Is Máíhɨ̃ki the only Tukanoan language without grammaticalized evidentiality?

Amalia Skilton*

*University of California, Berkeley

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1 Introduction


a. Evidentials come from (i) speech and perception verbs, (ii) deictics, (iii) miratives, and (iv) 'evidential strategies' (Aikhenvald 2004:276) -- intensionally non-evidential morphs with evidential extensions in discourse

b. Epistemic modality comes from deontic modality

(2) In the Western branch of Tukanoan, evidentiality and epistemic modality come from a different source: non-evidential politeness strategies involving polar questions

a. Very common that polar questions can be read as declaratives with epistemic modal or evidential implicatures: Isn't Sue a linguist? (see e.g. Bolinger 1957, Romero and Han 2004, Heritage 2002, Koshik 2005)

b. As a result, in Western Tukanoan, semantic (and morphological) change has transformed polar questions into epistemic modals and evidentials

• Negative polar question > weak epistemic modal, inferential evidential
• Positive polar question > reportative evidential

(3) Contributions

a. Grammaticalization theory: (i) novel source for epistemic modals and evidentials, (ii) grammaticalization driven by non-referential properties of source construction

b. Tukanoan: evidentiality cannot be reconstructed to Proto-Western Tukanoan or (therefore) Proto-Tukanoan

*I thank all of the Western Tukanoan speakers who have shared their languages with me and the other authors cited here, especially my own Máíhɨ̃ki consultants: Soraida and Féderico López Algoba; Otilia López Gordillo; Adriano Ríos Sanchez; and Romero and Severino Ríos Ochoa. I also thank audiences at the 2015 Linguistic Society of America meeting and at UC Berkeley, as well as Claire Bowern, Andrew Garrett, Alice Harris, Lev Michael, and Zachary O'Hagan, for feedback on this and related work. This research was supported by a 2013-2014 Parker Huang Undergraduate Travel Fellowship from Yale University, an NSF Graduate Research Fellowship, and NSF BCS-1065621.
(4) Plan for today
§2: Background on Western Tukanoan (WT)
§3: Review of all evidential and interrogative devices described in WT literature
§4: Reconstructing grammaticalization of Siona and Secoya conjectural and reportative
§5: Conclusions

(5) Preliminaries
I distinguish two components of meaning:
  a. ‘Entailment’ (consecuencia lógica): invariant semantic primitive of linguistic units
  b. ‘Implicature’ (implicatura): cover term for inferred, context-dependent meanings

2 Background on Western Tukanoan

(6) Internal classification of WT, updated from Skilton (2013) (cf. Chacon 2014; differences relate to position of Koreguaje)

Only the Upper Napo subgroup is critical to this analysis.
All WT languages:
  • Have two verb classes, regular class and i-class, which exhibit different inflectional paradigms
  • Mark all finite verbs with portmanteau affixes that expone subject agreement, tense, and sentential mood (declarative vs. interrogative)

3 Interrogativity and evidentiality in Western Tukanoan

In WT languages which have evidentiality or something like it, the interrogative affixes and the affixes that express indirect evidentiality have a transparent morphological relationship: 7a, 7b
Amalia Skilton  

Is Máí hɨ́ m the only Tukanoan language without grammaticalized evidentiality?

(7) Colombian Siona¹ (Wheeler 1987:155)
   a. gahegi
      gahe -gi
      descend -3SG.M.PST.INT/REP
      'Did he go downriver?'
   b. gahegɨna
      gahe -gi -na
      descend -3SG.M.PST.INT/REP -REP
      'He went downriver, it's said.'
   c. gahebi
      gahe -bi
      descend -3SG.M.PST.DECL -REP
      'He went downriver.'

Which meaning of -gi PST.INT/REP came first: interrogative, or reportative?

3.1 Koreguaje (Cook and Criswell 1993)

(8) Koreguaje interrogative (Cook and Criswell 1993:56-57)


<table>
<thead>
<tr>
<th></th>
<th>Imperfective</th>
<th>Perfective</th>
</tr>
</thead>
<tbody>
<tr>
<td>REG</td>
<td>i-cls</td>
<td>REG</td>
</tr>
<tr>
<td>M.SG</td>
<td>-kʰi</td>
<td>-i</td>
</tr>
<tr>
<td>F.SG</td>
<td>-kʰo</td>
<td>-o</td>
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<tr>
<td>PL</td>
<td>-dʒe</td>
<td>-re</td>
</tr>
</tbody>
</table>

Cook and Criswell (1993:87): two evidentials, reportative and inferential. These have been innovated recently from lexical verbs. Reportative involves an auxiliary construction with ãsó 'make s.o. hear sth,' inferential an auxiliary construction with koso (< kʷàsó 'think').

(9) Koreguaje reportative (Cook and Criswell 1993:88)
   a. Imperfective aspect for reported event
      raa kʰi asomî
      raa -kʰi aso -mi
      bring -SUB.M.SG REP -M.SG
      'He's bringing (it), it's said.'
   b. Perfective aspect for reported event
      raa asome
      raa -∅ aso -me
      bring -SEQ REP -PL
      'They brought (it), it's said.'

¹The following abbreviations are used: 1 = first person, 2 = second person, 3 = third person, ANA = anaphoric, CLF = classifier, DECL = declarative, DEM = demonstrative, DIST = distal, F = feminine, FUT = future, I-CLS = verb class: i-class, INT = interrogative, INT/REP = interrogative/reportative (where identical), M = masculine, NEG = negative, NF = non-feminine, NSBJ = non-subject, PL = plural, PRES = present, PST = past, REG = verb class: regular, REP = reportative, SEQ = temporal sequence subordinate clause, SG = singular, SUB = temporal overlap subordinate clause.
3.2 Máihiki

The interrogative paradigm of Máihiki is shown in 10. Interrogative affixes impose strict HL culminating on the prosodic word (Farmer and Michael submitted). ‘~’ means ‘are dialect variants.’

| (10) Máihiki interrogative (Farmer 2015, my fieldnotes) |
|--------|--------|--------|--------|--------|--------|
|        | PRS.REG | PRS.I-CLS | PST.REG | PST.I-CLS | FUT.REG | FUT.I-CLS |
| 1SG    | -dʒi  ~ -dʒe | sáí-dʒi  ~ -re | sá-tè | -dʒi | sáà-dʒì |
| 2/3SG.NF | -kì | sáí-kì | -aì  ~ -gì | sá-kì | -dʒì | sáà-tʃì |
| 2/3SG.F | -ko | sáí-kò | -aò  ~ -gò | sá-kò | -dʒò | sáà-tʃò |
| PL     | -dʒì  ~ -dʒe | sáí-dʒì  ~ -re | sá-tè | -dʒò | sáà-dʒò |

Máihiki does not have evidentiality, but it does have a use of polar questions which can generate epistemic modal and evidential implicatures.

- Negative polar questions can be read as positive polarity declaratives, 11a
- Positive polar questions can be read as negative polarity declaratives, 11b

I refer to questions that undergo this reversal of syntactic polarity and illocutionary force as 'assertive questions' (AQs) (Skilton 2015, under review).

| (11) Máihiki assertive questions: polarity and force reversal |
|--------|--------|--------|--------|--------|--------|
| a. Negative polar question read as positive assertion (BAG 1010) |
| dʒì dòìkò känù tʃìà nǐtù bàì mààò. |
| 1SG G0.same.clan.kin -CLF:F DIST.DEM:time still child be -NEG -3SG.F.PST.INT |
| SPEAKER’S GLOSS: 'At that time my sister was still a little girl.' |
| SYNTACTICALLY IDENTICAL TO: 'Wasn’t my sister still a little girl at that time?' |

b. Positive polar question read as negative assertion (CES 5)

| dʒì dòìkì ítí dʒòòkì. |
| 1SG G0.same.clan.kin -CLF:M ANA.DEM -NSBJ do -3SG.NF.PRS.INT |
| SPEAKER’S GLOSS: 'My (classificatory) brother doesn’t behave correctly.' |
| SYNTACTICALLY IDENTICAL TO: 'Does my brother behave correctly?'

(12) Assertive questions are:

a. Completely formally identical to information-seeking questions - in phonology, prosody, and morphosyntax

b. Completely pragmatically identical to opposite-polarity declaratives - on metapragmatic judgement, translation, monolingual paraphrase, and embedding

(13) Discourse functions of assertive questions:

a. Counter-suppositional - contradicts inferred belief of previous speaker

b. Moral evaluations and scolding

c. Reports of morally controversial behavior
d. Epistemic modal statements, of necessity or possibility; language has no other conventional means of conveying epistemic modality

12, 13 show that:

- Assertive questions have same encoded meaning as information-seeking questions
- The assertive question design is a politeness device with no epistemic modal or evidential entailments or conventional implicatures
- Assertive question design conveys that speaker thinks hearer may contest the proposition; this can be for affective reasons, as in scolding, or because proposition is epistemically weak

We will see in §§3.3-3.4 that in the Upper Napo languages:

- Epistemic meanings of assertive question-like constructions are less/not context-dependent
- Thus: particularized implicatures (a.k.a. ‘one-off invited inferences’) have been promoted to conventional implicatures or entailments (Traugott 1989, Heine 1997, Evans and Wilkins 2000)

### 3.3 Colombian Siona (Wheeler 1987)

(14) Colombian Siona interrogative (from Wheeler 1987:160, in IPA)

<table>
<thead>
<tr>
<th></th>
<th>PRS.REG</th>
<th>PRS.I-CLS</th>
<th>PST.REG</th>
<th>PST.I-CLS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1SG</td>
<td>-dʒe</td>
<td>sai-dʒe</td>
<td>-ɾe</td>
<td>sa-té</td>
</tr>
<tr>
<td>2/3SG.M</td>
<td>-gî</td>
<td>sai-gî</td>
<td>-gî</td>
<td>sa-kî</td>
</tr>
<tr>
<td>2/3SG.F</td>
<td>-go</td>
<td>sai-go</td>
<td>-go</td>
<td>sa-kó</td>
</tr>
<tr>
<td>PL</td>
<td>-dʒe</td>
<td>sai-dʒe</td>
<td>-ɾe</td>
<td>sa-té</td>
</tr>
</tbody>
</table>

Interrogative again imposes HL culminativity on the entire prosodic word (Wheeler 1987:161).

Polar questions allow occurrence of two copies of the negative suffix -maʔi ~ -ma, as in 15. No other WT language permits this.

(15) Negation in Colombian Siona polar questions (Wheeler 1987:160)²

a. sêhône
   sêho -dʒe
   discard -PL.PRS.INT/REP
   'Are they going to discard it?'

b. sêhomamaʔi/ne
   sêho -maʔi -dʒe
   discard -NEG -PL.PRS.INT/REP
   'Aren't they going to discard it?' (Implicates that they should.)

c. sêhomamaʔi/ne
   sêho -ma -maʔi -dʒe
   discard -NEG -NEG -PL.PRS.INT/REP
   'Aren't they going to discard it?' (Implicates that they should not.)

²Notes are Wheeler’s; so is the absence of stress and tone marks.
(16) Colombian Siona epistemic/evidential categories, relabeled with modern terms (Wheeler 1987:152-159)³

a. Direct evidential: conveys speaker's 'responsibility, participation, or involvement' in the predicate
b. Distancing evidential: only in immediate past; conveys that speaker 'vouches for events but does not take into account the time of their occurrence'; examples suggest affective (non-evidential) and inferential (evidential) meanings
c. Reportative: conveys that mode of access is report and/or that speaker 'has nothing to do with the events...no responsibility, awareness, or direct contact with them'
d. Weak epistemic modal: only in present

(17) Colombian Siona evidential and epistemic modal paradigms (Wheeler 1987:152-159)

<table>
<thead>
<tr>
<th></th>
<th>Assertive Questions</th>
<th>Distancing (always PST.I-CLS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1SG</td>
<td>-maʔi-ɲe</td>
<td>--</td>
</tr>
<tr>
<td>2/3SG.M</td>
<td>-maʔi-gi</td>
<td>-ma-ki</td>
</tr>
<tr>
<td>2/3SG.F</td>
<td>-maʔi-g{o</td>
<td>-ma-ko</td>
</tr>
<tr>
<td>PL</td>
<td>-maʔi-ɲe</td>
<td>-ma-te</td>
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</table>

<table>
<thead>
<tr>
<th></th>
<th>Reportative</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PRS.REG</td>
<td>PRS.I-CLS</td>
</tr>
<tr>
<td>1SG</td>
<td>-dʒe-na</td>
<td>sai-dʒe-na</td>
</tr>
<tr>
<td>2/3SG.M</td>
<td>-gi-na</td>
<td>sai-gi-na</td>
</tr>
<tr>
<td>2/3SG.F</td>
<td>-go-na</td>
<td>sai-go-na</td>
</tr>
<tr>
<td>PL</td>
<td>-dʒe-na</td>
<td>sai-dʒe-na</td>
</tr>
</tbody>
</table>

Note that in these paradigms:

a. Reportative is composed of interrogative agreement followed by -na REP
b. 'Distancing evidential' and 'weak epistemic modal' are composed of -ma ~ -maʔi NEG followed by interrogative agreement. They are syntactically negative polar questions, morpheme-by-morpheme identical to Máihiki assertive questions, except that two copies of NEG are used to convey negated proposition (vs. zero in Máihiki)

3.4 Ecuadorian Siona (Bruil 2014, 2015)

(18) Ecuadorian Siona interrogative paradigms (from Bruil 2014:186-190, in IPA)

<table>
<thead>
<tr>
<th></th>
<th>PRS.REG</th>
<th>PRS.I-CLS</th>
<th>PST.REG</th>
<th>PST.I-CLS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1SG</td>
<td>-dʒe</td>
<td>sai-dʒe</td>
<td>-de</td>
<td>saʰ-te</td>
</tr>
<tr>
<td>2/3SG.M</td>
<td>-ki</td>
<td>sai-ki</td>
<td>-i</td>
<td>saʰ-ko</td>
</tr>
<tr>
<td>2/3SG.F</td>
<td>-ko</td>
<td>sai-ko</td>
<td>-o</td>
<td>saʰ-ko</td>
</tr>
<tr>
<td>PL</td>
<td>-dʒe</td>
<td>sai-dʒe</td>
<td>-de</td>
<td>saʰ-te</td>
</tr>
</tbody>
</table>

³Mapping from my terms to Wheeler's: 'direct evidential' = Wheeler's 'perspectiva de identificación completa,' 'distancing evidential' = Wheeler's 'perspectiva de identificación parcial,' 'reportative' = Wheeler's 'perspectiva de separación completa,' 'weak epistemic modal' = Wheeler's 'subjuntivo.'
Ecuadorian Siona 'evidential' paradigms (Bruil 2014:192; conjectural is always i-class).

<table>
<thead>
<tr>
<th></th>
<th>Conjectural:</th>
<th>Conjectural:</th>
<th>Reportative:</th>
<th>Reportative:</th>
<th>Reportative:</th>
<th>Reportative:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PRS</td>
<td>PST</td>
<td>PRS.REG</td>
<td>PRS.I-CLS</td>
<td>PST.REG</td>
<td>PST.I-CLS</td>
</tr>
<tr>
<td>1SG</td>
<td>-a b̰aʔi-dʒe</td>
<td>-a b̰aʰ-te</td>
<td>-dʒe-na</td>
<td>saí-dʒe-na</td>
<td>-de-na</td>
<td>saʰ-te-na</td>
</tr>
<tr>
<td>2/3SG.M</td>
<td>-a b̰aʔi-i</td>
<td>-a b̰aʰ-ki</td>
<td>-ki-na</td>
<td>sai-ki-na</td>
<td>-i-na</td>
<td>saʰ-ki-na</td>
</tr>
<tr>
<td>2/3SG.F</td>
<td>-a b̰aʔi-o</td>
<td>-a b̰aʰ-k̄o</td>
<td>-ko-na</td>
<td>sai-ko-na</td>
<td>-o-na</td>
<td>saʰ-k̄o-na</td>
</tr>
<tr>
<td>PL</td>
<td>-a b̰aʔi-dʒe</td>
<td>-a b̰aʰ-te</td>
<td>-dʒe-na</td>
<td>saí-dʒe-na</td>
<td>-de-na</td>
<td>saʰ-te-na</td>
</tr>
</tbody>
</table>

E Siona conjectural again ambiguous between negative polar question and conjectural declarative:

(20)  tii a b̰a k̄i (Bruil 2014:264)

  tii -a b̰a -k̄i
  break.off.VI -NEG COP -3SG.M.PST.INT/REP
  a. 'It broke off (I conjecture).'
  b. 'Didn't it break off?'

But Ecuadorian Siona conjectural is not precisely the same as Colombian Siona 'subjunctive':

- Negation expressed by negative subordinator -a rather than inherited -maʔ NEG
- Conjectural reading is not available to polar questions with negative copula, i.e. is detachable; cf. non-detachable in Colombian Siona and Máíhɨ̃ki

4 Reconstruction

4.1 Assertive questions: morphology

Form of information-seeking questions and assertive questions is very stable across WT.

(21)  PWT interrogative paradigm for 1SG and PL agreement

<table>
<thead>
<tr>
<th></th>
<th>PRS.REG</th>
<th>PRS.I-CLS</th>
<th>PST.REG</th>
<th>PST.I-CLS</th>
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<tr>
<td>PWT</td>
<td>-dʒe</td>
<td>*saí-dʒe</td>
<td>*-de</td>
<td><em>sa</em>-te</td>
</tr>
<tr>
<td>Koreguaje</td>
<td>-dʒe</td>
<td>sai-dʒe</td>
<td>-re</td>
<td>sa-te</td>
</tr>
<tr>
<td>Máíhɨ̃ki</td>
<td>-dʒe ~ -dʒi</td>
<td>sai-dʒe ~ sáí-dʒi</td>
<td>-re</td>
<td>sá-tè</td>
</tr>
<tr>
<td>Colombian Siona</td>
<td>-dʒe</td>
<td>sai-dʒe</td>
<td>-re</td>
<td>sa-té</td>
</tr>
<tr>
<td>Ecuadorian Siona</td>
<td>-dʒe</td>
<td>sai-dʒe</td>
<td>-de</td>
<td>saʰ-te</td>
</tr>
</tbody>
</table>

(22)  PWT negative: *-maʔi ~ *-ma (immediately preceding past tense inflectional suffixes)

  a. Displayed allomorphy of an i-class verb, as still in Koreguaje and Colombian Siona
  b. Same negation in declaratives and in both types of interrogatives

(23)  Form of assertive question conveying negative proposition

<table>
<thead>
<tr>
<th></th>
<th>AQ conveying positive proposition</th>
<th>AQ conveying negative proposition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colombian Siona</td>
<td>V-maʔi-dʒe</td>
<td>V-ma-maʔi-dʒe</td>
</tr>
<tr>
<td>Máíhɨ̃ki</td>
<td>V-ma-dʒi</td>
<td>V-dʒi</td>
</tr>
</tbody>
</table>

Double negation in Colombian Siona must be due to semantic shift followed by analogy with the declarative.
Figure 1: General and assertive questions: form and meaning

PWT
*-dʒe PL/1SG.PRS.INT, *-re PL/1SG.PST.INT
*-maʔi ~ -*ma NEG

Koreguaje
No assertive questions
*-maʔi > -ma, -maʔ, -mane NEG

P-Napo
Assertive questions exist
AQ meanings: logical, affective
Positive AQ: V*-maʔi*-dʒe
Negative AQ: V*-dʒe

Máihiki
*maʔi > -ma NEG
*-dʒe > -dʒi PL/1SG.PRS.INT
AQ meanings: logical, affective
Positive AQ: V-ma-ŋe
Negative AQ: V-dʒi

P-Upper Napo
dubitative content question suffix innovated

C.Siona
*-maʔi bleaches in AQs
Tense split in meanings
Positive logical AQ > V-ma-dʒe
Negative logical AQ > V-ma-maʔi-dʒe

E. Siona
*-maʔi lost in main clauses
AQ meanings: conjecture
Positive AQ > V-a ḅaʔi-dʒe

Secoya
4.2 Assertive questions: semantics and pragmatics

The meaning of assertive questions, in the languages where they exist, is less stable.

(24) Meanings conveyed (note: not entailed) by assertive questions
   a. Máihîki: counter-suppositional, weak or strong epistemic modal (logical); moral evaluation, morally controversial report (affective)
   b. C Siona: weak epistemic modal (logical, only for present tense); speaker approves of events, speaker treats subject of clause as 'member of speaker's own family' (examples in Wheeler 1987:153-154 (affective, only for past tense)
   c. E Siona: conjecture (logical)

(25) Which of the meanings in 24 are old?
   a. Assertive/'rhetorical' questions can usually convey both logical and affective meanings (see e.g. Schieffelin 1986, Koshik 2005, Stivers et al. 2010, de Ruiter 2012)
   b. Since both affective and logical meanings in Máihîki and Colombian Siona, I reconstruct both for P-Napo

4.3 Reportative

What about the Siona and Secoya reportatives?

- Siona and Secoya reportative is morphologically composed of INT/REP plus -ɲa REP
- Interrogative paradigm can be reconstructed to PWT; assertive questions, to Proto-Napo; reportative paradigm cannot be reconstructed to either node
- Proposed trajectory: like 'conjectural,' Upper Napo reportative has grammaticalized from a syntactic question with the clause-level affix -ɲa, as schematized in 26
  - No etymology for -ɲa; not a speech verb; not a copula (PWT copula was *-a)
  - Many word-final monomoraic information-structural suffixes of form -Ca in WT

(26) Grammaticalization of Upper Napo reportative

<table>
<thead>
<tr>
<th>Proto-Napo</th>
<th>Assertive question *V-maʔi-dʒe 'doesn't S V?' conveys opposite-polarity assertion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proto-Upper Napo</td>
<td>Innovates new discourse strategy *V-dʒe-ɲa 'does S V?' conveys same-polarity assertion</td>
</tr>
<tr>
<td></td>
<td>*V-dʒe-ɲa conveys access by report in some contexts, affective meaning in others</td>
</tr>
<tr>
<td>Colombian Siona</td>
<td>Minor semantic narrowing of V-dʒe-ɲa</td>
</tr>
<tr>
<td></td>
<td>Use of V-dʒe-ɲa not coterminous with reportative mode of access (Wheeler 1987:154)</td>
</tr>
<tr>
<td>Ecuadorian Siona</td>
<td>Major semantic narrowing of V-dʒe-ɲa: conveys only report</td>
</tr>
</tbody>
</table>

Some arguments against 26:
• Interrogative and reportative simultaneously grammaticalized from a nominalization (Bruil 2014:325): while interrogative is clearly from a nominalization, it is also much older than reportative (see above)

• Questions inherently appeal to interlocutor's epistemic authority (e.g. Portner 2009)
  – Speakers use syntactic questions to accomplish many actions which do not appeal to interlocutor's knowledge: issuing directives and offers; requesting permission; scolding; displaying own epistemic or affective stance (see e.g. Searle 1969, Brown and Levinson 1987 [1978], Schieffelin 1986, Koshik 2005, Heritage 2012)
  – Association between question syntax and repeating previous speaker's turn in dialogic storytelling in Tariana and Eastern Tukanoan languages (Aikhenvald 2004:120); repeating the previous turn is a form of reported speech and a possible bridge to reportative

5 Conclusions

Relevance for grammaticalization theory:

• Novel diachronic source for epistemic and evidential morphology: polar questions
  – If polar questions have the same epistemic and evidential implicatures cross-linguistically, other cases of semantic change from polar question to epistemic/evidential should exist
  – Yet no such cases, even though polar questions are source for other targets, e.g. antecedent clause of conditional

• Example of semantic change driven by implicatures associated with non-truth-conditional properties (i.e. illocutionary force) rather than truth-conditional content; cf. Jespersen cycles and 'emphatic' negation (Kiparsky and Condoravdi 2006)

For Tukanoan:

• Cannot reconstruct either evidential morphs or existence of evidentiality as a category to Proto-Western Tukanoan; absent evidence of a Central clade, entails that evidentiality also cannot be reconstructed to Proto-Tukanoan

• Large evidential systems characteristic of Vaupés area languages reflect innovation at Proto-Eastern Tukanoan or later

References

Amalia Skilton Is Máihi the only Tukanoan language without grammaticalized evidentiality?


