Denis BERTET — Fieldwork Forum, UC Berkeley — February 7, 2018

How to make the most out of one morpheme

Disentangling the inflectional morphology of Ticuna's finite predicative head

NORMAL											
		1SG		3-’ǖ́/’ǖ̃nè/yá -kū̃		3í -kū̃		3explicite		1PL.INCL	
		NORMAL	NMLZ	NORMAL	NMLZ	NORMAL	NMLZ	NMLZ	IMPER	NORMAL	NMLZ
NA		chā-	chà-	ná-	nà-	ī-	nā-	Ø	nà-	tá-	ì-
	obj	chānā-	chànā-	nánā-	nà- -ã̀-	īnā-	**nā- -ã̀-**	nā-	nā-	tánā-	nà-
Ī		chīī-	chīī-	níī-	yà-	īyā-	yā-	ī-	ī-	tíī-	ì-
	obj	chāyā-	chàyā-	náyā-	**yà- -ã̀-**	īyā-	**yā- -ã̀-**	yā-	yā-	táyā-	yà-
Ì		chīì-	chìì-	níì-	yà-	īyà-	yà-	ì-	ì-	tíì-	ì-
	obj	chāyà-	chàyà-	náyà-	**yà- -ã̀-**	īyà-	**yà- -ã̀-**	yà-	yà-	táyà-	yà-
RŪ̃		chārū̃-	chàrū̃-	nárū̃-	nà(rū̃)-	īrū̃-	nā-	rū̃-	rū̃-	tárū̃-	rù̃-
	obj	chānā-	chànā-	nánā-	**nà- -ã̀-**	īnā-	**nā -ã̀-**	nā-	nā-	tánā-	nà-
"MOVIMIENTO ASOCIADO"				SUR CE SUJET, CF. entre autres 10:88-89							
NA		chāyà-	chàyà-	náyà-	yà-	īyà-	yà-	yà-	yà-	táyà-	yà-
	obj	chāyà-	chàyà-	náyà-	yà- -ã̀-	īyà-	OK yà- -ã̀-	yà- confirmé	yà-	táyà-	yà-
Ī, Ì, RŪ̃		chāyàrū̃-	chàyàrū̃-	náyàrū̃-	yànà-	īyàrū̃-	yànā-	yàrū̃-	yàrū̃-	táyàrū̃-	yàrù̃-
	obj	chāyànā-	chàyànā-	náyànā-	yànà- -ã̀- confirmé	īyànā-	yànā- -ã̀- confirmé	yànā-	yànā-	táyànā-	yànà-

General objective

Make sense of the inflectional morphology of Ticuna's finite predicative head: sequence inconsistencies, non-compositionality, SBJ/OBJ ambiguity

- How many morphological slots? (syntagmatic)
- What morphemes in each slot? (paradigmatic)
- Interactions

Boring? Going into details will make apparent (hopefully) interesting phenomena

1. Introduction to data and language

2. Typological overview (and other relevant morphosyntactic information)

3. Pinning down the points at issue

4. Describing the remaining gray areas

5. Interpreting the description

6. Results

1. Introduction to data and language

Work in progress: comments more than welcome, please interrupt!

Based on field data (2015-2018, PhD project, Antoine GUILLAUME, DDL & Université Lumière–Lyon 2)

San Martín de Amacayacu (SMA) Ticuna (younger speakers' variety)

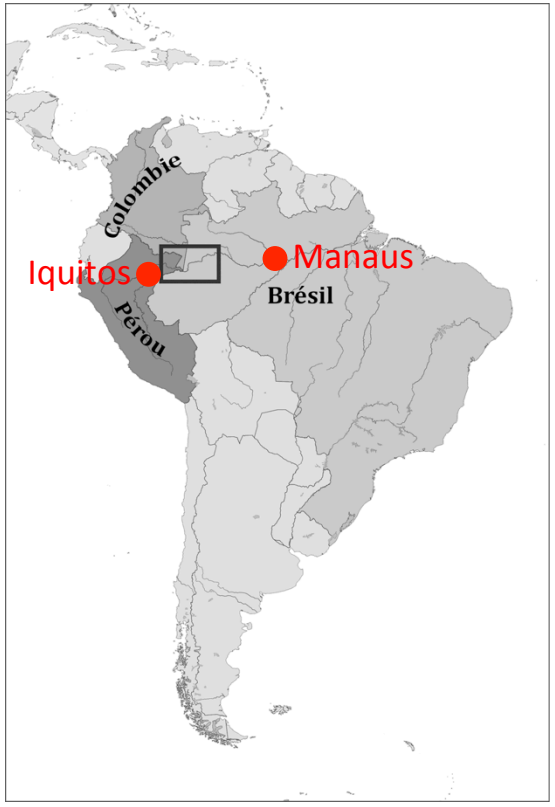
Elicitation for complete paradigms (mostly with Javier Sánchez Gregorio)

So far consistent with spontaneous/staged data (corpus ≈ 20,000 words)

Data essentially consistent with D. Anderson's (1962) on Cushillococha (Peru) Ticuna; (consistent with A. Skilton's?)

Ticuna ≈ 50,000~60,000 speakers (Peru, Colombia, Brazil); vital as a whole; SMA ≈ 550 speakers

Isolate (or Yuri-Ticuna?, Carvalho 2009, Goulard & Montes 2013)



Goulard (2009)

2. Typological overview (and other relevant morphosyntactic information)

Phonology

Relatively simple segmental inventory and syllable structure (≈/(C)V(ʔ)/)

Contrastive nasality (exact locus?)

Highly tonal (rich toneme inventory + use of toneme change for morphosyntactic purposes)

N.B.: practical orthography in this talk (=> no claims as to phonology, but all contrasts maintained)

Relatively straightforward, but please note:

x̀	low toneme	*y*	[d͡z]	*ü*	[ɯ]
x̄	mid toneme	*ch*	[t͡ɕ]		
x́	high toneme	*g̃*	[ŋ]		
x̋	extra high toneme	*’*	[ʔ]		

General morphosyntax

Mostly agglutinative (morpheme boundaries often correspond to syllable boudaries)

Nominative-accusative

Morphological encoding of SBJ as proclitics attached to predicative head (never on SBJ argument itself); for OBJ (and other Cases), more complex

No clear-cut basic word order (often claimed SOV)

Person & Number categories in pronominal morphology

1SG	1PL	
2SG	2PL	
3		*(+ agrees in agreement classes)*
4		*(or "1PL.INCL")*

5 agreement Classes (C) for non-SAP (≈genders)

Distribution unclear, at least partially lexical (although some semantic motivation)

Agreement mostly within DP: demonstratives, "connectors", nominal personal prefixes ("possessives"), NMLZs… + person indexes procliticized to predicative head

Tagging:	C1	C2	C3	C4	C5
	ngēmà	*ngémà*	*yîmà*	*yî'èmá*	*yǐmá*

4 Predicate Classes (PC) (≈conjugations)

“Spoiling” information, but demonstration out of scope

Distribution unclear again, at least partially lexical (although some semantic motivation)

Tagging:	PCA	PCB	PCC	PCD
	Ø	*rǖ*	*ī*	*ì*

3 “modes” for predicates

Tagging:	Imperative *(2SG only)*	Non-Imperative	
		Non-nominalized	Nominalized

Recap

1SG 1PL
2SG 2PL
3
4

Agreement classes
C1
C2
C3
C4
C5

Predicate Classes
PCA
PCB
PCC
PCD

Predicate “modes”
Imperative
Non-nominalized
Nominalized

3. Pinning down the points at issue

Tūìchārūg̃ù’ɛ́’ɛ̄:

‘I let him/her/it/them rest.’ (ex: referring to *kŏwǘ* ‘(the female) deer’, which is C4)

tū̄=	ì=	chā=	rū̄=	g̃ù	-’ɛ́’ɛ̄
3.C4.OBJ=					

1SG
2SG
3
4
1PL
2PL

Agreement classes

C1
C2
C3
C4
C5

Predicate Classes

PCA
PCB
PCC
PCD

Predicate “modes”

Imperative
Non-nominalized
Nominalized

Tūìchārūg̃ù’ɛ́’ɛ̃̄.

‘I let him/her/it/them rest.’

tū̄=	ì=	chā=	rū̄=	g̃ù	-’ɛ́’ɛ̃̄
3.C4.OBJ=					

Tūìchārūg̃ù’ɛ́’ɛ̃̄.

‘I let him/her/it/them rest.’

tū̄=	ì=	chā=	rū̄=	g̃ù	-’ɛ́’ɛ̃̄
3.C4.OBJ=	SPA/ASP=				

Tūìchārūg̃ù’ɛ́’ɛ̃̄.

‘I let him/her/it/them rest.’

tū̄=	ì=	chā=	rū̄=	g̃ù	-’ɛ́’ɛ̃̄
3.C4.OBJ=	SPA/ASP=	1SG.SBJ=			

1SG
2SG
3
4
1PL
2PL

Agreement classes

C1
C2
C3
C4
C5

Predicate Classes

PCA
PCB
PCC
PCD

Predicate “modes”

Imperative
Non-nominalized
Nominalized

Tūìchārūg̃ù’ɛ́’ɛ̃̄.

‘I let him/her/it/them rest.’

tū̄=	ì=	chā=	rū̄=	g̃ù	-’ɛ́’ɛ̃̄
3.C4.OBJ=	SPA/ASP=	1SG.SBJ=			

Tūìchārūg̃ù’ɛ́’ɛ̃̄.

‘I let him/her/it/them rest.’

tū̄=	ì=	chā=	rū̄=	g̃ù	-’ɛ́’ɛ̃̄
3.C4.OBJ=	SPA/ASP=	1SG.SBJ=	PCB=		

1SG 1PL
2SG 2PL
3
4

Agreement classes
C1
C2
C3
C4
C5

Predicate Classes
PCA
PCB
PCC
PCD

Predicate “modes”
Imperative
Non-nominalized
Nominalized

Tūìchārūg̃ù’ɛ́’ɛ̃̄.

‘I let him/her/it/them rest.’

tū̄=	ì=	chā=	rū̄=	g̃ù	-’ɛ́’ɛ̃̄
3.C4.OBJ=	SPA/ASP=	1SG.SBJ=	PCB=		

Tūìchārūg̃ù’ế’ẽ̄.

‘I let him/her/it/them rest.’

tū̄=	ì=	chā=	rū̄=	g̃ù	-’ế’ẽ̄
3.C4.OBJ=	SPA/ASP=	1SG.SBJ=	PCB=	to.rest	-CAUS

1SG 1PL
2SG 2PL
3
4

Agreement classes
C1
C2
C3
C4
C5

Predicate Classes
PCA
PCB
PCC
PCD

Predicate “modes”
Imperative
Non-nominalized
Nominalized

Tūìchārūg̃ù’ế’ẽ̄.

‘I let him/her/it/them rest.’

tū̄=	ì=	chā=	rū̄=	g̃ù	-’ế’ẽ̄
3.C4.OBJ=	SPA/ASP=	1SG.SBJ=	PCB=	to.rest	-CAUS

Tūìchārūg̃ù’ɛ́’ɛ̄.

‘I let him/her/it/them rest.’

tū=	ì=	chā=	rū=	g̃ù	-’ɛ́’ɛ̄
3.C4.OBJ=	SPA/ASP=	1SG.SBJ=	PCB=	to.rest	-CAUS

Structure?

Special focus on person reference tracking

1SG 1PL
2SG 2PL
3
4

Agreement classes
C1
C2
C3
C4
C5

Predicate Classes
PCA
PCB
PCC
PCD

Predicate “modes”
Imperative
Non-nominalized
Nominalized

Intransitive predicate chíbǜ, ‘to eat’ (PCA)

1SG	chā	-chíbǜ	‘I eat’
1PL	tā	-chíbǜ	‘we eat’
2SG	kū	-chíbǜ	…
2PL	pē	-chíbǜ	
3C4	tá	-chíbǜ	
3C2	ī	-chíbǜ	
3C1/3/5	ná	-chíbǜ	
4	tá	-chíbǜ	

=> SBJ= head

Intransitive predicate g̃ù, ‘to rest’ (PCB)

1SG	chā	rū̄	-g̃ù	‘I rest’
1PL	tā	rū̄	-g̃ù	‘we rest’
2SG	kū	rū̄	-g̃ù	…
2PL	pē	rū̄	-g̃ù	
3C4	tá	rū̄	-g̃ù	
3C2	ī	rū̄	-g̃ù	
3C1/3/5	ná	rū̄	-g̃ù	
4	tá	rū̄	-g̃ù	
=>	**SBJ=**	**PC=**	**head**	

Intransitive predicate chíbǜ, ‘to eat’ (PCA) + associated movement (A.MOV)

1SG	chā	yà	-chíbǜ	‘I go/come and eat’
1PL	tā	yà	-chíbǜ	‘we go/come and eat’
2SG	kū	yà	-chíbǜ	…
2PL	pē	yà	-chíbǜ	
3C4	tá	yà	-chíbǜ	
3C2	ī	yà	-chíbǜ	
3C1/3/5	ná	yà	-chíbǜ	
4	tá	yà	-chíbǜ	

=> SBJ= A.MOV= head

Intransitive predicate g̃ǜ, ‘to rest’ (PCB) + associated movement (A.MOV)

1SG	chā	yà	rǘ	-g̃ǜ	‘I go/come and rest’
1PL	tā	yà	rǘ	-g̃ǜ	‘we go/come and rest’
2SG	kū	yà	rǘ	-g̃ǜ	…
2PL	pē	yà	rǘ	-g̃ǜ	
3C4	tá	yà	rǘ	-g̃ǜ	
3C2	ī	yà	rǘ	-g̃ǜ	
3C1/3/5	ná	yà	rǘ	-g̃ǜ	
4	tá	yà	rǘ	-g̃ǜ	
=>	**SBJ=**	**A.MOV=**	**PC=**	**head**	

1SG 1PL
2SG 2PL
3
4

Agreement classes
C1
C2
C3
C4
C5

Predicate Classes
PCA
PCB
PCC
PCD

Predicate “modes”
Imperative
Non-nominalized
Nominalized

1SG 1PL
2SG 2PL
3
4

Agreement classes

C1
C2
C3
C4
C5

Predicate Classes

PCA
PCB
PCC
PCD

Predicate “modes”

Imperative
Non-nominalized
Nominalized

Intransitive predicate chíbǜ, ‘to eat’ (PCA)

1SG	chā	-chíbǜ	‘I eat’
1PL	tā	-chíbǜ	‘we eat’
2SG	kū	-chíbǜ	…
2PL	pē	-chíbǜ	
3C4	tá	-chíbǜ	
3C2	ī	-chíbǜ	
3C1/3/5	ná	-chíbǜ	
4	tá	-chíbǜ	

=> SBJ= head

Intransitive predicate chíbǜ, ‘to eat’ (PCA)

1SG	chā	-chíbǜ	chà	-chíbū	’ũ	‘I eat’
1PL	tā	-chíbǜ	tā	-chíbū	’ũ	‘we eat’
2SG	kū	-chíbǜ	kù	-chíbū	’ũ	…
2PL	pē	-chíbǜ	pē	-chíbū	’ũ	
3C4	tá	-chíbǜ	tà	-chíbū	’ũ	
3C2	ī	-chíbǜ	nā	-chíbū	’ũ	
3C1/3/5	ná	-chíbǜ	nà	-chíbū	’ũ	
4	tá	-chíbǜ	ì	-chíbū	’ũ	

=> SBJ= head

N.B.: ⇧ =TONEME CHANGE

Intransitive predicate g̃ù, ‘to rest’ (PCB)

1SG	chā	rū̄	-g̃ù	‘I rest’
1PL	tā	rū̄	-g̃ù	‘we rest’
2SG	kū	rū̄	-g̃ù	…
2PL	pē	rū̄	-g̃ù	
3C4	tá	rū̄	-g̃ù	
3C2	ī	rū̄	-g̃ù	
3C1/3/5	ná	rū̄	-g̃ù	
4	tá	rū̄	-g̃ù	
=>	**SBJ=**	**PC=**	**head**	

Intransitive predicate g̃ù, ‘to rest’ (PCB)

1SG	chā	rū̄	-g̃ù	chà	rū̄	-g̃ū̃	’ũ̄	‘I rest’
1PL	tā	rū̄	-g̃ù	tā	rū̄	-g̃ū̃	’ũ̄	‘we rest’
2SG	kū	rū̄	-g̃ù	kù	rū̄	-g̃ū̃	’ũ̄	…
2PL	pē	rū̄	-g̃ù	pē	rū̄	-g̃ū̃	’ũ̄	
3C4	tá	rū̄	-g̃ù	tà	rū̄	-g̃ū̃	’ũ̄	
3C2	ī	rū̄	-g̃ù	nā		-g̃ū̃	’ũ̄	
3C1/3/5	ná	rū̄	-g̃ù	nà		-g̃ū̃	’ũ̄	
4	tá	rū̄	-g̃ù		rù̀	-g̃ū̃	’ũ̄	

=> SBJ= PC= head

Temporary results

	SBJ	A.MOV	PC	
1SG	chā			
1PL	tā			
2SG	kū		Ø	
2PL	pē		rū	
3C4	tá	yà	ī	head
3C2	ī		ì *	
3C1/3/5	ná			
4	tá			

SBJ=
chà
tā
kù
pē
tà
[redacted]

*Some almost straightforward fusion happens when SBJ= directly precedes PC3/4=.

1SG 1PL
2SG 2PL
3
4

Agreement classes
C1
C2
C3
C4
C5

Predicate Classes
PCA
PCB
PCC
PCD

Predicate “modes”
Imperative
Non-nominalized
Nominalized

Transitive predicate		ngo̰, ‘to bite’ (PCA)			
⚠ **OBJ**					
1SG		*			
1PL		*			
2SG	kū	chā		-ngo̰	‘I bite you (SG)’
2PL	pē	chā		-ngo̰	‘I bite you (PL)’
3C4	tū	chā		-ngo̰	‘I bite him/her/it/them’
3C2	ī	chā		-ngo̰	…
3C1/3/5		chā	nā	-ngo̰	
4		*			
	OBJ=	**SBJ=**		**head**	

=>

Transitive predicate ngo̰, ‘to bite’ (PCA)

⚠ **OBJ**

1SG	chā/chō	kū		-ngo̰	‘you (SG) bite me’
1PL	tō	kū		-ngo̰	‘you (SG) bite us’
2SG		*			
2PL		*			
3C4	tū̄	kū		-ngo̰	‘you (SG) bite him/her/it/them’
3C2	ī	kū		-ngo̰	…
3C1/3/5		kū	nā	-ngo̰	
4		*			

=> OBJ= SBJ= head

Transitive predicate maa̰, ‘to kill’ (PCD)

⚠ **OBJ**

1SG		*				
1PL		*				
2SG	kū	chī (<chā)	ì		-maa̰	‘I kill you (SG)’
2PL	pē	chī	ì		-maa̰	‘I kill you (PL)’
3C4	tū	chī	ì		-maa̰	‘I kill him/her/it/them’
3C2	ī	chī	ì		-maa̰	…
3C1/3/5		chā		yā	-maa̰	
4		*				

=> OBJ= SBJ= PC= head

Transitive predicate maa̰, ‘to kill’ (PCD)

⚠ **OBJ**

1SG	chā/chō	kū	ì		-maa̰	‘you (SG) kill me’
1PL	tō	kū	ì		-maa̰	‘you (SG) kill us’
2SG		*				
2PL		*				
3C4	tū̄	kū	ì		-maa̰	‘you (SG) kill him/her/it/them’
3C2	ī	kū	ì		-maa̰	…
3C1/3/5		kū		yā	-maa̰	
4		*				

=> OBJ= SBJ= PC= head

1SG 1PL
2SG 2PL
3
4

Agreement classes
C1
C2
C3
C4
C5

Predicate Classes
PCA
PCB
PCC
PCD

Predicate “modes”
Imperative
Non-nominalized
Nominalized

1SG 1PL
2SG 2PL
3
4

Agreement classes
C1
C2
C3
C4
C5

Predicate Classes
PCA
PCB
PCC
PCD

Predicate “modes”
Imperative
Non-nominalized
Nominalized

Temporary results

	SBJ	A.MOV	PC	
1SG	chā			
1PL	tā			
2SG	kū		Ø	
2PL	pē		rū	
3C4	tá	yà	ī	head
3C2	ī		ì	
3C1/3/5	ná			
4	tá			

SBJ
chà
tā
kù
pē
tà
[redacted]

Temporary results (update)

	BEN	OBJ	SP/ASP	SBJ	A.MOV	PC	
1SG	chǎ~chǒ	chā~chō		chā			
1PL	tǒ	tō		tā			
2SG	kǔ	kū		kū		Ø	
2PL	pǒ	pē		pē		rū	
3C4	tǔ	tū		tá	yà	ī	head
3C2	ǐ	ī		ī		ì	
3C1/3/5	nǔ	[redacted]		ná			
4	tǔ	tū		tá			

⇧ ⇧

4. Describing the remaining gray areas

Temporary results

	BEN	OBJ	SP/ASP	SBJ	A.MOV	PC	
1SG	chā́~chǒ́	chā~chō		chā			
1PL	tǒ́	tō		tā			
2SG	kú́	kū		kū		Ø	
2PL	pé́	pē		pē		rū̄	
3C4	tú́	tū̄		tá	yà	ī	head
3C2	ǐ́	ī		ī		ì	
3C1/3/5	nǔ́	[redacted]		ná			
4	tǔ́	tū̄		tá			

Temporary results

	BEN	OBJ	SP/ASP	SBJ		A.MOV	PC
1SG	chá~chó	chā~chō		chā	chà		
1PL	tó	tō		tā	tā		
2SG	kú	kū		kū	kù		Ø
2PL	pé	pē		pē	pē	yà	rū
3C4	tú	tū		tá	tà		ī
3C2	í	ī		ī			ì
3C1/3/5	nú			ná			
4	tú	tū		tá			

head

1SG
2SG
3
4
1PL
2PL

Agreement classes

C1
C2
C3
C4
C5

Predicate Classes

PCA
PCB
PCC
PCD

Predicate “modes”

Imperative
Non-nominalized
Nominalized

Intransitive predicates

		A.MOV	SBJ?=	head	-NMLZ	
Predicate Classes	PCA	yà	nà	-chíbɨ̄	’ɨ̃	‘he/she/it/they eat(s)’
	PCB					
PCC						
	PCD					

Temporary results

	BEN	OBJ	SP/ASP	SBJ		A.MOV	PC	
1SG	chá~chó	chā~chō		chā	chà			
1PL	tó	tō		tā	tā			
2SG	kú	kū		kū	kù			
2PL	pé	pē		pē	pē			
3C4	tú	tū		tá	tà	yà	Ø rū ī ì	head
3C2	í	ī		ī				
3C1/3/5	nú			ná				
4	tú	tū		tá				

Intransitive predicates

		?=	head	-NMLZ	
Predicate Classes	PCA	nà	-chíbɯ̄	’ɯ̃	‘he/she/it/they eat(s)’
	PCB	nà	-g̃ɯ̆	’ɯ̃	‘he/she/it/they rest(s)’
		yà	-dé’ā	’ɯ̃	‘he/she/it/they speak(s)’
	PCC				
		yà	-yû’ù	’ɯ̃	‘he/she/it/they jump(s)’
	PCD				

Temporary results

		PC	3C1/3/5 SBJ
Predicate Classes	PCA	Ø	nà
	PCB	rū	nà
PCC		ī	yà
	PCD	ì	yà

Temporary results

	BEN	OBJ	SP/ASP	SBJ		A.MOV	PC
1SG	chá~chó	chā~chō		chā	chà		
1PL	tó	tō		tā	tā		
2SG	kú	kū		kū	kù		Ø
2PL	pé	pē		pē	pē	yà	rū
3C4	tú	tū		tá	tà		ī
3C2	í	ī		ī			ì
3C1/3/5	nú			ná			
4	tú	tū		tá			

head

Temporary results

	BEN	OBJ	SP/ASP	SBJ		A.MOV	PC
1SG	chā́~chǒ́	chā~chō		chā	chà		
1PL	tǒ́	tō		tā	tā		
2SG	kǔ́	kū		kū	kù		Ø
2PL	pḗ	pē		pē	pē		rū̄
3C4	tǔ́	tū̄		tá	tà	yà	ī
3C2	ǐ́	ī		ī			ì
3C1/3/5	nǔ́			ná			
4	tǔ́	tū̄		tá			

head

1SG
2SG
3
4
1PL
2PL

Agreement classes

C1
C2
C3
C4
C5

Predicate Classes

PCA
PCB
PCC
PCD

Predicate “modes”

Imperative
Non-nominalized
Nominalized

1SG 1PL
2SG 2PL
3
4

Agreement classes
C1
C2
C3
C4
C5

Predicate Classes
PCA
PCB
PCC
PCD

Predicate “modes”
Imperative
Non-nominalized
Nominalized

Intransitive predicates

		A.MOV	?=	head	-NMLZ	
Predicate Classes	PCA	yà	nā	-chíbɨ̄	’ɨ̃	‘she/it/they eat(s)’
	PCB					
PCC						
	PCD					

Intransitive predicates

		?=	head	-NMLZ	
Predicate Classes	PCA	nā	-chíbū	’ũ̃	‘she/it/they eat(s)’
	PCB	nā	-g̃ŭ	’ũ̃	‘she/it/they rest(s)’
		yā	-dé’ā	’ũ̃	‘she/it/they speak(s)’
	PCC				
		yà	-yû’ù	’ũ̃	‘she/it/they jump(s)’
	PCD				

Temporary results (update)

		PC	3C2 SBJ	3C1/3/5 SBJ
Predicate Classes	PCA	Ø	nā	nà
	PCB	rū	nā	nà
PCC		ī	yā	yà
	PCD	ì	yà	yà

?

BUT both are
in “Nominalized mode”

Temporary results

	BEN	OBJ	SP/ASP	SBJ		A.MOV	PC
1SG	chā́~chǒ́	chā~chō		chā	chà		
1PL	tǒ́	tō		tā	tā		
2SG	kǔ́	kū		kū	kù		Ø
2PL	pḗ	pē		pē	pē		rū̄
3C4	tǔ́	tū̄		tá	tà	yà	ī
3C2	ǐ́	ī		ī			ì
3C1/3/5	nǔ́			ná			
4	tǔ́	tū̄		tá			

head

Temporary results

	BEN	OBJ	SP/ASP	SBJ		A.MOV	PC
1SG	chā́~chǒ́	chā~chō		chā	chà		
1PL	tǒ́	tō		tā	tā		
2SG	kú́	kū		kū	kù		Ø
2PL	pé́	pē		pē	pē		rū̄
3C4	tú́	tū̄		tá	tà	yà	ī
3C2	ǐ́	ī		ī			ì
3C1/3/5	nǔ́			ná			
4	tǔ́	tū̄		tá			

head

1SG 1PL
2SG 2PL
3
4

Agreement classes
C1
C2
C3
C4
C5

Predicate Classes
PCA
PCB
PCC
PCD

Predicate “modes”
Imperative
Non-nominalized
Nominalized

1SG
2SG
3
4
1PL
2PL

Agreement classes
C1
C2
C3
C4
C5

Predicate Classes
PCA
PCB
PCC
PCD

Predicate “modes”
Imperative
Non-nominalized
Nominalized

Intransitive predicates

		A.MOV	?=	head	-NMLZ	
Predicate Classes	PCA		ì	-chíbɨ̄	’ɰ̃	‘we (INCL) eat’
	PCB	yà	rù	-g̃ɨ̃	’ɰ̃	‘we (INCL) rest’
			ì	-dé’ā	’ɰ̃	‘we (INCL) speak’
PCC			ì	-yû’ù	’ɰ̃	‘we (INCL) jump’
	PCD					

Temporary results (update)

		PC	4 SBJ	3C2 SBJ	3C1/3/5 SBJ
Predicate Classes	PCA	Ø	ì	nā	nà
	PCB	rūˉ	rǜ	nā	nà
PCC		īˉ	ì	yā	yà
	PCD	ì	ì	yà	yà
			?		?

Temporary results

	BEN	OBJ	SP/ASP	SBJ		A.MOV	PC
1SG	chā́~chǒ́	chā~chō		chā	chà		
1PL	tǒ́	tō		tā	tā		
2SG	kú́	kū		kū	kù		Ø
2PL	pé́	pē		pē	pē		rū̄
3C4	tú́	tū̄		tá	tà	yà	ī
3C2	ǐ́	ī		ī			ì
3C1/3/5	nǔ́			ná			
4	tǔ́	tū̄		tá			

head

Temporary results

	BEN	OBJ	SP/ASP	SBJ	A.MOV	PC
1SG	chā́~chǒ́	chā~chō		chā		chà
1PL	tǒ́	tō		tā		tā
2SG	kú́	kū		kū		kù
2PL	pé́	pē		pē		pē
3C4	tū́	tū̄		tá	yà	tà
3C2	ī́	ī		ī		ì
3C1/3/5	nū́	[redacted]		ná		
4	tū́	tū̄		tá		

head

1SG
2SG
3
4
1PL
2PL

Agreement classes
C1
C2
C3
C4
C5

Predicate Classes
PCA
PCB
PCC
PCD

Predicate “modes”
Imperative
Non-nominalized
Nominalized

1SG 1PL
2SG 2PL
3
4

Agreement classes

C1
C2
C3
C4
C5

Predicate Classes

PCA
PCB
PCC
PCD

Predicate “modes”

Imperative
Non-nominalized
Nominalized

1SG 1PL
2SG 2PL
3
4

Agreement classes

C1
C2
C3
C4
C5

Predicate Classes

PCA
PCB
PCC
PCD

Predicate “modes”

Imperative
Non-nominalized
Nominalized

Transitive predicates

		SBJ	A.MOV	?=	head	
Predicate Classes	PCA	chā		nā	-ngo̰	‘I bite him/her/it/them’
	PCB	chā	yà	nā	-g̃ù’ḗ’ē	‘I let him/her/it/them rest’
		chā		yā	-dé’à’ḗ’ē	‘I let him/her/it/them speak’
PCC		chā		yà	-ma̰	‘I kill him/her/it/them’
	PCD					

Temporary results (update)

		PC	4 SBJ	3C2 SBJ	3C1/3/5 OBJ	3C1/3/5 SBJ
Predicate Classes	PCA	Ø	ì	nā	nā	nà
	PCB	rū̄	rǜ	nā	nā	nà
PCC		ī	ì	yā	yā	yà
	PCD	ì	ì	yà	yà	yà
			?			?

Temporary results

	BEN	OBJ	SP/ASP	SBJ	A.MOV	PC
1SG	chā́~chǒ́	chā~chō		chā		chà
1PL	tǒ́	tō		tā		tā
2SG	kú́	kū		kū		kù
2PL	pé́	pē		pē		pē
3C4	tū́	tū̄		tá	yà	tà
3C2	ī́	ī		ī		ì
3C1/3/5	nū́	[redacted]		ná		
4	tū́	tū̄		tá		

head

Temporary results

	BEN	OBJ	SP/ASP	SBJ		A.MOV	PC
1SG	chā́~chǒ	chā~chō		chā	chà		
1PL	tố	tō		tā	tā		
2SG	kú	kū		kū	kù		Ø
2PL	pé	pē		pē	pē		rū
3C4	tú	tū		tá	tà	yà	ī
3C2	í	ī		ī			ì
3C1/3/5	nú	[redacted]		ná			
4	tú	tū		tá	[redacted]		

head

Transitive predicates

		A.MOV	?=	head	-NMLZ	
Predicate Classes	PCA		nà	-ngő	’ű	‘we (INLC) bite him/her/it/them’
	PCB	yà	nà	-g̃ù’ế’ề	’ű	‘we (INCL) let him/her/it/them rest’
			yà	-dé’à’ẽ’ề	’ű	‘we (INCL) let him/her/it/them speak’
PCC			yà	-mā́	’ű	‘we (INCL) kill him/her/it/them’
	PCD					

Temporary results (update)

		PC	4 SBJ	3C2 SBJ	3C1/3/5 OBJ	3C1/3/5 SBJ	3C1/3/5 OBJ
Predicate Classes	PCA	∅	ì	nā	nā	nà	nà
	PCB	rū	rǜ	nā	nā	nà	nà
PCC		ī	ì	yā	yā	yà	yà
	PCD	ì	ì	yà	yà	yà	yà
			?			?	?

Temporary results

	BEN	OBJ	SP/ASP	SBJ		A.MOV	PC
1SG	chā́~chǒ	chā~chō		chā	chà		
1PL	tố	tō		tā	tā		
2SG	kú	kū		kū	kù		Ø
2PL	pé	pē		pē	pē		rū
3C4	tú	tū		tá	tà	yà	ī
3C2	í	ī		ī			ì
3C1/3/5	nú	[redacted]		ná			
4	tú	tū		tá	[redacted]		

head

Temporary results

	BEN	OBJ	SP/ASP	SBJ	A.MOV	PC
1SG	chā́~chǒ́	chā~chō		chā		
1PL	tǒ́	tō		tā		
2SG	kú́	kū		kū		Ø
2PL	pé́	pē		pē		rū̄
3C4	tū́	tū̄		tá	yà	ī
3C2	ī́	ī		ī		ì
3C1/3/5	nū́	[redacted]		ná		
4	tū́	tū̄		tá		

chà
tā
kù
pē
tà
[redacted]

head

Transitive predicates

		A.MOV	?=	head	-?	-NMLZ	
Predicate Classes	PCA		nà/nā	-ngo	ằ	’ữ	‘he… bite(s) him…’
	PCB	yà	nà/nā	-g̃ù’ế’ẽ̄	ằ	’ữ	‘he… let(s) him… rest’
	PCC		yà/yā	-dé’à’ẽ’ẽ̄	ằ	’ữ	‘he… let(s) him… speak’
	PCD		yà/yà	-ma	ằ	’ữ	‘he… kill(s) him…’
			same with 3C2.SBJ				

Temporary results (update)

		PC	4 SBJ	3C2 SBJ	3C1/3/5 OBJ	3C1/3/5 SBJ	3C1/3/5 OBJ
Predicate Classes	PCA	Ø	ì	nā	nā	nà	nà
	PCB	rū	rù	nā	nā	nà	nà
PCC		ī	ì	yā	yā	yà	yà
	PCD	ì	ì	yà	yà	yà	yà
			?			?	?
						+	**3C1/3/5 OBJ** (head)-ǎ
							?

Descriptive level (distribution not described here)

	① BEN	② OBJ	③ SP/ASP	④ SBJ		⑤ A.MOV	⑥ PC.4/3C1/2/3/5 SBJ/OBJ		⑦ 3C1/3/5
1SG	chá̋~chó̋	chā~chō		chā	chà				
1PL	tő	tō		tā	tā				
2SG	kú̋	kū	í̋	kū	kù		Ø/ì/nā/nà		
2PL	pé̋	pē	ì	pē	pē		rū̄/rǜ̀/nā/nà		
3C4	tǘ̋	tǖ̄	né̋	tá	tà	yà	ī/ì/yā/yà	head	-ǟ̀
3C2	í̋	ī	nè	ī			ì/yà		
3C1/3/5	nǘ̋		(á̋)	ná					
4	tǘ̋	tǖ̄		tá					

Descriptive level

(Almost) exhaustive and true to data but relatively unsatisfactory

Deeper level of analysis?

5. Interpreting the description

Temporary results

		PC	4 SBJ	3C2 SBJ	3C1/3/5 OBJ	3C1/3/5 SBJ	3C1/3/5 OBJ
Predicate Classes	PCA	Ø	ì	nā	nā	nà	nà
	PCB	rū	rù	nā	nā	nà	nà
PCC		ī	ì	yā	yā	yà	yà
	PCD	ì	ì	yà	yà	yà	yà
			⇧			⇧	⇧
						+	**3C1/3/5 OBJ** (head)-ầ
							⇧

Temporary results

		PC	4 SBJ	3C2 SBJ	3C1/3/5 OBJ	3C1/3/5 SBJ	3C1/3/5 OBJ
Predicate Classes	PCA	Ø	ì	nā	nā	nà	nà
	PCB	rū̄	rǜ	nā	nā	nà	nà
PCC		ī	ì	yā	yā	yà	yà
	PCD	ì	ì	yà	yà	yà	yà
			?			?	?

	3C1/3/5 OBJ
+	(head)-ǎ̀
	?

Highly likely
(+there is a way to check it,
although data unavailable for now)

Temporary results

		PC	4 SBJ	3C2 SBJ	3C1/3/5 OBJ	3C1/3/5 SBJ	3C1/3/5 OBJ
Predicate Classes	PCA	Ø	ì	nā	nā	nà	nà
	PCB	rū̄	rǜ	nā	nā	nà	nà
PCC		ī	ì	yā	yā	yà	yà
	PCD	ì	ì	yà	yà	yà	yà
			⇧ ?			⇧ ?	⇧ ?

3C1/3/5 OBJ

+

(head)-*ã̄

⇧

Highly likely
(+there is a way to check it,
although data unavailable for now)

Temporary results

		PC	4 SBJ	3C2 SBJ	3C1/3/5 OBJ	3C1/3/5 SBJ	3C1/3/5 OBJ
Predicate Classes	PCA	Ø	ì	nā	nā	nà	nà
	PCB	rū	rù	nā	nā	nà	nà
PCC		ī	ì	yā	yā	yà	yà
	PCD	ì	ì	yà	yà	yà	yà
			⇧			⇧	⇧
						+	**3C1/3/5 OBJ** (head)-*ā
							⇧

Temporary results

		PC	4 SBJ	3C2 SBJ	3C1/3/5 OBJ	3C1/3/5 SBJ	3C1/3/5 OBJ
Predicate Classes	PCA	Ø	ì	nā	nā	nà	nà
	PCB	rū	rù	nā	nā	nà	nà
PCC		ī	ì	yā	yā	yà	yà
	PCD	ì	ì	yà	yà	yà	yà
			⇧			⇧	⇧
						+	**3C1/3/5 OBJ** (head)-*ā
							⇧

Temporary results

		PC	4 SBJ	3C2 SBJ	3C1/3/5 OBJ	3C1/3/5 SBJ	3C1/3/5 OBJ
Predicate Classes	PCA	Ø	ì	nā	nā	nà	nà
	PCB	rū̄	rǜ	nā	nā	nà	nà
PCC		ī	ì	yā	yā	yà	yà
	PCD	ì	ì	yà	yà	yà	yà
			⇧			⇧	⇧
						+	**3C1/3/5 OBJ** (head)-*ã̄ ⇧

Imperative of intransitive predicate

		A.MOV	?=	head	
Predicate Classes	PCA		nà	-chíbǜ	‘eat! (SG)’
	PCB	yà	rūˉ	-g̃ǜ	‘rest! (SG)’
	PCC		īˉ	-dé’à	‘speak! (SG)’
	PCD		ì	-yû’ū	‘jump! (SG)’

Temporary results

		PC	4 SBJ	3C2 SBJ	3C1/3/5 OBJ	3C1/3/5 SBJ	3C1/3/5 OBJ
Predicate Classes	PCA	Ø/nà	ì	nā	nā	nà	nà
	PCB	rū̄	rǜ	nā	nā	nà	nà
PCC		ī	ì	yā	yā	yà	yà
	PCD	ì	ì	yà	yà	yà	yà
			⇧			⇧	⇧
						+	3C1/3/5 OBJ (head)-*ã̄ ⇧

Temporary results

		PC	4 SBJ	3C2 SBJ	3C1/3/5 OBJ	3C1/3/5 SBJ	3C1/3/5 OBJ
Predicate Classes	PCA	Ø/nà	ì	nā	nā	nà	nà
	PCB	rū̄	rǜ	nā	nā	nà	nà
PCC		ī	ì	yā	yā	yà	yà
	PCD	ì	ì	yà	yà	yà	yà
			?			?	?

Very likely ("Nominalized" mode, same change across several cells)

+ 3C1/3/5 OBJ
(head)-*ā̄

Temporary results

		PC	4 SBJ	3C2 SBJ	3C1/3/5 OBJ	3C1/3/5 SBJ	3C1/3/5 OBJ
Predicate Classes	PCA	Ø/nà	ì	nā	nā	nà	nà
	PCB	rū̄	rǜ	nā	nā	nà	nà
PCC		ī̄	ì	yā	yā	yà	yà
	PCD	ì	ì	yà	yà	yà	yà

Very likely ("Nominalized" mode, same change across several cells)

+ 3C1/3/5 OBJ
(head)-*ā̄

Temporary results

		PC	4 SBJ	3C2 SBJ	3C1/3/5 OBJ	3C1/3/5 SBJ	3C1/3/5 OBJ
Predicate Classes	PCA	Ø/nà	ì	nā	nā	nà	nà
	PCB	rū̄	rǜ	nā	nā	nà	nà
PCC		ī	ì	yā	yā	yà	yà
	PCD	ì	ì	yà	yà	yà	yà

Compositional elements?

+	3C1/3/5 OBJ
	(head)-*ā̄

Temporary results

		PC	4 SBJ	3C2 SBJ	3C1/3/5 OBJ	3C1/3/5 SBJ	3C1/3/5 OBJ
Predicate Classes	PCA	Ø/nà	ì	nā	nā	nà	nà
	PCB	rū	rǜ	nā	nā	nà	nà
PCC		ī	ì	yā	yā	yà	yà
	PCD	ì	ì	yà	yà	yà	yà

PC	**3C1/2/3/5**
PC	*-a ?

	3C1/3/5 OBJ
+	(head)-*ā

Temporary results

		PC	4 SBJ	3C2 SBJ	3C1/3/5 OBJ	3C1/3/5 SBJ	3C1/3/5 OBJ
Predicate Classes	PCA	Ø/nà	ì	nā	nā	nà	nà
	PCB	rū	rǜ	nā	nā	nà	nà
PCC		ī	ì	yā	yā	yà	yà
	PCD	ì	ì	yà	yà	yà	yà
			⇧			⇧	⇧

PC	**3C1/2/3/5**
PC	*-a ?

	3C1/3/5 OBJ
+	(head)-*ã̄
	⇧

Temporary results

		PC	4 SBJ	3C2 SBJ	3C1/3/5 OBJ	3C1/3/5 SBJ	3C1/3/5 OBJ
Predicate Classes	PCA	Ø/nà	ì	nā	nā	nà	nà
	PCB	rū	rù	nā	nā	nà	nà
PCC		ī	ì	yā	yā	yà	yà
	PCD	ì	ì	yà	yà	yà	yà
			⇧			⇧	⇧

PC	**3C1/2/3/5**
PC	*-ā ?

	3C1/3/5 OBJ
+	(head)-*ā̄
	⇧

Temporary results

		PC	4 SBJ	3C2 SBJ	3C1/3/5 OBJ	3C1/3/5 SBJ	3C1/3/5 OBJ
Predicate Classes	PCA	Ø/nà	ì	nā	nā	nà	nà
	PCB	rū	rù	nā	nā	nà	nà
PCC		ī	ì	yā	yā	yà	yà
PCD		ì	ì	yà	yà	yà	yà

PC	**3C1/2/3/5**		**+**	**3C1/3/5 OBJ**
PC	*-ā̄ ?	⟷		(head)-*ā̄

Temporary results

		PC	4 SBJ	3C2 SBJ	3C1/3/5 OBJ	3C1/3/5 SBJ	3C1/3/5 OBJ
Predicate Classes	PCA	Ø/nà	ì	nā	nā	nà	nà
	PCB	rū̄	rǜ	nā	nā	nà	nà
PCC		ī	ì	yā	yā	yà	yà
	PCD	ì	ì	yà	yà	yà	yà
			⇧			⇧	⇧

PC	**3C1/2/3/5**			**+**	**3C1/3/5 OBJ**
PC	*-ā̄ ?				(head)-*ā̄
					⇧

Temporary results

		PC	4 SBJ	3C2 SBJ	3C1/3/5 OBJ	3C1/3/5 SBJ	3C1/3/5 OBJ
Predicate Classes	PCA	Ø/nà	ì (?)	nā < *nà-ã̄		nà < *nà-ã̄	
	PCB	rū̀	rū̀ < *rū̀	nā < *rū̀ -ã̄		nà < *rū̀ -ã̄	
PCC		ī	ì < *ī	yā < *ī -ã̄		yà < *ī -ã̄	
	PCD	ì	ì < *ì	yà < *ì -ã̄		yà < *ì -ã̄	

a

b

⇧ ⇧

PC	3C1/2/3/5	+	3C1/3/5 OBJ
PC	*-ã̄ ?		(head)-*ã̄

⇧

a
PCA nā and PCB nā:
convergence (from 2 ≠ sources)
not syncretism (diffusion from 1 source):
cf. [ɲà] 'Actually' → PCA nā > yà
vs. yà 'Advsurprising' → PCB nā > yà and *yà* not nasal

b
r > y/dz < *[j], cf. XIXth c. record
[ɲà] 'Actually' → PCA nā > yà
yà 'Advsurprising' → PCB nā > yà

6. Results

An 8-slot proposal of syntagmatic and paradigmatic analysis of the inflectional morphology of SMAT's finite predicative head

	①	②	③	④		⑤	⑥	⑦	(⑧)	⑨
	BEN	OBJ	SP/ASP	SBJ		A.MOV	PC	3C1/2/3/5		3C1/3/5.OBJ
1SG	chā́~chó̋	chā~chō		chā	chà					
1PL	tó̋	tō		tā	tā					
2SG	kú̋	kū	ǐ̋	kū	kù		Ø/nà			
2PL	pé̋	pē	ì	pē	pē		rū̄			
3C4	tǘ̋	tū̄	né̋	tá	tà	yà	ī	*ā̄	head	*ā̄
3C2	ǐ̋	ī	nè	ī			ì			
3C1/3/5	nǘ̋		(á̋)	ná						
4	tǘ̋	tū̄		tá						

A single morpheme, *ā, "compensates" for most "gaps" in slots OBJ (②) and SBJ (④)

*ā may appear in two rather different morphological positions, and in both at the same time

In slot ⑦ it can encode both SBJ or OBJ arguments, from both C2 or C1/3/5

Synchronically, most morphemes where *ā can be detected are **fusional morphology**, in a mostly agglutinative language

When *ã̄ (⑦) encodes SBJ (in “Nominalized mode”), its encoding a C2 or a C1/3/5 relies on absence *vs.* presence of toneme change on *ã̄

=> class agreement through presence/absence of toneme change

(*Cf.* C2 nominalizations (segmentally identical to C5 nominalizations): no toneme change before NMLZ (while toneme change in C5 –and all other– nominalizations) => general question of what toneme change is synchronically and diachronically in Ticuna)

An interpretation of how SBJ or OBJ function encoding is assigned to *ã̄ (⑦)

④
SBJ
Filled
Capts SBJ

⑦
***ã̄**
Receives OBJ

⑦
***ã̄**
Receives SBJ

⑦
***ã̄**
Capts SBJ

⑨
***ã̄**
Receives OBJ

An interpretation of how SBJ or OBJ function encoding is assigned to *ã̄ (⑦)

④
SBJ
Filled
Capts SBJ

⑦
***ã̄**
Receives OBJ

⑦
***ã̄**
Receives SBJ

BUT receives OBJ in Imperative “mode”
AND “Nominalized mode” with (covert) 4th person SBJ
while slot SBJ (④) empty

⑦
***ã̄**
Capts SBJ

⑨
***ã̄**
Receives OBJ

Possible interpretation of last observation

In Imperative "mode": SBJ is covertly filled with 2SG?

	⑦
SBJ	***ã̄**
Covertly filled	
	Receives OBJ

In "Nominalized mode" with (covert) 4th person SBJ: there is really no SBJ function? (indeed often generic meaning; or *ã̄ is then actually SBJ of anticausative, and no real 4th person SBJ possible?)

	⑦
	***ã̄**
	Receives OBJ (for want of SBJ)

Still much to say about SMAT's predicative head's inflectional morphology **(differential object marking, different grades of boundness, exact semantics, etc.)**!

But exact number of slots and contents of slots rather clear, with interesting insights into diachrony.

References

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If NOT “Nominalized mode”, *ã̄(⑦) encodes C1/3/5.OBJ

If “Nominalized mode”:

if intransitive predicate:

if *ã̄(⑦) receives toneme change, it encodes C2.SBJ

if *ã̄(⑦) does NOT receive toneme change, it encodes C1/3/5.SBJ

1SG 1PL
2SG 2PL
3
4

Agreement classes
C1
C2
C3
C4
C5

Predicate Classes
PCA
PCB
PCC
PCD

Predicate “modes”
Imperative
Non-nominalized
Nominalized

1SG
2SG
3
4
1PL
2PL

Agreement classes
C1
C2
C3
C4
C5

Predicate Classes
PCA
PCB
PCC
PCD

Predicate “modes”
Imperative
Non-nominalized
Nominalized

1SG 1PL
2SG 2PL
3
4

Agreement classes
C1
C2
C3
C4
C5

Predicate Classes
PCA
PCB
PCC
PCD

Predicate “modes”
Imperative
Non-nominalized
Nominalized

Transitive predicates

		A.MOV	?=	head	NMLZ	
Predicate Classes	PCA	yà	nā	-chíbū	’ű̃	‘she/it/they eat(s)’
	PCB					
PCC						
	PCD					

Temporary results		PC	**4 SBJ**	**3C2 SBJ**	**3C1/3/5 OBJ**	**3C1/3/5 SBJ**
Predicate Classes	PCA	Ø/nà	ì	nā	nā	nà
	PCB	rū̄	rǜ	nā	nā	nà
PCC		ī	ì	yā	yā	yà
	PCD	ì	ì	yà	yà	yà

Temporary results

	① BEN	② OBJ	③ SP/ASP	④ SBJ	⑤ A.MOV	⑥ PC	⑦ 3C1/2/3/5		⑧ 3C1/3/5
1SG	chā́~chǒ́	chā~chō		chā	chà				
1PL	tǒ́	tō		tā	tā				
2SG	kú́	kū		kū	kù	Ø/nà			
2PL	pé́	pē		pē	pē	rū̄			
3C4	tū́	tū̄		tá	tà	ī	*ā̄	head	*ā̄
3C2	ǐ́	ī	ǐ́	ī		ì			
3C1/3/5	nū́		ì	ná					
4	tū́	tū̄	nè (á́)	tá					