

”Relational” morphology in Cariban, Macro-Jêan and Tupian languages

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Introduction

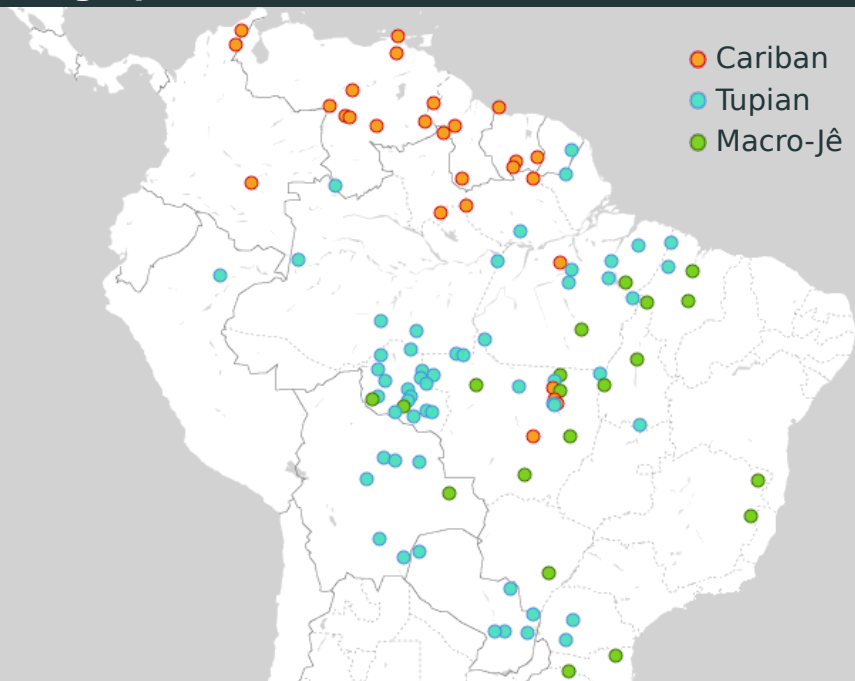
The language families

- Cariban
 - around 25 extant languages
 - fairly shallow time depth
 - between 60'000 and 100'000 speakers total (Gildea 2012)
 - spoken in Northern South America and central Brazil
- Macro-Jê
 - consists of Jê proper (~14 extant) and other isolated branches (~10 extant)

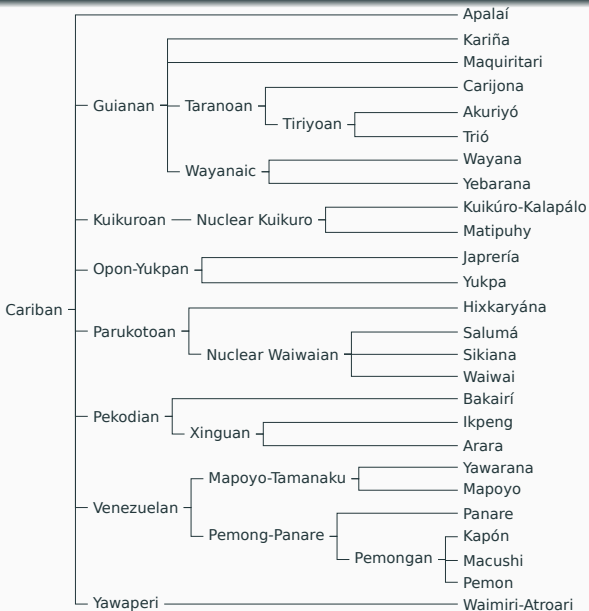
The language families

- around 60'000 speakers, 50'000 Jê proper (Crevels 2012)
- mostly spoken in Brazil
- Tupian
 - widespread, mostly spoken in the Amazon
 - 10 distinct subfamilies, around 70 languages (**Rodrigues et al 2012 Tupian**)
 - ~650'000 speakers (Crevels 2012)

Geographical Distribution

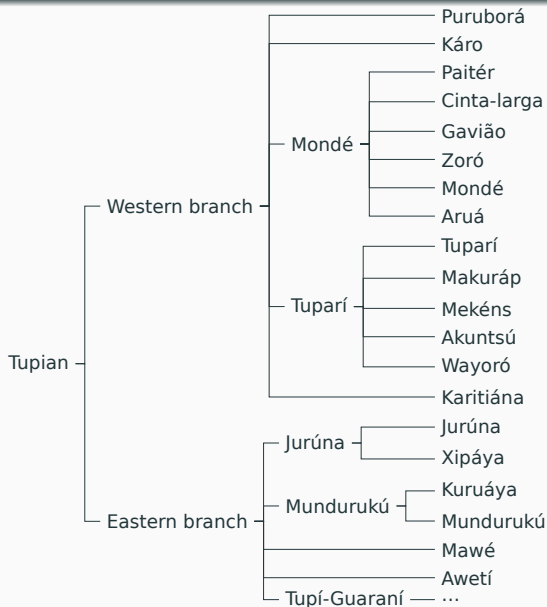


Cariban: Classification



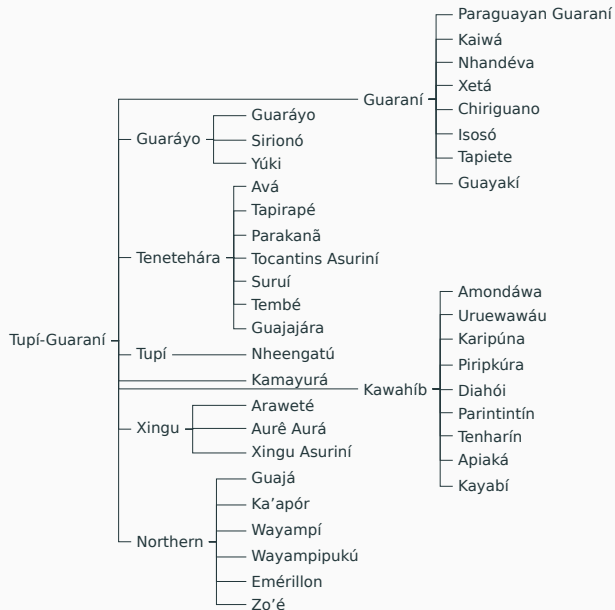
(Hammarström et al.
2018)

Tupian: Classification

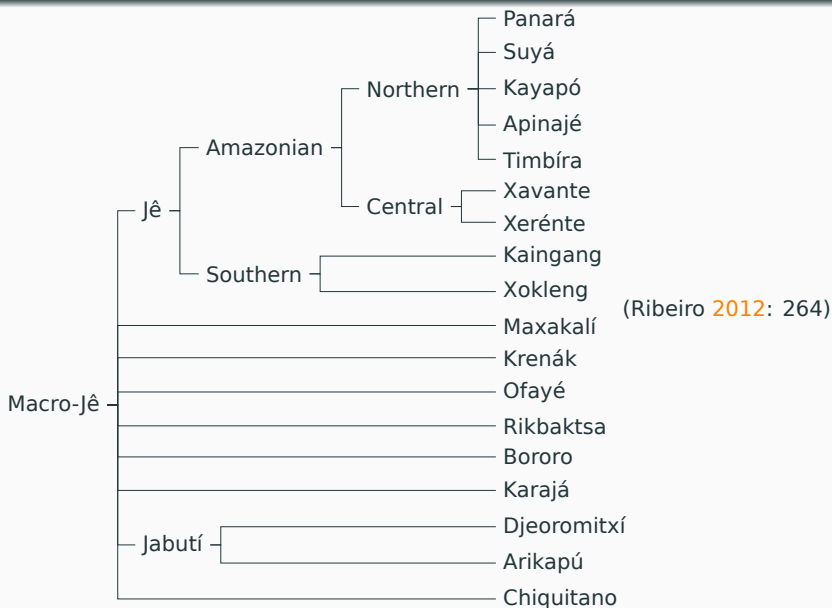


(Rodrigues et al. 2012) Tupia

Tupí-Guaraní: Classification



Macro-Jê: Classification



Argument marking in the three families

- different word classes can take arguments
 - verbs
 - nouns
 - adpositions
- languages of the three families have postpositions & inalienable nouns
- ...and typically use the same person markers for all classes

Argument marking in the three families

(1) Apalaí (**koehnapa**)

a. **o**-niʔ-no

2-sleep-REC

'You slept.'

b. **o**-mũku-ru komo

2-son-POSS PL

'your son'

c. naeroro **oj**-a oeʔ-no

so 2-ALL come.1-REC

'That's why I've come to you.'

Argument marking in the three families

(2) Karitiana (Tupian, Everett 2006: 268, 304, 394)

a. **a**-ta-tepik

2-SAP-dive

'You dove'

b. **a**-so:jt

2POSS-wife

'your wife'

c. elivar naka-hi:t **ãn-ti** i

E. 3-give 2-OBL 3

'Elivar gave you to her.'

Argument marking in the three families

(3) Apinajé (Macro-Jê, de Oliveira 2005: 168, 101, 158)

a. $\eta i = r\ddot{i}$ ka te **a**-pa?
 where=at 2 HAB 2-live

‘Where do you live?’

b. **a**-krě=kĩ
 2-head=hair

‘your hair’

c. **a**-kot kũmrɛtʃ̃ mẽ na pa itʃ̃-prõt
 2-after INTS DAT REAL 1 1-run

‘I ran after **you** first.’

Complementary distribution of bound and free forms

- bound person markers in complementary distribution with free (pro-)nouns (“pro-index” in the framework of Haspelmath [2013])

(4) Apalaí (**koehnapa**)

a. aimo n-anĩ-no
 boy 3-lift-REC
 ‘The boy caught it.’

b. aimo kana n-anĩ-no
 boy fish lift-REC
 ‘The boy caught the fish.’

c. i-kiri-ri
 3-thing-POSS
 ‘her/his possession’

d. noʔpo kiri-ri
 woman thing-POSS
 ‘the woman’s possession’

Relational or linking morphology

- some languages have complementary distribution of \emptyset **x-...** and **NP y-...**
- i.e., free arguments trigger specific morphology on verb / noun / postposition
- TuKajê hypothesis: deep genealogical relationship between three language families (Rodrigues 1985)
- “relational” or “linking” or “contiguity” prefixes as a shared trait (Rodrigues 2000, 2009, 2012)

Relational or linking morphology: Tupian

(5) Mawé (Tupian, Cabral et al. 2013: 406–407)

a. aware **s**-uwaipo i-ʔiwo:p
dog ʌK-tail 3-be.long

‘The dog’s tail is long.’

b. h-uwaipo i-ʔiwo:p
3-tail 3-be.long

‘Its tail is long.’

Relational or linking morphology: Cariban

(6) Waiwai (Cariban, Hawkins 1998: 169, 69, 193)

a. oj-ew-ru

1-eye-POSS

'my eye'

b. Ø-ew-ru

3-eye-POSS

'his eye'

c. noro **j**-ew-ru

3SG LK-eye-POSS

'his eye'

Relational or linking morphology: Macro-Jê

(7) Panará (Jê, Dourado 2001: 101)

a. s-ũpiə

3-father

'his father'

b. tɛseja j-ũpiə

T. ɫK-father

'Teseya's father'

Linking markers in a crosslinguistic perspective

- not found anywhere else
- similarities to construct state
- but triggered by adjacency of argument

Distribution of linking markers

- not all languages
 - not all word classes
 - not all members of word classes
 - only partially similar forms
 - different reconstructions
- inherited trait or superficial similarity?
- sample of 74 languages

Cariban

Linking morphemes in Cariban

- only 3 (maybe 5) languages show an overt linker, all *j*-
- Panare, Waiwai, Hixkaryána (maybe Pemon, Waimiri-Atroari)
- all three in nouns
- Hixkaryána and Waiwai in transitive verbs (Waiwai only in subordinate clauses) and postpositions
- none with intransitive verbs

Linking on nouns in Cariban

- (8) a. Waiwai (Hawkins 1998: 126)
 ehtʃopo ʃa-kɲe noro **j**-apo-ri
 unequal be.3-PST 3PRO LK-arm-POSS
 ‘His arms were unequal.’
- b. Hixkaryána (Derbyshire 1985: 200)
 waraka **j**-owa-ni
 W. LK-chest-POSS
 ‘Waraka’s chest’
- c. Panare (T. E. Payne & D. L. Payne 2013: 26)
 kən **j**-apə-n
 3.PRO LK-arm-POSS
 ‘his/her arm’

Linking on transitive verbs in Cariban

- (9) a. Waiwai (Hawkins 1998: 45)
ti-kanawa-ri **j**-eh-so tom-o
COR-canoe-POSS LK-bring-SUP 3.go-PST
'He went to bring his canoe.'
- b. Hixkaryána (Derbyshire 1985: 191)
woto **j**-ono-no
meat LK-eat-HOD
'He ate the meat.'

Linking on prepositions in Cariban

- (10) a. Waiwai (Hawkins 1998: 42)

onok **j**-akro mi:-tʃ-e?

who LK-with 2-go-PST

‘With whom are you going?’

- b. Hixkaryána (Derbyshire 1985: 212)

feka **j**-ohoje nahko tukusu

fish.trap LK-above be.3.PST hummingbird

‘The hummingbird was above the fishtrap.’

Alternation with zero in other Cariban languages

(11) Trió (Meira 1999: 289)

a. n-apə-i

3-catch-DUB

‘S/he has caught (it).’

b. pakira apə-i

peccary catch-DUB

‘S/he has caught the peccary.’

Alternation with zero in other Cariban languages

(12) Ikpeng (Pachêco 2001: 176, 242)

a. aŋpi ikore-li i-mja-ri
 boy break-REC 3-hand-POSS

‘The boy_i broke his_j hand.’

b. aŋpi mja-ri oŋ̃-ikore-li
 boy hand-POSS DETRZ-break-REC

‘The boy’s hand broke.’

j- with non-third arguments

- (13) a. Macushi (Abbott 1991: 158)

piretiku-ja u-**j**-ene-ʔsaʔ

frog-ERG 1-LK-bring-CPL

‘The frog brought me here.’

- b. Panare (T. E. Payne & D. L. Payne 2013: 28)

a-**j**-ikiti-jah kən

2-INV-cut-PST.PFV 3.PRO

‘He/she cut you’

j- with non-third arguments: Kariña

(14) Kariña (Courtz 2008: 64)

- a. *ɨ-j-enaʔta-ri*
1-LK-nose-POSS
'my nose'

- b. *a-j-enaʔta-ri*
2-LK-nose-POSS
'your nose'

- c. *enaʔta-ri*
nose-POSS
'his/her/its nose'

Ablaut

- almost all Cariban languages show mutation of previous Proto-Cariban *ɣ to e or similar
- triggered by many prefixes
- presumed to be caused by earlier presence of *j-

Reconstruction

Table 1: Evolution of Cariban person marking, after Meira et al. (2010: 489)

	Pre-Proto-Cariban	Proto-Cariban	phonological reduction
1	*(γ)wi j-...	*u=j-	*uj-/*u-
2	* γ (m γ) j-...	* γ =j-	* γ j-/* γ -
NP	*NP j-...	*j-	*j-/* \emptyset -
3	*j-...	*j-	* \emptyset -/*j-

Macro-Jê

Linking morphemes in Macro-Jê

- Jê proper
 - only Northern Jê languages show linking with NPs
 - Central Jê languages Xavante and Xerênte show stem-initial alternations depending on the person prefix, but no linking
 - in Southern Jê, poorly documented Kaingang shows linking-like behavior in three words, while Xokleng shows no linking whatsoever
- outside of Jê proper, linking behavior is only found in the Jabutí family, Karajá, and (disputed) Chiquitano
- Ofayé claimed to have linking morphemes based on old data, Bororo shows possible remnants of linking morphology
- no traces in Maxakalí and Rikbaktsa, Krenak not documented

(15) Panará (Jê, Rodrigues 2012: 269)

a. sɔti j-akoa
animal ɫK-mouth

‘the animal’s mouth’

b. s-õtɔ s-akoa amã
3-tongue 3-mouth ɫOC

‘The tongue is in the mouth.’

Linking morpheme or root-initial mutation?

- Salanova (2009,2011): there is neither a third person morpheme nor a linking morpheme
- instead: root-initial mutation for contiguity, third person zero marked

- (16) a. sɔti jakoa
 animal mouth.LK
 ‘the animal’s mouth’
- b. sɔ̃tɔ sakoa amã
 tongue mouth loc
 ‘The tongue is in the mouth.’

Linking morpheme or root-initial mutation?

- main problem: nouns never occur without either a person or linking marker
- e.g. *akoa* 'mouth' does not exist on its own
- same form is used for third person possession and non-possession
- ...but does not matter much

Innovated “linking” behavior in Northern Jê

- Proto Northern Jê is reconstructed as having prenasalized plosives (Nikulin 2016)
- reduction to voiceless plosives in Panará, Timbira
- nasality resurfaces with preceding argument (possessor):

Innovated “linking” behavior in Northern Jê

- (17) Timbira (Alves 2004: 31–32)
- a. [hũ'mɾɛ] ‘man’
 - b. [i:ʔput] ‘my belly’
 - c. [,hũmɾɛ̃'mput] ‘the man’s neck’
 - d. [,hũmɾɛʔ'tu] ‘the man’s belly’
 - e. Proto Northern Jê **mbutũ* (Nikulin 2016: 180)

Innovated “linking” behavior in Northern Jê

- (18) Panará (Dourado 1993: 17)
- a. [nãkã] ‘cobra’
 - b. [ĩtɔ] ‘(his) eye’
 - c. [nãkã ãtɔ] ‘the cobra’s eye’ (epenthetic vowel Ỹ)
 - d. Proto Northern Jê **ndɔ* (Nikulin 2016: 175)

Stem alternations in Central Jê

Meaning	Xavante	Xerênte
'my mouth'	<i>ĩĩ-zadawa</i>	<i>ĩ-zdawa</i>
'your mouth'	<i>a-sadawa</i>	<i>ai-sdawa</i>
'his mouth'	<i>ĩ-sadawa</i>	<i>ĩ-sdawa</i>
'NP's mouth'	<i>zadawa</i>	<i>zdawa</i>

- but compare e.g. Panará *j-akoa* and *s-akoa*
- Northern Jê shows alternation with presence vs. absence of NP
- Central Jê does not, but same segments / prefixes involved in alternation

Jabutí family

- two extant languages, Djeoromitxí and Arikapú, demonstrated to be Macro-Jêan by Ribeiro & Voort (2010)
- Djeoromitxí shows linking-like behavior:

(19) a. hɥ hɥmi
 1SG be.ill
 'I'm ill.'

b. hɥ pa=rɥmi
 1SG foot=be.ill
 'My foot hurts.'

- Van der Voort (2007: 150) and Ribeiro & Voort (2010: 540) suggest that Proto-Jabutí $*tʃ$ became Djeoromitxí *r* intervocalically, but *h* elsewhere

Jabutí family

- Proto-Jabutí \widehat{tjomi} 'hurt', Djeoromitxí *-rɥmi, hɥmi*, Arikapú \widehat{tjomi}
- Proto-Jabutí $*\widehat{tj}$ is in turn claimed to be related to Proto-Jê $*j$ (Ribeiro & Voort 2010: 565):

Meaning	Proto-Jê	Proto-Jabutí
'tooth'	$*j-ua$	$*\widehat{tjo}$
'father'	$*j-um$	$*\widehat{tju}$
'mouth'	$*j-arkua$	$*\widehat{tjako}$

- ...alternation, but not with cognate segments!

Karajá

Possessor	'forehead'	'hand'	'blood'
NP ('man')	hãbu kɔɾɔ	hãbu dɛbɔ	hãbu ləbɔ
1	wa-kɔɾɔ	wa-dɛbɔ	wa-ləbɔ
2	a-kɔɾɔ	ɛbɔ	əbɔ
3	i-kɔɾɔ	ɖɛbɔ	ɖəbɔ

Tupian

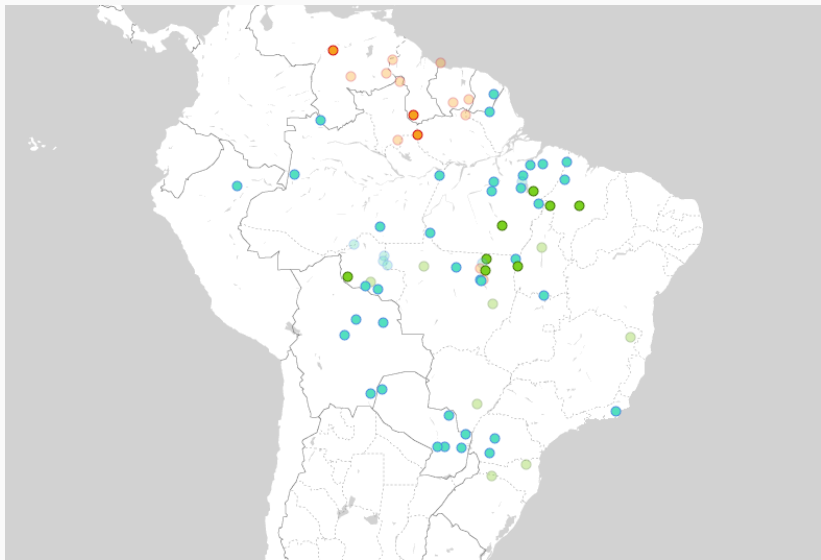
Distribution of linking morphology in Tupian

- Eastern Tupian: Tupí-Guaraní, Mundurukú, Mawé, and Awetí; Western Tupian: Tuparí
- well established & reconstructible to Proto-Tupí-Guaraní
- Meira & Drude (2013) reconstruct root-initial mutation for pre-Mawé-Awetí-Tupí-Guaraní
- similar consonant (*c or *tʃ) involved as in Jê

What can we say so far?

- similar appearance and behavior in all three families
- not pervasive in any family, most clearly in Tupí-Guaraní
- origins in Cariban potentially third person marker, Tupian and Macro-Jê lenition of *c
- no clear areal pattern
- could have arisen due to similar morphosyntactic structure

Preliminary distribution of linking morphology



Prosodic and syntactic integration of arguments

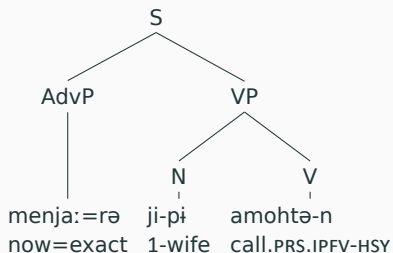
- (20) Timbóra (Jê, Alves 2004: 31-32)
[,hũmrẽ'mput] 'the man's neck'

Prosodic and syntactic integration of arguments

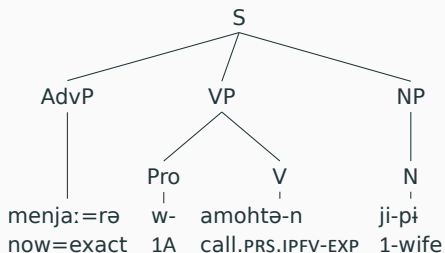
(21) Trió (Cariban, Meira 1999: 532)

- a. menja:rə=rə ji-pi amohtə-n
 now=exact 1-wife call.PRS.IPFV-HSY
 'S/he is calling my wife right now.'
- b. *ji-pi menja:rə=rə amohtə-n
- c. ji-pi w-amohtə-e
 1-wife 1A-call.PRS.IPFV-EXP
 'I am calling my wife.'
- d. w-amohtə-e ji-pi
 1A-call.PRS.IPFV-EXP 1-wife
 'I am calling my wife.'

Prosodic and syntactic integration of arguments



'S/he is calling my wife right now.'



'I am calling my wife.'

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Glossing Abbreviations

1 first person, 2 second person, 3 third person, A agentive transitive argument, ALL allative, COR coreference, CPL completive, DAT dative, DETRZ detransitivizer, DUB dubitative, ERG ergative, EXP experiential or direct evidentiality, HAB habitual, HOD hodiernal past, HSY hearsay/indirect evidentiality, INTS intensifier, INV inverse, IPFV imperfective, LK linker, LOC locative, OBL oblique, PFV perfective, PL plural, POSS possessive, PRO pronoun, PRS present, PST past, REAL realis, REC recent past, SAP speech act participant, SG singular, SUP supine