like, to love'

### Affix order in Chamacoco 3P verb inflection

- Ayoreo and Old Zamuco have no form for the 3P person, they optionally use the 3P-pronoun *ore*. Chamacoco presents the 3P pronoun *\tilde{or}*: possibly *\tilde{or} > o*-.

#### Ayoreo:

tc-i-mesere 's/he/they want(s)' (3); ore tc-i-mesere (3P)

#### Old Zamuco:

ch-i-mêcêre 's/he/they love(s)' (3); ore ch-i-mêcêre (3P)

- The innovative Chamacoco 3P-prefix *o*- might in turn have yielded, under morphomic re-use, the identical 1PE-prefix. Alternatively, the latter was imported from the 1PE-prefix of Guarani (ro-) and re-used for the 3P.

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### Gender and possessive classifiers

• Aikhenvald (2000: 126, 133) claims that possessive classifiers «do not involve agreement». However, in some Chaco languages possessive classifiers agree in gender and/or number with the *possessum.* 

• One can also observe some cross-linguistic similarities, possibly due to contact:

Ayoreo gachit (MS.BF) gachidi (MS.FF), gachide (FS)
'domestic animal' (noun and classifier)

- Chamacoco echit (MS.FF), echita (FS.FF), 'domestic animal'
- Kadiwéu *wiGadi* (M) *wiqate* (F) 'animal' (noun and classifier)

• «It is well known that classification systems often diffuse in situations of language contact. [...] The examples from Gran Chaco confirm the importance of classifiers in areal diffusion» (Aikhenvald 2011: 175).

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### First person zero marking in Ayoreo realis

"First person zero marking is extremely rare. The Romanian present tense is an example [...]. The only other examples that I know are the pronominal inflections from Alagwa [...] and Burunge [...], two Southern Cushitic languages from Tanzania." (Cysouw 2008)

In the most conservative form of Ayoreo, the 1 person prefix is absent in the 'realis' form:

tç-i-go 'to tell, to show'

1S j-i-go  $\rightarrow$  Ø-i-go in realis contexts

1P j-i-go-go  $\rightarrow$  Ø-i-go-go in realis contexts

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A conjunct / disjunct system\* "is a binary system, with 'conjunct' used for first person in statements and second person in questions, while 'disjunct' is used for second and third person in statements and first and third person in questions." (Curnow 2002: 611)

	Statements	Questions	
1-person	conjunct	disjunct	
2-person	disjunct	conjunct	
3-person	disjunct	disjunct	(Curnow 2002: 614)

\*For a different terminology, see Creissels 2008, Tournadre 2008 and Post 2013.

In some paradigms of Old Zamuco (which presents a full opposition between realis and irrealis) the 1S-realis coincides with the 2S-irrealis...

cho '	to look like, to be like'
Realis	Irrealis
o (1S)	cho (1S)
do (2S)	o (2S)
cho (3)	do (3)
oco (1P)	choco (1P)
doyo (2P)	oyo (2P)

If one takes into account that:

• The 1S-realis occurs more frequently in (positive) statements than its irrealis counterpart

• The 2S-irrealis occurs more frequently in questions than its realis counterpart

Then, the morphological overlapping of 1S-realis and 2S-irrealis reminds of a conjunct in so-called conjunct /disjunct systems.

• 1-realis  $(a - \sqrt{0}) = 2$ -irrealis  $(a - \sqrt{0})$ 

Old Zamuco: <i>chimêcêre</i> 'to love'				
Person	Realis	Irrealis		
1S	<b>a-/Ø</b> +V+ROOT / <i>a</i> -i-mecêre	ch-/z-/y- + V + ROOT / ch-i-mecêre		
2S	d-+V+ROOT / d-a-mecêre	<b>a-/Ø</b> +(V)+ROOT / <b>a</b> -Ø-mecêre		
3	ch-/t-/z-/Ø+(V)+ROOT / ch-i-mêcêre	d-/n-/Ø+(V)+ROOT / d-i-mêcêre		
1P	<b>a-/Ø</b> +V+ROOT+SUFF / <i>a</i> -i-mecê-co	ch-/z-/y- + V + ROOT + SUFF / ch-i-mecê-co		
2P	d- + V + ROOT + SUFF / d-a-mecê-ño	a-∕Ø+(V)+ROOT+SUFF / a-Ø-mecê-ño		
3P	ore ch-/t-/z- /Ø+(V)+ROOT / ore ch-i-mêcêre	ore d-/n-/Ø+(V)+ROOT / ore d-i-mêcêre		

• The 1S-realis and the 2S-irrealis do not coincide in all paradigms, but they where originally marked by the same morpheme *a*-.

chimêcêre 'to love' 'to look like, to be like'RealisIrrealisa-i-mecêre (1S)ch-i-mecêre (1S)d-a-mecêre (2S)a-mecêre (2S)ch-i-mêcêre (3)ch-i-mêcêre (3)a-i-mecê-co (1P)a-i-mecê-co (1P)d-a-mecê-ño (2P)d-a-mecê-ño (2P)

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### Greater plural and clusivity

**Greater plural:** "Languages may have a secondary split into **normal and 'greater'** (sometimes termed 'lesser' and 'greater') within certain number values. The two which may be split are the paucal and the plural. There are relatively few known cases of split numbers and the account here is tentative. [...] 'greater plural', typically implies an excessive number, sometimes called 'plural of abundance', or else all possible instances of the referent, sometimes called the 'global plural'. We shall use 'greater plural' to cover the different types (abundance, global). The evidence is limited, but it comes from a variety of languages and sources, sufficient to indicate that there is an interesting phenomenon that deserves study. More examples with careful descriptions of their meaning would be welcome." (Corbett 2000: 30)

### Greater plural and clusivity

"To distinguish between a 'normal amount' and a 'greater than normal amount', as is done in the Sursurunga paucal is very rare and, if anything, is found with the plural yielding a greater plural (or global plural). The distinction would then be something like 'many' and 'very many indeed'." (Velupillai 2012: 162).

The greater plural (GP) is observed in Chamacoco 1-inclusive (1PI) and 2-person free pronouns:

<b>yok</b> (1S)	õryok (1P.excl	õryok (1P.exclusive)		
	eyok (1P.inclu	eyok (1P.inclusive) eyoklo (1GP.inclusive)		
owa (2S)	olak (2P)	olaklo (2GP)		
		(Ciucci 2013: 31)		

### Greater plural and clusivity

The greater plural is also found in the 1-inclusive of Chamacoco verb inflection:

(1) a. j-i-tçew (1PI) 'we write'
b. j-i-tçew-lo (1PI.GP) 'we (many, all) write'
c. o-j-i-tçew (1PE) 'we write'
d. \*o-j-i-tçew-lo [1PE.GP]

The Chamacoco greater plural is an optional feature. It mostly refers to the totality of the contextual referents, indipendently of the actual cardinality. (1) **Y-iĩsi-l** jotsi-t bahlu-t par y-imchaha asa **1PI-dig-GP** hole-MS.FF big-MS.FF SUB 1PI-put that.FS kemyon bahlu-ta ese jotsi-t ehe-t, truck big-FS.FF that.MS hole- MS.FF 3.inside-MS.FF asa wate s-ihn eyoklo. pork because that.FS DET.FS 3-wipe\_out 1PI.GP 'We will dig (or: let us dig) a big hole in order to put the armored truck in the hole, because [otherwise] that is going to wipe out all of us.' (Ciucci, field-notes)

(2) Sara, Nené, inaapo ye deychole hn y-uku-l
 Sara Nené why NEG tomorrow COORD 1PI-go-GP
 pehle oskôr

pehle.fruit.FP oskor.fruit.PF

'Sara, Nené, why don't we all go to [collect] fruits tomorrow?' (Ciucci, field-notes)

#### Greater plural and clusivity Minimal / augmented systems

•A 1P inclusive split gives rise to a minimal / augmented system. Minimal / augumented systems are rare in South America (Cysouw 2008: 140, Bickels & Nichols 2005: 53, Crevels & Muysken 2005: 318)

• Chamacoco's clusivity is not prototypical, however, according to the classifications by Cysouw (2008: 85-90) and Bickels & Nichols (2005: 50-53)

• In minimal / augmented systems the expected minimal inclusive element is a dual (not a plural), while the augmented is a plural (not a greater plural).

#### Greater plural and clusivity

The Chamacoco minimal / augmented system

(1) a. o-j-i-tçew (1P.exclusive) 'we write'
b. j-i-tçew (1P.inclusive) 'we write'
c. j-i-tçew-lo (1.GP.inclusive) 'we (many, all) write'

(2) yok (1S) õryok (1P.exclusive)
 eyok (1P.inclusive) eyoklo (1GP.inclusive)
 owa (2S) olak (2P) olaklo (2GP)

#### Greater plural and clusivity

• There are morphological and semantic reasons to consider the 1-exclusive a particular kind of plural of the 1S-person (Daniel 2005; Cysouw 2005; Bickel & Nichols 2005: 51-53)

•The inclusive should be considered a person on its own (Daniel 2005)

In most languages inclusives are morphologically independent from the 1S-person (Daniel 2005: 5).
 Cf. CH yok (1S), ôryok (1PE), eyok (1PI)

• In Chamacoco verb morphology the **1P-exclusive** derives from the **1P-inclusive**: t-i-chew (1S) 'I write' **j-i-tcew** (1PI) 'we write'  $\rightarrow$  **o-j-i-tcew** (1PE) 'we write'

• The interaction between clusivity and greater plural is probably quite rare among the world's languages and would probably deserve further typological studies...

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# Para-hypotaxis

- This term was introduced by Sorrento (1950), and is still very popular in Romance linguistics.
- It refers to sentences with a proleptic dependent clause, where the main clause is introduced by a coordinator:
- dependent clause + coordinator + main clause This was one of the first attempts to overcome the **dichotomic view** of the contrast parataxis vs. hypotaxis.

#### Para-hypotaxis in Chamacoco

(1) Chamacoco [Ciucci, field-work]

Ujeyet-uu\_leeych,icheseaahn-tSUBNEG1S-fightCOORDDEM.MSevil\_spirit-MS.FFs-erzyoo.3-win1S'When/if I don't fight, that evil spirit will defeat me.'

(2) Chamacoco [Ciucci, field-work] *Kõhe*, uu like ishir lishi sõhe, teehe, lf DET.MS this indigenous\_man.MS poor.MS VOL interj s-ohnimichi=ke, *hn* uhu oy-ihyer ire.
3.IRLS-get\_off=PST COORD 2S.CAUS 1PE-arrest 3S
'If the indigenous man had wanted to get off (the bus), you would have made us arrest him.'

# Para-hypotaxis in Ayoreo

(3) Ayoreo [Bertinetto, field-work] *Ujetiga* Jate di=rase nga, ch-isi=rase yogu=iji
SUB Jate 3.arrive=MOD COORD 3-give=MOD 1P=loc
cucha-rique
thing-MS.IF
'If Jate arrived, he would give us something.'

#### (4) Ayoreo [Preachers]

Ujetigaa-dutecuchaajmacaca-riqueSUB2S.IRLS-listenthing.MS.BFill\_fated-MS.IFmaringajecaa-todocuchaalthoughMODNEG2S.IRLS-fearthing.MS.BFajmamacar-odeill\_fated-MP.FF'Even though you might hear threats, do not be afraid of<br/>them.'

Para-hypotaxis is a rare syntactic configuration. It has long been considered limited to Old Romance and classical languages (Biblical Hebrew, Greek and Latin).

(5) Old Italian (Dante Alighieri, Inferno 30,115)

S' io dissi il falso, e tu If 1S say.1S.PAST.PERF DET.MS false-MS COORD 2S falsasti il conio alter-2S.PAST.PERF DET.MS minting\_die-MS 'If I said something false, you (did worse, for you) altered the minting die.'

Recent research has revealed the presence of parahypotactical structures in Swahili (Rebuschi 2011) and in the Zamucoan languages (Bertinetto & Ciucci 2012).

# Para-hypotaxis and beyond: Areality

The discovery of para-hypotaxis in the Zamucoan languages opens the door for a large scale investigation, which might produce surprising results.

Para-hypotactical structures have been found in other Chaco languages, such as Maká (Mataguayo), Nivaclé (Mataguayo), Wichí (Mataguayo), Mocoví (Guaycurú) and Pilagá (Guaycurú). Iquito, a Zaparoan language, also presents para-hypotaxis.

Chaco has been proposed as a linguistic area (Comrie *et al.* 2010) and in other Chaco languages which have been in contact with the Zamucoan family, some of the above discussed typological rarities can be found, such as: (i) the presence of gender and classifiers; (ii) the traces of conjunct/disjunt system and (iii) number markers preceding person markers (Ciucci 2014).

Eruei ute End this (Ayo)

> Shi ele no ma Only this no more (Ceg)

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