

# Finding Purpose: The Origin of Purposive Clause Markers in Proto-Omagua-Kokama (Tupí-Guaraní)\*

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## 1 Introduction

- This talk argues for the grammaticalization-based origin of three purposive clause markers, *\*-tara*, *\*-mira* and *\*=senuni*, in Proto-Omagua-Kokama (POK), a Tupí-Guaraní (TG) language of Amazonia.<sup>1</sup>
- These morphemes are intriguing from a TG-comparative perspective, as no other TG language exhibits morphology exclusively dedicated to encoding purpose.
- Their distribution is governed by obligatory coreference between the ellipsed argument of the purposive clause and the absolutive argument of the matrix clause, as well as semantic factors in those cases in which more than one is grammatically permissible (Vallejos Yopán 2010:617-628, 2012).
- This system survives intact in both daughter languages Omagua and Kokama-Kokamilla.
- I argue that each of these markers grammaticalized from TG markers of distinct functional categories, which accounts for the abovementioned coreference restrictions.<sup>2</sup>
  - *\*-tara*<sup>3</sup> < *\*\*tar* AGENTIVE NOMINALIZER and *\*\*-(r)amo* “ATTRIBUTIVE”
  - *\*-mira* < *\*\*βaʔé* CLAUSAL NOMINALIZER and *\*\*-(r)am* NOMINAL FUTURE
  - *\*=senuni* < *\*\*ts-* 3.ABSOLUTIVE and *\*\*enoné* ‘ahead of’
- Some TG languages exhibit complex morphological strategies for encoding purpose that formally parallel POK strategies; others exhibit forms with functions located at intermediate stages of the grammaticalization trajectories proposed here.

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<sup>1</sup>A negative purposive marker *\*-maka* is reconstructable to POK, but is not treated here.

<sup>2</sup>I assume the PTG reconstructions in Jensen (1998) to be correct, although in §5.4 we will see that they prove problematic here. I modify her glosses where appropriate for clarity. A reconstruction of PTG is being carried out at Berkeley by Keith Bartolomei, Natalia Chousou-Polydouri, Lev Michael, Zachary O'Hagan, Mike Roberts and Vivian Wauters.

<sup>3</sup>I indicate reconstructed POK forms via <\*> and reconstructed PTG forms via <\*\*>.

- These facts lend support for the grammaticalization-based origin of POK purposive markers, and show that such an account need not be motivated only for the history of POK.

- ROADMAP

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## 2 Language Background

### 2.1 Sociolinguistic and Ethnohistorical Situation

- Proto-Omagua-Kokama is the ancestor of Omagua and Kokama-Kokamilla, two highly endangered languages of Peruvian Amazonia.
  - Kokama and Kokamilla are mutually intelligible dialects with ~1,000 speakers.
  - There is an ethnic population of ~20,000 ethnic Kokama-Kokamilla in ~120 communities:
    - The Kokamilla live primarily on the Huallaga river.
    - The Kokama have dispersed along the Marañón, Ucayali, Amazon, Nanay and Itaya river basins (Vallejos Yopán 2010:10, 31-32).
  - We have identified only 7 speakers of Omagua, all natives or residents of San Joaquín de Omaguas, on the Amazon river.<sup>4</sup>
- Cabral (1995) and Cabral and Rodrigues (2003) proposed that Omagua and Kokama are rapid creoles that originated on 17th- and 18th-century Jesuit *reducciones* (mission settlements), though a number of arguments suggest this is an untenable hypothesis.
- The Omagua and Kokama-Kokamilla occupied an extremely large geographical space at the time of first mention by Europeans, and were recognized as distinct, but related, ethnic groups.
  - Gaspar de Carvajal, a Dominican priest joined to the expedition of Francisco de Orellana, first described the Omagua in 1542 (de Carvajal 1542b).<sup>5</sup>

<sup>4</sup>Additional speakers may live in the community of San Salvador de Omaguas, nearer to the site of the historical Jesuit mission (Tessmann 1930:48; Myers 1992:140-141), and previous ethnographic work suggests that this site remained more culturally conservative than San Joaquín as late as the 1950s (Girard 1958:163-185). However, I have not visited this site to determine the sociolinguistic situation there, though word-of-mouth reports indicate that there are no speakers there.

<sup>5</sup>Francisco de Orellana’s expedition branched off from that of Gonzalo Pizarro (half-brother of the *conquistador* Francisco). This is the first English translation of de Carvajal’s account, though a summary of it was published in English as de Herrera y Tordesillas (1859) by the British geographer Sir Clements Robert Markham ([http://en.wikipedia.org/wiki/Clements\\_Markham](http://en.wikipedia.org/wiki/Clements_Markham)), which itself was extracted from de Herrera y Tordesillas (1726), translated from Spanish by Captain John Stevens, although the Spanish original appears to be lost. The first full Spanish edition was published as de Carvajal (1542a).



- i. F. Samuel Fritz, a German-speaking priest from Bohemia, began missionizing among the Omagua in 1686, founding almost 40 missions (Anonymous 1922).
  - ii. At this time their territory extended from below the mouth of the Napo (in Peru) to below the mouth of the Jutai (in Brazil) (Michael 2010).
  - iii. This appears to correspond roughly to their distribution at contact, though they are likely to have suffered from disease following a short period of missionization by the Franciscan F. Laureano de la Cruz beginning in 1647 (de la Cruz 1653).
  - iv. In the years immediately preceding and following the turn of the 18th century, most Omagua fled upriver from Portuguese slave raids into what is now Peru (some remained in the area around São Paulo de Olivença in Brazil (Bonin and Cruz da Silva 1999; Maciel 2003, 2006)).
  - v. Between 1723-1726 the Omagua relocated to the site roughly corresponding to the current community of San Salvador de Omaguas, in territory previously inhabited by the Yameo, a Peba-Yaguan group (Anonymous 1922:138).
- Juan de Salinas y Loyola, a Spanish *conquistador*, first encountered the Kokama on the Ucayali river in October 1557, as described in a letter to Juan de Ovando dated 10 June 1571 (Jiménez de la Espada 1897:LXXIII).
    - i. Alonzo Mercadillo, a captain under Hernando Pizarro (another brother), traveled down the Huallaga as far as the Pongo de Aguirre (rapids) in 1538, and may have had contact with the Kokamilla if they had by then fissioned from the Kokama.<sup>6</sup>
    - ii. The Kokamilla likely had infrequent contact with Spaniards as early as 1611, when Diego Vaca de Vega began undertaking incursions into the upper Marañón.<sup>7</sup>
    - iii. The first significant Kokamilla settlement was Santa María de Huallaga, founded in September 1649 by F. Bartolomé Pérez (Stocks 1978:116).
    - iv. The first significant Kokama settlement was Santa María de Ucayali, founded by the same Pérez in 1651~1652 after he was replaced on the Huallaga by F. Raimundo de Santa Cruz (Stocks 1978:116-117).
- The Kokama and Kokamilla rose up against the Spanish much more than did the Omagua.
    - In 1643, the Kokamilla attempted to assassinate a party of Spaniards about to pursue a group of escaped Jeberos, with whom they were allied (Stocks 1978:112-113).
    - The Kokama of the Ucayali suffered horrendously from disease following a visit by Spaniards in May 1644 to capture the abovementioned Kokamilla, who had fled there.<sup>8</sup>
    - In 1662, upon the death of F. de Santa Cruz, the Kokamilla fled to the Ucayali Kokama, ten of whom were hanged in 1663 for sheltering them.<sup>9</sup>
      - i. Some Kokama were probably forced onto Santa María de Ucayali (moved to the Huallaga river) at this time (Stocks 1978:132).
    - In 1664 the Kokama attacked a mission on the Pastaza river, killing several Spaniards.
    - Later they attacked Santa María de Huallaga, burning houses, killing cattle and scaring off the non-participating Kokamilla and priest F. Tomás Maxano.<sup>10</sup>

<sup>6</sup>Stocks (1978:99), citing de Cieza de León (1923:284-287).

<sup>7</sup>Stocks (1978:104), citing Chantre y Herrera (1901:32-46).

<sup>8</sup>Stocks (1978:113-115), citing de Figueroa (1904:100, 104).

<sup>9</sup>Stocks (1978:127-128, see pages for original sources).

<sup>10</sup>Stocks (1978:129) citing Maroni (1737b:305-306). F. Maxano had first missionized the Ucayali Kokama for two years beginning in October 1657, but for his own safety was ordered out of the region in 1659 by the lay governor Juan Mauricio Vaca (Stocks 1978:125-126, see pages for original sources).

- These events culminated in March 1666, when a band of Kokama at the mouth of the Aipena river decapitated F. Francisco de Figueroa, who was in search of the missing F. Maxano (Stocks 1978:130).
- At this time, the two Kokama-Kokamilla settlements were only weakly held together.
- At no time in recorded history were the Omagua, Kokama and Kokamilla grouped in a single settlement, or even in proximate settlements, which severely undermines Cabral’s creolization hypothesis.
- Nearby Huallaga and Ucayali river settlements were essentially mono-ethnic during this period, and remained so at least until after 1682 (Stocks 1978:133).
  - Santa María de Huallaga, founded September 1649 (Stocks 1978:116), Kokamilla
  - Nueva Cartagena de Lagunas, founded 25 July 1670 (Maroni 1737a:222), Panoan
  - San Lorenzo de Tibilos, extant by August 1670 (ibid.), Arawak (Chamicuro)
- Only in 1735 are the Kokama-Kokamilla and Panoan groups first documented as resident in distinct *barrios* at Lagunas (Stocks 1978:133).<sup>11</sup>
- Michael (2010) has shown that the first attestation of the Kokama language is too early in relation to the earliest Jesuit missions in the region for a creolization scenario to be tenable, even if all Omagua/Kokama-Kokmailla had lived together and the missions been multi-ethnic.
  - On 3 June 1681, F. Juan Lorenzo Lucero, Superior of the Jesuit missions, wrote:

(1) kakiri tanupapa, kakiri ura, Dios ikatuta nari.

kakiri tanu=                    papa kakiri ura       Dios ikatu    -ta    na=    =ari  
 live    1PL.EXCL.MS= father live    3SG.MS God be.good -CAUS 2SG= =IMPF

‘May our father live, may he live, and God will make you well.’

(Maroni 1737a:224, gloss and translation mine)<sup>12</sup>

- This passage includes some of the same morphemes that Cabral (1995) argues to be evidence for the creolization of the language, e.g., *ura* 3SG.MS and *-ta* CAUS.
- Ongoing research has increasingly been able to characterize POK as less divergent from TG, mainly by demonstrating a high degree of retention of TG functional items (O’Hagan 2011).
  - The synchronic function of many grammatical morphemes has been shown to be the result of grammaticalization processes, as argued here.
  - Despite some loan words from Arawak, Zaparoan and Peba-Yaguan languages, an increasing number of lexical items of previously unknown origin have been shown to be TG, particularly when one is attentive to cases of semantic drift.<sup>13</sup>

<sup>11</sup>Given prehistoric hostilities between certain ethnic groups, residence in distinct *barrios* was typical of Jesuit missions, a practice continued by the Franciscans into the 19th century (see Myers (1990)).

<sup>12</sup>The original reads ‘*Caquire tanu papa, caquere vra Dios icatotonare*’ and is free-translated by Lucero as ‘Quédate con Dios hombre esforzado, Dios te guarde y te dé mucha vida’ (ibid.). Kokama who Lucero had induced to live at Santa María de Ucayali (actually upriver from Lagunas on the Huallaga), were fleeing a smallpox epidemic that began in June 1680, and advising Lucero that he do the same.

<sup>13</sup>For example, the reflex of PTG \*\**kujã* ‘woman’, came to mean ‘sister.MALE.EGO’ in POK, whereas POK \**wainua* (really Kokama *waina*) was considered a Quechua borrowing by Cabral (1995:266). However, Fernandes (2003:135), citing D’Evreux (1615:82), has shown that †Tupinambá (TG, Brazil) <uainuy> ([wainui]?) was a designation for elder women who had attained a certain social status in local Tupinambá communities.

- These general facts suggest that creolization is not the appropriate story to tell for POK.
- Rather, POK may have been the earliest offshoot from Proto-Tupí-Guaraní, and archaeological evidence placing a TG group in the greater upper Amazon basin before 1000AD supports this argument (Michael, p.c.).
- A period of intense multilingualism at this time may account for the borrowings seen from the major language families in the region, as well as for points of structural (but not formal) similarity between families (e.g., clause-linking in Zaparoan languages).

## 2.2 Typological Profile

- POK is an isolating language wherein grammatical relations are expressed through word order.
  - Word order in unmarked main clauses is SVO.
  - There is no agreement anywhere in the grammar.
- Most grammatical categories are expressed via (a combination of) both syntactically distributed (“special”) and phonologically bound clitics.
  - Sentence-initial clitics encode negation, sentential modality and directionality, and function as clause-linkers.
  - Second-position clitics encode epistemic modality.
  - VP-final clitics encode tense, aspect, reality status (a polyfunctional irrealis marker) and directionality, and function as clause-linkers.
  - Noun-phrase clitics encode number and license oblique arguments.
- Bound morphology appears to have been exclusively derivational, with the exception of two pluralional morphemes *\*-ka* ITERATIVE and *\*-katu* REGRESSIVE, and the purposives *\*-tara* and *\*-mira*.
- Person is expressed on nouns, verbs and postpositions via (in some persons) two sets of pronouns with overlapping distributions not discussed here.
- The language exhibited a typologically uncommon genderlect system in nominal number marking, the pronominal system and forms derived historically from pronouns (deictic adverbs and the words ‘thus’ and ‘also’); this is indicated in glosses as MS and FS for masculine and feminine speech, respectively.

## 3 POK Purposive Constructions

- POK subordinate purposive clauses are encoded via one of three verbal suffixes/enclitics: *\*-tara*, *\*-mira* or *\*=senuni*.
  - No additional verbal morphology co-occurs with these markers.
- Purposive clauses in which *\*-tara* or *\*-mira* appear require that one argument be ellipsed, and that the ellipsed argument be coreferential with the absolutive argument of the matrix clause, the predicate of which must be semantically active.
  - For *\*-tara* purposives the ellipsed argument is A/S<sub>A</sub>.
  - For *\*-mira* purposives the ellipsed argument is P.
  - Neither *\*-tara* nor *\*-mira* co-occur with stative predicates (S<sub>P</sub>).

- In \*=*senuni* purposives, all arguments must be realized.
  - Thus verbs in \*=*senuni* clauses are not strictly subordinate.
    - i. \*=*senuni* occurs (infrequently) on the verbs of matrix clauses as a marker of intentionality.
  - When the referent of a third-person object is highly given in discourse, it may be null, a pattern also found in matrix clauses.
  - Only \*=*senuni* may co-occur with stative predicates (S<sub>P</sub>).
  - When either is permissible, the alternation between \*-*tara*/\*-*mira* and \*=*senuni* hinges on a notion of control on the part of the agent, a topic not treated in depth here.
- Past work (Vallejos Yopán 2010:617-628, Vallejos Yopán 2012) has argued that alignment in \*-*tara*- and \*-*mira*-purposive clauses is nominative-accusative, and noted the unexpected sensitivity to an alternate alignment system in the matrix clause.
  - This work has not treated the syntactic status of S<sub>P</sub> in the purposive clause, or the restriction to active predicates in the matrix clause (though the latter is not unexpected).
  - Synchronically, the special treatment of S<sub>P</sub> in the purposive clause is reminiscent of a split ergative-absolutive alignment, which happens to be the alignment pattern of matrix clauses.
- I argue that all this falls out from the fact that these two morphemes grammaticalized from nominalizers with exactly these distributions (targeting A/S<sub>A</sub> and P).
- Table 1 illustrates the changes in the form of these morphemes in the daughter languages.

Table 1: Diachronic Change in POK Purposives

| POK              | OMG           | KK             |
|------------------|---------------|----------------|
| *- <i>tara</i>   | - <i>tara</i> | - <i>tara</i>  |
| *- <i>mira</i>   | - <i>mira</i> | - <i>mira</i>  |
| *= <i>senuni</i> | - <i>tsen</i> | = <i>smuni</i> |

- Examples (2)-(4) illustrate *-tara* purposives in Omagua.<sup>14</sup>

(2) [tana<sub>i</sub>usu]<sub>MATRIX</sub> [[-]<sub>i</sub> yapikata<sub>ra</sub>]<sub>PURP</sub>.

tana=                    usu yapika    **-tara**  
 1PL.EXCL.MS= go    sit.down -CLM:PURP

‘We went to sit down.’  
 (MCT:C6.S2)

(3) [mi<sub>i</sub> rua ni<sub>i</sub>usuari ikumi]<sub>MATRIX</sub> [[-]<sub>i</sub> uwakira sakitatar<sup>15</sup>]<sub>PURP</sub>.

mi    rua    ni=    usu =usuari ikumi uwakira    sakita    **-tara**  
 2SG NEG 2SG= go    =FUT today sugar.cane cut.down -CLM:PURP

<sup>14</sup>See Vallejos Yopán (2010:617-628) for Kokama-Kokamilla data.

<sup>15</sup>Due to haplology, *-tara* occasionally reduces to *-ra* following *ta*-final stems. When it is *-ta* CAUSATIVE that derives a *ta*-final stem, this process can yield an ambiguous form. However, it is in principle possible to have a sequence of three *tas*, e.g., *sakita-ta-tara* [saki,tata'tara] ‘in order to make [s.o.] cut down’.

‘You are not going to go cut down sugar cane today.’  
(LHC:2011.07.07.1)

- (4) [mukuika papana irusu inatairana<sub>i</sub>]<sub>MATRIX</sub> [[-]<sub>i</sub> yumisarikatara]<sub>PURP</sub>.

mukuika papa =na irusu ina= taıra =na yumisarika -tara  
two father =PL.FS take 3PL.FS= son.MALE.EGO =PL.FS play -CLM:PURP

‘Two parents took their sons to play.’  
(ZJO 2011, E-1, p. 81, AmHT, Sp. given)

- Examples (5)-(6) illustrate *-mira* purposive clauses.

- (5) [upa i<sub>i</sub>sakitapa [-]<sub>j</sub>]<sub>MATRIX</sub> [r<sub>i</sub>irusumira [-]<sub>j</sub> kawakati]<sub>PURP</sub>.

upa i= sakita -pa r= irusu **-mira** kawa =kati  
COMPL 3SG.FS= cut.down -COMPL 3SG.FS= take -CLM:PURP forest =ALL

‘He will cut [the beams of the house] all down to take [them] to the forest.’  
(AHC:2011.07.14.1)

- (6) [wipi awa<sub>i</sub> yumira]<sub>MATRIX</sub> [tasnumira [-]<sub>i</sub>]<sub>PURP</sub>.

wipi awa yumira ta= simu **-mira**  
INDEF.ART man get.angry 1SG.MS= hear -CLM:PURP

‘A man got angry so I would hear [him].’  
(MCT:C6.S1)

- (7) [tasasta taawati<sub>i</sub>]<sub>MATRIX</sub> [atawarikana numira [-]<sub>i</sub>]<sub>PURP</sub>.

ta= sasta ta= awati atawari =kana iu **-mira**  
1SG.MS= remove.seeds.from 1SG.MS= corn chicken =PL.MS eat -CLM:PURP

‘I removed the kernels from my corn so the chickens might eat [them].’  
(MCT:C3.S3)

- Examples (8)-(9) illustrate *=smuni* purposive clauses.

- (8) [ikwani [-]<sub>i</sub> tikita irikari, iparapani]<sub>MATRIX</sub>, [pi<sub>i</sub>ukirismuni]<sub>PURP</sub>!

ikwani tikita irikari iparapani pi= ukiri =**smuni**  
go.IMP tie mosquito.net quickly 2PL= sleep =CLM:PURP

‘Go tie the mosquito net quick so you can sleep!’  
(LCT:2010.08.13)

- (9) [amai wawankira<sub>i</sub> warika iwiraariwa]<sub>MATRIX</sub> [r<sub>i</sub>umaismuni mukuika kururu]<sub>PURP</sub>.

amai wawankira warika iwira =ariwa r= umai =**smuni** mukuika  
DEM.PROX.FS child climb tree =SUPERESS 3SG.FS= see =CLM:PURP two  
kururu  
frog

‘The boy climbed up on top of the tree to see two frogs.’  
(AmHT:2011.08.01)

- When multiple arguments occur across multiple purposive clauses, the alternation between *-tara* and *-mira* assists in tracking the referent of the ellipsed argument, as in (10) & (11).

(10) [ta<sub>i</sub>usu]<sub>MATRIX</sub> [[--]<sub>i</sub> uni<sub>j</sub> iruratarata]<sub>PURP</sub> [ta<sub>i</sub>apupurimira [--]<sub>j</sub>]<sub>PURP</sub>.

ta= usu uni irura **-tara** ta= apupuri **-mira**  
1SG.MS= go water bring -CLM:PURP 1SG.MS= boil -CLM:PURP

‘I went to bring water to boil [it].’  
(LHC:2010.08.06.2)

(11) [ta<sub>i</sub>usu]<sub>MATRIX</sub> [ta<sub>i</sub>yapifikasmuni akia iwirakana<sub>j</sub>]<sub>PURP</sub> [ta<sub>i</sub>atikamira [--]<sub>j</sub>]<sub>PURP</sub>.

ta= usu ta= yapifika =**smuni** akia iwira =kana ta=  
1SG.MS= go 1SG.MS= grab =CLM:PURP DEM.PROX.MS tree =PL.MS 1SG.MS=  
atika **-mira**  
throw.out -CLM:PURP

‘I went to grab the trees and throw them out [i.e., ones burned for a swidden].’  
(MCT:C1.S5)

- Example (12) illustrates *-tara* and *=smuni* on distinct verbs that denote sequential events, where the realization of the event denoted by the verb in the second purposive clause (*=smuni*) is dependent upon the realization of the event denoted by the verb in the first (*-tara*).

(12) [isui ta<sub>i</sub>ususari sawaikati ayampai]<sub>MATRIX</sub> [[--]<sub>i</sub> karupamatarata]<sub>PURP</sub>, [ta<sub>i</sub>yatimasmuni awati]<sub>PURP</sub>...

isui ta= usu =usari sawaikati ayampai karupama **-tara** ta=  
then.FS 1SG.MS= go =FUT to.opposite.bank also.FS clear.land -CLM:PURP 1SG.MS=  
yatima =**smuni** awati  
sow =CLM:PURP corn

‘Then I’ll also go to the opposite bank to clear land in order to sow corn.’  
(LHC:2010.08.10.1)

- The suffix *-tara* may only appear on a sequence of subordinate verbs if the realization of the events denoted by those verbs are not dependent one upon the next, but are simply coordinated, as in (13).

(13) [tsipapa<sub>i</sub> usu ipasukati]<sub>MATRIX</sub> [[--]<sub>i</sub> ipira sikitara]<sub>PURP</sub> ... [[--]<sub>i</sub> iwasu ayuatarata]<sub>PURP</sub>...

tsi= papa usu ipasu =kati ipira sikii **-tara** iwasu ayua **-tara**  
1SG.FS= father go lake =ALL fish hook -CLM:PURP arapaima shoot -CLM:PURP

‘My father used to go to the lake to hook fish and shoot arapaima (fish sp.).’  
(AmHT:2011.06.13)

## 4 TG Morphology

### 4.1 Nominalizers

- Jensen (1998:539-544) reconstructs a series of nominalizers for PTG:
  - \*\**-a* ~  $\emptyset$  EVENT NOMINALIZER (C/G-final ~ V-final)
  - \*\**-ar* ~ *-tsar* ~ **-tar** AGENT NOMINALIZER (C-final ~ V-final ~ G-final)
  - \*\**-aβ* ~ *-tsaβ* ~ *taβ* CIRCUMSTANTIAL NOMINALIZER (C-final ~ V-final ~ G-final)
  - \*\**-pir* PATIENT NOMINALIZER
  - \*\**emi-* PATIENT NOMINALIZER
  - \*\***-βaʔé** CLAUSAL NOMINALIZER
  - \*\**tswar* ~ *-nwar* ADVERBIAL NOMINALIZER (C-final ~ [+nas]-final)<sup>16</sup>
- POK generalized the glide-final allomorph *\*-tar* to vowel-final roots (all POK roots are vowel-final), a change that has occurred with other morphemes where such allomorphy exists.
- The syntactic distribution of the clausal nominalizer varies greatly across TG (Jensen 1998:543).
  - In some languages it targets A, S, P and obliques (in the latter function following an oblique-licensing postposition).
  - In other languages it targets only S.
  - It is clear that POK *\*-mai*, the reflex of \*\**-βaʔé*, targeted S<sub>P</sub>, P and obliques.
- TG \*\**-βaʔé*-derived nouns are inflected for all verbal arguments, as in (14).<sup>17</sup>

(14) TUPINAMBÁ  
oisuʔúβaʔé  
  
o- i- suʔú -βaʔé  
3.ERG- 3.ABS- bite -NOMZ.CL  
  
'the one that bit him'  
(Jensen 1998:542)

- They are negated via the circumfixal negator \*\**n(a)- -i* ~ *n(i)- -i*, otherwise a clause-level negator.

### 4.2 Nominal Tense Marking

- Jensen (1998:544) reconstructs two nominal tense suffixes:
  - \*\**-am* ~ **-ram** NOMINAL PAST (C-final ~ V-final)
  - \*\**-wer* ~ *-pwer*<sup>18</sup> NOMINAL PAST (C-final ~ V-final)

<sup>16</sup>The POK agent nominalizers *\*-wara* and *\*-suri* have cognates across TG, but are not reconstructed by Jensen (1998).

<sup>17</sup>POK nouns derived with *\*-mai* are not inflected for person, but this is because the cross-referencing prefixes productive elsewhere in TG have frozen to verb roots, yielding “new” unanalyzable roots (see O’Hagan (2011:15-48)).

(1) PTG \*\**o-* *tsó* 3.ERG- go > POK *\*usu* ‘go’

<sup>18</sup>The reconstruction of \*\**pw* is dubious, as all languages in the family except Tupinambá and POK show a *kw* reflex.

(15) TUPINAMBÁ  
*iβarama*<sup>19</sup>

iβá -**ram** -a  
 fruit -FUT.NOM -ARG

PORT: ‘a que será fruta, futura fruta’  
 ENG: ‘that which will be fruit, future fruit’  
 (Lemos Barbosa 1956:101)

- Future tense *\*\*-ram* also occurs on nominalized verbs, as in (16) & (17). In languages that have lost coda nasals (many), the reflex of *\*\*-ram* is *-rã*.

(16) TUPINAMBÁ  
*iwasu osasaβa?erama*<sup>20</sup>

i -wasu o- s- asaβ -**βa?é** -**ram** -a  
 water -AUG 3.ERG- 3.ABS- cross -CL.NOMZ -FUT.NOM -ARG

PORT: ‘o que vai atravessar o rio’  
 ENG: ‘he who will cross the river’  
 (Lemos Barbosa 1956:256)

(17) WAYAMPÍ  
*ereminõrã*

e- r- **emi-** nõ -**rã**  
 1SG.ABS- EPC- NOMZ- make -FUT.NOM

ENG: ‘that which I will make’  
 (Jensen 1998:544)

### 4.3 TG “Attributive”

- Jensen (1998:507) reconstructs an “attributive” suffix *\*\*-amo* ~ *-ramo* (C-final ~ V-final).
- This suffix licenses an oblique NP that denotes a referent that:
  - occupies a particular role or function;
  - is the result of a process;
  - or is the result of a change of state (ibid.).
- The examples in (18) & (19) illustrate the “role” and “result” functions, respectively.

(18) KAYABÍ  
*tukumã apea ka?mika kunumiakira ku?afaaw amũ.*

tukumã apea ka?mika kunumiakira ku?afaaw **amũ**  
 palm.nut shell broken baby.boy belt ATTR

<sup>19</sup>In most TG languages, arguments are derived by the suffix *-a*. This suffix has been the subject of much debate among TG scholars (for a summary see Cabral (2001)).

<sup>20</sup>The impermissible consonant cluster *ββ* in (16) is resolved via the deletion of the first consonant.

‘Tucum shells are broken to make baby belts.’  
(Jensen 1998:508)

(19) WAYAMPÍ (JARI)  
*ojinõ soʔo ramõ.*

o-        jinõ        soʔo **ramõ**  
3.ERG- transform deer ATTR

‘He changed into a deer.’  
(ibid.)

## 4.4 TG Postpositions

- Jensen (1998:514) reconstructs a series of oblique-licensing postpositions for PTG (her glosses):
  - *\*\*tsupé* ‘to, for (DAT)’
  - *\*\*tsuwí* ‘from’
  - *\*\*koti* ‘to, toward (LOC)’
  - *\*\*paβê* ‘with (company)’
  - *\*\*pé* ‘to, for’
  - *\*\*potsé* ‘lying with’
  - *\*\*pipé* ‘in’
  - *\*\*etsé* ‘with respect to’
  - *\*\*etseβé* ‘with’
  - *\*\*oβaké* ‘in front of’
  - *\*\*enoné* ‘ahead of’
  - *\*\*upí* ‘by means of, within an area, according to’

## 5 Grammaticalization Trajectories

### 5.1 *\*\*tar-amo* > *\*-tara*

- I propose that *\*\*taramo* reduced to *\*-tara* as in Figure 2 (but see §6).

*\*\*taramo* > *taram* > *\*tara*

Figure 2: Change in Form *\*\*tar-amo* > *\*-tara*

- I propose the changes in the meaning (bridging contexts) of constructions in which *\*-tara* appeared as follows (summarized in Figure 3):
  1. Forms with *\*-tara* originally functioned as oblique NP NP compounds coreferential with matrix S<sub>A</sub> only (recall (20), reproduced with hypothetical gloss from (3) above).<sup>21</sup>

<sup>21</sup>Note that this ordering follows the structure of NP NP compounding in the modern languages.

(20)  $mi_i$  rua  $ni_i$  ususari ikumi [uwakira sakitatarata]<sub>NP<sub>i</sub></sub>.

$mi$  rua  $ni=$  usu =usari ikumi uwakira sakita -tara  
 2SG NEG 2SG= go =FUT today sugar.cane cut.down -CLM:PURP

“You are not going to go as a sugar cane cutter today.”

2. This function was then extended, such that the oblique was merely a (non-compound) deverbal nominal coreferential with  $S_A$  (recall (21), reproduced with hypothetical gloss from (2) above).

(21) tanausu [yapikatarata]<sub>NP</sub>.

tana= usu yapika -tara  
 1PL.EXCL.MS= go sit.down -CLM:PURP

“We went as sitters.”

3. This function was then extended, such that the oblique nominal was coreferential with the immediately preceding argument (recall (22), reproduced with hypothetical gloss from (4) above).

(22) mukuika papana irusu inatairana<sub>i</sub> [yumisarikatarata]<sub>NP<sub>i</sub></sub>.

mukuika papa =na irusu ina= taira =na yumisarika -tara  
 two father =PL.FS take 3PL.FS= son.MALE.EGO =PL.FS play -CLM:PURP

“Two parents took their sons as players (of games).”

4. The oblique NP was then reinterpreted as the reason (purpose) for the realization of the event denoted by the verb of the matrix clause.

‘as a Y X-er’ > ‘as an X-er’ > ‘in order to (PURP)’

Figure 3: Grammaticalization Trajectory *\*\*-tar-amo* > *\*-tara*

- Several distributional facts fall out from this schema:
  - An ellipsed A/ $S_A$  is accounted for by the fact that these are agentive nominalizations.
  - The non-co-occurrence of *\*-tara* and stative predicates is similarly predicted.
  - OV word order (see (20)), otherwise anomalous in the language, is a result of the erstwhile pattern of NP NP<sub>HEAD</sub> compounding.
  - The ordering of “extensions” above is meant to capture tendencies of coreference between arguments of the matrix and purposive clause, as noted by Vallejos Yopán (2012) for Kokama-Kokamilla:
    - i.  $S_{MATRIX}:A_{PURP} = 49\%$
    - ii.  $S_{MATRIX}:S_{PURP} = 29\%$  (extension 1)
    - iii.  $O_{MATRIX}:A_{PURP} = 4\%$  (extension 2)
    - iv.  $O_{MATRIX}:S_{PURP} = 3\%$  (extension 2)

## 5.2 **\*\***-*βaʔé-ram* > **\***-*mira*

- I propose that **\*\****βaʔéram* reduced to **\***-*mira* as follows (summarized in Figure 4 below):
  - $\beta > m$ 
    - i. This is an unexpected change, as otherwise  $\# \beta > w$  in POK.
    - ii. Rather more likely, as Jensen (1998:543) speculates, is that an allomorph **\*\***-*maʔé* existed following [+nas] segments.
    - iii. No TG language preserves this allomorphy.
  - Final stress was lost, yielding right-aligned trochees (a categorical change in POK).<sup>22</sup>
    - i. [maʔéram] > [máʔeram]
  - $e\#$  (now unstressed) >  $i$ 
    - i. Two correspondences exist (**\*\*** $e\# : *e\#$  and **\*\*** $e\# : *i\#$ ).<sup>23</sup>
  - $\text{ʔ} > \emptyset$  (a categorical change in POK)
  - $ai > i$ 
    - i. In Kokama-Kokamilla, monophthongization occurred in non-initial position (e.g., **\****umai* > *umi* ‘see’ (O’Hagan and Wauters 2012)).
    - ii. A small number of forms in Omagua also show this pattern (e.g., **\****marai* > *mari* ‘what’) likely under influence from Kokama-Kokamilla.<sup>24</sup>
    - iii. For now I reconstruct **\***-*mira* and not *maira* for POK.
  - $m\# > \emptyset$ 
    - i. POK did not categorically lose coda nasals, with most roots instead exhibiting frozen final vowels that prevented such deletion.
    - ii. Many other TG languages have lost coda nasals.

**\*\****βaʔéram* > ***maʔéram*** > ***máʔeram*** > ***maʔiram*** > ***mairam*** > ***miram*** > **\****mira*

Figure 4: Change in Form **\*\***-*βaʔé-ram* > **\***-*mira*

- I propose the changes in the meaning (bridging contexts) of constructions in which **\***-*mira* appeared as follows (summarized in Figure 5).

1. Forms with **\***-*mira* originally functioned as juxtaposed (compound) nouns coreferential with P of the preceding clause (recall (23), reproduced with hypothetical gloss from (7) above).

(23) tasasta taawati<sub>i</sub> [atawarikana rumira]<sub>NP<sub>i</sub></sub>.

<sup>22</sup>See (Sandy and O’Hagan 2012).

<sup>23</sup>More work is needed to determine the conditioning environments.

<sup>24</sup>In the later missionization period, Kokama and Omagua lived on some of the same mission settlements. This is reported for San Joaquín de Omaguas (Amazon river), a Jesuit site, from the mid-18th century onwards (Uriarte 1774); Sarayacu (Ucayali river), a Franciscan site, from the early 19th century onwards (Myers 1990); and Lagunas (Huallaga river), the head of the Jesuit missions until 1768 (Yuyarima Tapuchima, p.c.). Trade patterns are known to have existed between the residents of San Joaquín de Omaguas and ethnic groups from the upper Ucayali as late as 1828 (Maw 1829:185), though whether the latter were Sarayacu residents is unknown. Nevertheless, these facts make the possibility for some contact-induced changes quite likely.

ta= sasta ta= awati atawari =kana iu -mira  
 1SG.MS= remove.seeds.from 1SG.MS= corn chicken =PL.MS eat -CLM:PURP

“I removed the kernels from my corn, [it’s] what the chickens will eat.”

2. This construction was then extended to syntactic environments in which the juxtaposed noun is coreferential with  $S_A$  of the matrix clause (recall (24), reproduced with hypothetical gloss from (6) above).

(24) wipi awa<sub>i</sub> yumira [tasimumira]<sub>NP<sub>i</sub></sub>.  
 wipi awa yumira ta= simu -mira  
 INDEF.ART man get.angry 1SG.MS= hear -CLM:PURP

“A man got angry, [it’s] what I will hear.”

3. The juxtaposed noun was then reinterpreted as the reason (purpose) for the realization of the event denoted by the verb of the matrix clause.

$P_i$  ... ‘what I will  $X_i$ ’ >  $S_{A_i}$  ... ‘what<sub>i</sub> I will X’ >  $S_{A_i}/P$  ... ‘in order to X [it<sub>i</sub>]’

Figure 5: Grammaticalization Trajectory **\*\**-βaʔé-ram*** > **\**-mira***

- Several distributional facts fall out from this schema:
  - An ellipsed P is accounted for by the fact that these are patientive nominalizations.
  - The non-co-occurrence of **\**-mira*** and stative predicates is similarly predicted.

### 5.3 **\*\**ts-enoné*** > **\*=*senuni***

- I propose that **\*\**tsenoné*** went to **\*=*senuni*** as follows (summarized in Figure 6 below):
  - Final stress was lost, yielding right-aligned trochees.
  - *e#* > *i* (see above)
  - *ts* > *s* (a categorical change in POK)
  - *o* > *u* (a categorical change in POK)

**\*\**tsenoné*** > *tsenone* > *tsenoni* > ***senoni*** > **\**senuni***

Figure 6: Change in Form **\*\**ts-enoné*** > **\*=*senuni***

- I propose the changes in the meaning (bridging contexts) of constructions in which **\*=*senuni*** appeared as follows (summarized in Figure 7).
  1. POK **\*=*senuni*** was originally morphologically complex, from **\*\**ts-enoné*** ‘ahead of him/her/it’.
    - i. It originally had spatial semantics, e.g., ‘I came ahead of him/her/it’ (e.g., in a line).
    - ii. Note that it marks the spatially posterior entity.

2. In this function it developed temporal semantics, e.g., ‘I came before him/her/it’, which falls out naturally from the fact that arriving at a destination ahead of someone (in space) entails arriving before them in time.
3. The salience of *\*\*ts-* as marking person was then lost.
  - i. This is in line with the freezing of these person prefixes throughout POK.
  - ii. At this point *\*=senuni* essentially functioned as a free adverb (e.g., ‘I came before.’).<sup>25</sup>
4. *\*=senuni* was free to combine with other complements, as in the hypothetical sentence in (25).

(25) *\*tausu taiyiwitasenuni.*

ta=        usu ta=        iyīwi        -ta        =senuni  
1SG.MS= go 1SG.MS= be.cooked -CAUS =CLM:before

‘I went before I cooked.’

5. The temporally posterior event was then reinterpreted as the reason (purpose) for the realization of the event denoted by the verb of the preceding clause.

‘ahead of (SPAT)’ > ‘before (TEMP)’ > ‘in order to (PURP)’

Figure 7: Grammaticalization Trajectory *\*\*ts-enoné* > *\*=senuni*

- Several distributional facts fall out from this schema:

- That all arguments in a *\*=senuni*-purposive clause must be realized falls out from the fact that purposive *\*=senuni* grammaticalized from a temporal clause-linker, where all arguments in temporally linked clauses elsewhere in POK are realized.
- That *\*=senuni* marks the temporally posterior clause is accounted for by the fact that it formerly marked a spatially posterior entity.
- Positing a stage of temporal clause-linking is in line with the grammaticalization of other temporal clause-linkers.

\* In Omagua, POK *\*=sakapiri* ‘behind (SPAT)’ grammaticalized to ‘after’ (cf., Tupinambá *s-akipueri* ‘behind him/her/it’).<sup>26</sup>

\* One can essentially tell the same grammaticalization story for this form.

#### 5.4 *\*\*-ramo* VERSUS *\*\*-ram*

- Note that PTG *\*\*-ramo* ATTR and *\*\*-ram* NOM.FUT look strikingly similar.
- It is likely that *\*\*-ramo* ATTR was bimorphemic in PTG and that Jensen (1998) fails to capture this.
  - I suggest tentatively that *\*\*-ramo* < *\*\*-ram* + *\*\*-(a)βo* NON-ASSERTIVE,<sup>27</sup> where *\*\*-ram* was a polyfunctional morpheme encoding tense and attributive functions.<sup>28</sup>

<sup>25</sup>Even in modern Omagua, certain postpositions may additionally function as free adverbs, e.g., *(=)iantira* ‘in front (of)’.

<sup>26</sup>Kokama-Kokamilla *=sakapiri* has only the spatial meaning, exhibiting a different strategy to encode temporal anteriority, indicating that, while the grammaticalization trajectory for *\*=senuni* can be reconstructed to POK, the one for *\*=sakapiri* only occurred in Omagua.

<sup>27</sup>Jensen (1998:529-530) calls this a serial verb suffix.

<sup>28</sup>It seems the first scholar to propose that this morpheme is/was bimorphemic was Alfred Höller for Guarayú (Bolivia):

– In most TG languages, then, the collocation  $**\text{-ram} + **\text{-(a)}\beta\text{o}$  “froze” as an attributive marker, leaving  $**\text{-ram}$  to encode only tense (note  $\beta \rightarrow \text{m} / [+nas]_{---}$ ).

• Three general points of evidence suggest this, presented in summary form below:

1. Tupinambá, the first documented TG language, exhibits both  $\text{-ram}$  NOM.FUT and  $\text{-(a)}\beta\text{o}$  NON-ASSERTIVE (Lemos Barbosa 1956:100-104, 158-161, latter gloss mine).<sup>29</sup>
  - i. A suffix  $\text{-(r)amo}$  with attributive functions is mentioned separately (Lemos Barbosa 1956:230).
  - ii. Most TG languages have no reflex of  $**\text{-(a)}\beta\text{o}$ , only exhibiting a reflex of  $\text{-ramo}$ , suggesting that in these languages  $**\text{-(a)}\beta\text{o}$  became unproductive following its fusion with  $**\text{-ram}$ .
2. Kamaiurá, a TG language of central Brazil, exhibits only one morpheme  $\text{-(r)am}$ , which covers both attributive (role and change of state functions) and nominal tense functions, as in (26)-(28), respectively.

(26) jamurikuma jo?opirám orojomonome ko?it.

jamurikuma jo?opir **-am** oro- jomono -me ko?it  
 pers.name guest -ATTR 1PL.EXCL.ERG travel -GER ?

PORT: ‘Nós viajamos como convidados da festa Jamurikuma.’  
 ENG: ‘We traveled as guests to the Jamurikuma festival.’  
 (Seki 2000:110)

(27) kawa?iwam ete ijerowaki a?e wa ta?ij

kawa?iw **-am** ete i- je- r- owak -i a?e wa ta?ij  
 indio.bravo -ATTR VERID 3.ABS- REFL- EPC- transform -OB.TOP ? MS pers.name

PORT: ‘Eles se transformaram em índios bravos, Mana.’  
 ENG: ‘They transformed into *índios bravos*, Mana.’  
 (Seki 2000:111)

(28) upi?a ?añ karakarakoram.

upi?a ?añ karakarako **-ram**  
 egg PROX hen -NOM.FUT

PORT: ‘Este ovo será uma galinha.’  
 ENG: ‘This egg will be a hen.’  
 (Seki 2000:112)

3. The Kamaiurá distributions are identical to those in POK, where one form similarly encoded attributive and nominal tense functions, shown in (29)-(30) from Omagua, respectively.

(29) wainú uwaka pukara.

wainú uwaka puka **-ra**  
 woman transform turtle.sp. -ATTR

---

Der Optativ, die unserem: o moöchte ich doch! o, hätte ich doch! entspricht. Er wird gebildet, indem man an das einfache Futurum azepiara die Partikel mo oder moma oder moviña oder ramoviña oder rarau oder rarauviña anhängt (Höller 1932:26).

<sup>29</sup>Lemos Barbosa’s work is based primarily on Anchieta (1595) and Figueira (1687).

‘The woman transformed into a *charapa*.’  
(ZJO 2011, E-1, p. 164, LHC, Sp. given)

(30) wipi uyawiri taupata fukai mura, entonces taipuraka raiantiramai.

wipi uyawiri ta= upata fukai mura entonces ta= ipuraka ra= ianti  
once 1SG.MS= finish dig 3SG.MS then 1SG.MS= make 3SG.MS= prow  
**-ra** -mai  
-NOM.FUT -CL.NOMZ

‘Once I finish digging it [a canoe] out, I make the prow.’  
(MCT:C2.S3)

- In this story, POK and Kamaiurá reflect an older stage of polyfunctionality of *\*\*-ram*, whereas in most TG daughter languages the attributive functions have come to be encoded by the erstwhile bimorphemic *-ramo*.

## 6 Parallel Strategies in TG Languages

### 6.1 *\*-tara*-like Strategies

- Kamaiurá employs a combination of *-tar* AGT.NOMZ and *-(r)am* ATTR to encode purpose.
  - In these constructions, the attributive licenses an oblique argument (a complex NP) coreferential with the object, as in (31).

(31) [Sapaĩã]<sub>i</sub> aenõj [moĩã jukataram]<sub>i</sub>.

Sapaĩ -a a- enõj moĩ -a juka **-tar** **-am**  
pers.name -ARG 1SG.ERG- call.to snake -ARG kill -AGT.NOMZ -ATTR

PORT: ‘Eu chamei Sapaĩ para ele matar a cobra’ (lit., ‘na qualidade de matador da cobra’).  
ENG: ‘I called to Sapaĩ so he would kill the snake’ (lit., ‘acting as a snake killer’).  
(Seki 2000:187)

- This sequence looks conspicuously like POK *\*-tara*.
- In Kamaiurá, this purpose-encoding strategy is part of a productive construction that may employ other deverbal nominalizers, as in (32).<sup>30</sup>

(32) Kawa aenõj ijotawam.

Kawa a- enõj i- jo **-taw** **-am**  
pers.name 1SG.ERG call.to 3.ABS- go -EVNT.NOMZ -ATTR

PORT: ‘Eu chamei Kawa para ela ir.’  
ENG: ‘I called Kawa to go.’  
(Seki 2000:187)

<sup>30</sup>Seki (2000:187, translation mine) states the following about this construction:

Unlike the locative adverbial sentences discussed above, in purposive sentences distinct nominalizing affixes are used, which are selected based on the valence of the verb and the function of the noun in the dependent sentence.

## 6.2 \*-*mira*-like Strategies

- Some TG languages exhibit a verbal future *βaʔerã*, as in (33) from Kaiowá (glosses modified).

(33) ñande ko ñawahẽmba aβe βaʔerã jahaβi iʃupe.

|                     |               |           |                   |                  |
|---------------------|---------------|-----------|-------------------|------------------|
| ñande               | ko ña=        | wahẽm =ba | aβe βaʔerã ja-    | ha               |
| 1PL.EXCL.ERG.PRON ? | 1PL.EXCL.ERG= | arrive    | =“todos” also FUT | 1PL.EXCL.ERG- go |
| -βi                 | i=            | =ʃupe     |                   |                  |
| -“enquanto”         | 3.ABS=        | =GOAL     |                   |                  |

PORT: ‘Nós todos chegaremos até ele.’

ENG: ‘We will all arrive where he is.’

(Taylor 1984:23)

- This appears to be an innovation in the Guaranian languages only, and it is unclear if its verbal distribution here is related to the otherwise nominal distribution I discuss above.

## 6.3 \*=*senuni*-like Strategies

- Temporal clause-linking functions for reflexes of \*\**enoné* have been reported in Kayabí (Dobson 1988) and Kamaiurá (Seki 2000), although no purposive function has been reported.

## 7 Conclusions

- Distributions of two POK purposive suffixes \*-*tara* and \*-*mira*, which may synchronically be described in terms of restrictions on coreference between arguments between the matrix and purposive clause, have been shown to fall out from their grammaticalization from nominalizers targeting certain syntactic positions.
  - The grammaticalization account given for \*-*tara* shows close parallels in Kamaiurá, a language which many TG scholars have considered to have branched off very early in the history of TG.
  - Frequencies of coreference between certain matrix and purposive clause arguments (Vallejos Yopán 2012) have been shown to fall out from a nominalizer account in which certain types of coreference may have been pragmatically more awkward than others.
- The grammaticalization account of \*=*senuni* via a spatial postposition (and temporal clause-linking) predicts the clause in which \*=*senuni* appears, as well as the obligatory realization of all arguments.
  - A temporal clause-linking function is reported elsewhere in the family, notably in Kamaiurá.
- The broader language-internal distribution of Kamaiurá -*ram* and POK \*-*ra* (§5.4) suggests that these languages represent an earlier state of affairs in TG, with subsequent implications for subgrouping in the family.

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