Coding evidence time in the Ticuna noun phrase

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Introduction: Perceptual demonstratives

In many languages, demonstratives or determiners encode the speaker's mode of perception of the referent (Matthewson 1998; Hanks 2011).

- Visibility -- speaker sees the referent
- General direct evidentiality -- speaker directly perceives the referent via any sense
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Today's claim: Ticuna (isolate; Brazil, Peru, Colombia) has demonstratives that encode the speaker's **time** of perception of the referent: that s/he last perceived it in the remote past.
Nordlinger and Sadler (2004) define two kinds of temporal markers on nouns:

- "Independent nominal tense" -- Marker affects temporal interpretation of noun property
  - Analogous to English *future, former*

- "Propositional nominal tense" -- Marker affects temporal interpretation of entire clause
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Today's claim: The remote past demonstratives of Ticuna represent a **new kind** of nominal temporal marker.
Roadmap

1. Language background
2. Remote past demonstrative: Syntax, nontemporal semantics
3. Remote past demonstrative: Temporal semantics
4. Implications and conclusions
Ticuna people and territory

- Isolate/orphan (Carvalho 2009) spoken by 41,500-69,000 people in Colombia, Brazil, and Peru
- At least 3 identifiable dialect groups (Montes 2004)
Fieldwork

Today's data: From 8 months of fieldwork 2015-2017 in Cushillococha and Caballococha, Peru

- Neighboring towns with combined pop. ~15,000
- Language used by all ages; main public language in Cushillococha

Data collection:

- Mixed methods approach: semantic elicitation, Wilkins (1999) demonstrative questionnaire experiment, staged discourses, spontaneous discourses, overheard speech
- Used both Ticuna and Spanish as metalanguages
The demonstrative system

Ticuna has a very large number of demonstratives.

- **Nominal demonstratives** (*this*): 6 series, 28 unique items (suppletive noun class agreement)
- **Locative demonstratives** (*here*): 6 series, 14 unique items (suppletive forms for allative vs. locative case)
- **Manner demonstratives** (*thus*) and others: Derived from nominals
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I will be discussing only nominal demonstratives.
Nominal demonstratives

The temporal meaning involves two of the six nominal demonstrative series.

Table: Nominal Demonstrative Uses

<table>
<thead>
<tr>
<th>Lexical Item</th>
<th>Extension</th>
</tr>
</thead>
<tbody>
<tr>
<td>Series 1 $nα^4a^2$</td>
<td>deictic only: referent visible/touchable and near speaker</td>
</tr>
<tr>
<td>Series 2 $ŋe^3a^2$</td>
<td>deictic only: referent visible and inside perimeter with speaker</td>
</tr>
<tr>
<td>Series 3 $je^4a^2$</td>
<td>deictic only: referent visible and not near speaker</td>
</tr>
<tr>
<td>Series 4 $ŋo^4ma^4$</td>
<td>deictic only: referent encloses speaker</td>
</tr>
<tr>
<td>Series 5 $ŋe^3ma^2$</td>
<td>deictic: near addressee or invisible non-deictic: temporally neutral</td>
</tr>
<tr>
<td>Series 6 $je^4ma^4$</td>
<td>non-deictic: remote past temporal meaning</td>
</tr>
</tbody>
</table>
Main use of Series 5 and 6: *anaphora*. Obligatory in anaphoric noun phrases with human referents.
Nontemporal semantics of Series 5 and 6

Main use of Series 5 and 6: anaphora. Obligatory in anaphoric noun phrases with human referents.

Other uses:

- Inverse linking (King 2001): Head of (otherwise headless) relative clause with unfamiliar referent

- Recognitional (Himmelman 1996) / Weakly familiar (Roberts 2003): Referent is known to all discourse participants but not previously mentioned
Nontemporal semantics of Series 5 and 6

(1) A non-anaphoric use of Series 5

Context: T, a young woman, is on a social visit to her mother-in-law R and mother-in-law's father D. D is talking about someone who snores and T says, 

\[ tsau^{1}ru^{5}\  i^{4}\ ny^{1}\ ?ma^{5}\ na^{4}\?\ ts^{a^{3}}pe^{3}\?\ wa^{1}\ e^{3}\?\ tsi^{2},\ na^{4}\?\ ne^{3}ma^{2}\ vitamina\ i^{5}\ ts^{a^{1}}ga^{1}\ gi^{5}\ ?a^{4}\ wa^{5} \]

\[ ts^{a^{1}}= ru^{5}\ i^{4}\ ny^{1}\ ?ma^{5}\ na^{4}\?\ ts^{a^{3}}= pe^{4}\?\ =wa^{1}\ e^{3}=?i^{5}ts^{i^{2}} \]
1SG = like LNK now COMP 1SG = sleep = HAB = really

\[ na^{4}\?\ ne^{3}ma^{2}\ vitamina\ i^{5}=\ ts^{a^{1}}= ga^{1}=gi^{4} \]
COMP DNOM5(IV) Sp: vitamin(IV) VCL. = 1SG.SC = swallow = PL

\[ =?i^{4}=wa^{5} \]
=NMLZ(IV) = ALL

'Like me now, I'm always so sleepy because I'm taking those vitamins.' (TAA: Conversation 20170527 10:30)
Temporal Component: Overview

Series 5 can be used for anaphora in any temporal context. Series 6 can be used for anaphora only if at least one of the following two temporal conditions hold:
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1. Remote Evidence Time (Remote EvT): The speaker last perceived the referent in the remote past of utterance time (UT; time of the discourse).
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1. Remote Evidence Time (Remote EvT): The speaker last perceived the referent in the remote past of utterance time (UT; time of the discourse).

2. Remote Topic Time Use: The entire clause has a topic time (Klein 1994) in the remote past of UT.
Remote Evidence Time

(2) Context: I have been away from town for 8 months. Today, my first day back, I come to ask to borrow your cat to control some mice. But you gave your cat away 8 months ago, when I left, and you haven't seen it since then. You say, 

\[
ta^4 ma^3 ku^31 na^1 tʃa^3 na^3 mũ^2 \checkmark \quad ga^4 je^4 ma^4 / \checkmark \quad i^4 \ ηe^3 ma^2 mi^3 tʃi^1.
\]

\[
ta^4 ma^3 ku^31 = na^1 tʃa^3 = na^3 = mũ^2 \quad \checkmark
\]

NEG 2SG.PRO = RCP 1SG = 3OBJ = give(AnimO) \checkmark 

ga^4 je^4 ma^4 / \checkmark \quad i^4 \ ηe^3 ma^2 mi^3 tʃi^1 

LNK:GA DNOM6(IV) / \checkmark \quad LNK DNOM5(IV) cat(IV)

'I'm not giving you \checkmark \quad that_{RemoteEvT} / \checkmark \quad that∅ \quad cat.'
Remote Evidence Time

(3) Context: Same as (2), except you gave your cat away earlier today.
\[ ta^4ma^3 \text{ ku}^3\text{?na}^1 \text{ tʃa}^3na^3mũ^2 \times ga^4 \text{ je}^4ma^4 / √ i^4 \text{ ŋe}^3ma^2 \text{ mi}^3\text{tʃi}^1. \]

\[ ta^4ma^3 \text{ ku}^3 \text{ } = na^1 \text{ tʃa}^3 = na^3 = mũ^2 \times \]
\[ \text{NEG} \quad 2\text{SG.PRO} = \text{RCP 1SG} = \text{3OBJ} = \text{give(AnimO)} \times\]
\[ \text{ga}^4 \text{ je}^4ma^4 / √ i^4 \text{ ŋe}^3ma^2 \text{ mi}^3\text{tʃi}^1 \]
\[ \text{LNK:GA DNOM6(IV) / } √ \text{ LNK DNOM5(IV) cat(IV)} \]

'I'm not giving you \times \text{ that}_{RemoteEvT} / √ \text{ that}_∅ \text{ cat}.'
Remote EvT Use: Overview

Remote EvT use is syntactically restricted → Two uses are due to polysemy, not synchronic vagueness.
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2. **Remote Past Component**: The speaker's last evidence time (EvT) for the referent must be in the remote past of utterance time (UT).
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3. **Deictic Component**: The remote evidence time meaning is centered on the speaker, utterance time, and actual world.
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3. **Deictic Component**: The remote evidence time meaning is centered on the speaker, utterance time, and actual world.
For Series 6 to be acceptable, the speaker must have perceived the referent at some time; unacceptable if speaker has never perceived referent.

(4) Context: Two Americans are coming to visit town. They and I (= AHS) have communicated by letters, but I have never heard their voices or seen them before. You and I are walking along a path that leads to their house. As I turn off the path, I say to you,

\[nyu^{1}ma^{5} na^{4}ta^{1}gu^{2} tʃa^{3}na^{3}ʔu^{3}a^{1}ne^{1} \checkmark i^{4} \eta^{3}e^{2} / \times ga^{4} je^{4}ma^{4} tʃau^{1}ta^{3}ni^{3}ʔi^{4}gi^{4}.\]

\[nyu^{1}ma^{5} na^{4} + ta^{1} = gu^{2} tʃa^{3} = na^{3} = ù^{3}a^{1}ne^{1} \checkmark i^{4}\]

now 3PRO + RN:at = LOC 1SG = 3OBJ = visit:SgS \checkmark LNK(IV)

\[\eta^{3}e^{2} / \times ga^{4} je^{4}ma^{4} tʃau^{1} + ta^{3}ni^{3}ʔi^{4} = gi^{4}\]

DNOM5(IV) / \times LNK:GA DNOM6(IV) 1SG + person.like.self = PL

'Now I'm going to visit \times those_{RemoteEvT} / \times those∅ countrymen of mine.' (ECP: 2017.3.15)
Direct Perception Component

Seeing or touching a referent always counts as directly perceiving it for purposes of EvT. Hearing a person speak doesn't count:

(5) Context: My friend Marcelina has been away from town for many months, so in all that time I have not perceived her in any way. Today, I walk by her house and hear her voice coming out. I don't stop to look at her. When I arrive at my own house, I tell my relative, 

\[
Ma^3t\varsigma^4k^a^1 t\varsigma^a^3i^3n^i^3. \checkmark \eta^e^3m^a^2 / \checkmark je^4m^a^4 \eta^e^3^1 ri^1 nu^5a^2 na^4\eta^e^2^?ma^4.
\]

\[
Ma^3t\varsigma^4k^a^1 + ga^1 t\varsigma^a^3 = i^3n^i^3 \checkmark \eta^e^3m^a^2 / \checkmark je^4m^a^4
\]

\[
M + \text{voice } 1SG = \text{hear } \checkmark \text{Dnom5(IV)} / \checkmark \text{Dnom6(IV)}
\]

\[
\eta^e^3^1 ri^1 nu^5a^2 na^4 = \eta^e^2^?ma^4
\]

woman(IV) TOP DLOC1:ALL 3 = be.in.place

'I heard Marcelina's voice. \checkmark That_{RemoteEvT} / \checkmark that\Ø woman is here!' (ECP; LWG; DGG)

Ambiguous data on whether hearing referents that are typically perceived by only hearing (such as radios) counts as perceiving them.
Remote Past Component

For Series 6 to be acceptable, the speaker's most recent evidence time for the referent needs to be in the remote past (not recent past or any time in the future). What does 'remote' mean?

(6) \( gu^2 ma^4 ne^3?ti^1 i^3 ki^3 ri^1 na^2 na^3 ti^3 ?ta^1 wa^5 i^5 na^4 ja^3 dau^2 \).

\( gu^2 ma^4 ne^3?ti^1 i^3 ki^3 ri^1 na^2 + na^3 ti^3 + ?ta^1 = wa^5 \)
\( \)DNOM6(II) young.man(II) TOP 3PRO(II) + father + RN:at = ALL 
\( i^5 = na^4 = ja^3 = dau^2 \)
\( IMPF = 3 = AM:go.and = see \)

'That \textit{RemoteEvT} young man, he's visiting his father.'

a. ✓ My friend Carlos went to university in Lima. For 6 months, he was away from town and I did not see or speak to him. \textit{Yesterday}, I saw Carlos in the market. I inferred he was back in town to visit his parents, and I report this to you.

b. × Same as (a), except that I saw Carlos \textit{today}.
(DGG; LWG; ECP)

Speaker comments: 'It's been years since you've seen her'
The perceptual and temporal requirements of Series 6 are rigidly deictic.

- Evidence time must take the perspective of the speaker, not other discourse participants or referents (exception: attitude reports).
- Evidence time must be in the remote past of utterance time, not topic, reference, or event times.
- The evidence event must occur in the actual world, not only in other possible worlds.
Deictic Component: Speaker-Centered

EvT is calculated from the perspective of the speaker, never the addressee.

(7) Context: A and B know each other and A also knows B's son. A travels away from town for 8 months and does not see B or B's son. A returns and comes to B's house.

A: ñe₁ki₃ ni⁴¹ʔi⁴ / ñe₁ki₃ ni⁴¹ʔi⁴ ña⁴ jì²ma⁴ / ña⁴ jì²ma⁴ ku⁴³ ne³?

"Where's ñe₁ thatRemoteEvT / ñe₁ that∅ son of yours?"

B: ñu⁵e³ pa⁴ta³ʔi³ wa⁵ na⁴ ñe²ʔma⁴ jì²ma⁴ / ga⁴ gu²ma⁴ tʃau¹ ne³.

"That∅ / X thatRemoteEvT son of mine is AT SCHOOL." (SSG; LWG)
Deictic Component: UT-Centered

EvT is calculated from EvT to UT, never from EvT to another topic time (or event time).

(8) Context: My friend Angel has a very fierce dog. I saw the dog ten minutes ago and it tried to bite me. I resolve that when I return to town one year from now, I will avoid Angel's house so completely that I will never see the dog -- the time I saw it today will be the last time I ever see it. I say,

ŋẽ⁴ʔgu²ma³ nãĩ¹ ja⁴ tau¹ne³ ki³ gu² ta⁴ nu⁵ a¹ tfa¹ʔũ⁴³ gu², ta⁴ gu² ta⁴ ma³ ni³¹ ũ³ tfa³ dau² ✓ i⁴ ŋe³ ma² / x ga⁴ je⁴ ma⁴ ai³¹ ru⁵.

ŋẽ⁴ʔgu² ma³ nãĩ¹ ja⁴ tau¹ ne³ ki³ = gu² ta⁴ nu⁵ a¹ Conn other(II) Lnk(II) year(II) = Loc Fut Dloc1:All tfa¹ = ũ⁴³ = gu² ta⁴ gu² ta⁴ ma³ ni³¹ = ũ³ tfa³ = dau² ✓ 1sg.sc = come/go:SgS = Sub never:FUT 3 = Acc 1sg = see ✓ i⁴ ŋe³ ma² / x ga⁴ je⁴ ma⁴ ai³¹ ru⁵ Lnk(IV) Dnom5(IV) / x Lnk:Ga Dnom6(IV) dog(IV)

'When I come here next year, I will never see ✓ that∅ / x that RemoteEvT dog.' (YCG; ABS)
Deictic Component: Centered on Actual World

EvT is calculated from the last evidence event in the actual world, never from the last such event in another possible world: i.e. it never scopes under modal.

(9) Context: Your son was thinking about joining the army. If he had joined the army, he would have left town, and as of now, it would have been many years since you last saw him. You would miss him a lot.

\[
\eta\tilde{e}^4\text{gu}^2\text{ma}^3 \ t\text{fi}^4 \ t\text{fu}^3\text{ra}^3\text{ra}^1 \text{wa}^5 \ \text{na}^1\tilde{u}^43\text{gu}^2 \ \check{\text{ja}^4 \ ji^2\text{ma}^4} / \times \ \text{ga}^4 \ \text{gu}^2\text{ma}^4 \\
\text{tsau}^1\text{ne}^3, \ \text{ri}^1 \ \text{na}^{31}\text{ka}^1 \ \text{tsa}^3\eta^4\text{tsa}^1\tilde{t}^1.
\]

'If \check{\text{that}} / \times \text{that}_{\text{RemoteEvT}} \ \text{son of mine had joined the army, then I would miss him.}' (SSG; LWG)
Remote EvT: Projection

In fact, the descriptive content of Series 6 can never scope under:

- Negation
- Polar questions
- Conditional antecedents
- Modals

This is also true about the descriptive content of other demonstratives (visibility and space meanings).

→ Not-at-issue content (Potts 2005; Simons et al. 2010)
Remote EvT: Summary as Definition

The remote EvT use of Series 6 requires that:

- EvT, a time when the speaker directly perceives the referent of the noun phrase, is defined -- Direct Perception Component
- EvT precedes UT -- ordering part of Remote Past Component
- The distance from between the most recent EvT and UT is large by contextual standards -- remoteness part of Remote Past Component

The speaker and UT centering of the Deictic Component are built into these definitions.
The centering on the actual world of the Deictic Component reflects that this content is not-at-issue.
Implications for nominal tense

The Series 6 demonstrative represents a new kind of nominal temporal marker.

- Its temporal meaning cannot be analyzed as tense (TT-UT relation) or aspect (TT-ET relation).
- It does not affect the temporal interpretation of the property of the noun.

In both of these, Series 6:

- Contrasts with nominal aspect markers in Tupi-Guaraní languages (Tonhauser 2007).
- May resemble "propositional nominal tense" in other South American languages, such as Movima (Haude 2006).
Series 6 supports adding EvT to the set of times (utterance time, topic time, event time) presupposed in Klein (1994). EvT is also necessary for other empirical reasons:

- **Tense-evidentiality interactions** -- Matses (Fleck 2007), Papuan languages of Eastern Highlands
- **Mirativity** -- on analyses involving distance between UT and time speaker learned proposition (Salanova and Carol 2016; Anderbois to appear)
- **Demonstratives with perceptual features** (visible, invisible) -- time of perception must be UT
Thank you!

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All errors and omissions are my own.


Salanova, Andres and Javier Carol. 2016. The Guaraní mirative evidential. Presentation at SULA 9, UC Santa Cruz, May 2016.


For referents typically perceived via sound (e.g. radios), hearing does count as direct perception.

(10) Context: While I am in town in 2017, my neighbor always plays his radio at night. I never see the radio, but I hear its music every night. I leave town for one year, then return to the same house in 2018. On my very first night back, I don't hear the radio! I wonder what happened to it, so I go to ask my neighbor,

\[ \eta \epsilon \tilde{\eta} \tilde{i}^{3} \ ni^{41} \tilde{i}^{4} \ \checkmark \ ja^{4} \ ji^{2} \ ma^{4} / \ \checkmark \ ga^{4} \ gu^{2} \ ma^{4} \ ku^{31} \tilde{r}^{3} \ radio? \]

\[ \eta \epsilon \tilde{\eta} \tilde{i}^{3} \ ni^{41} \tilde{i}^{4} \ \checkmark \ ja^{4} \ ji^{2} \ ma^{4} / \ \checkmark \ ga^{4} \ gu^{2} \ ma^{4} \]

where(II) COP \ \checkmark \ LNK(II) DNOM5(II) / \ \checkmark \ LNK:GA DNOM6(II)

ku^{31} \tilde{r}^{3} \ radio

2SG.AL.POSS Sp:radio(II)

'What's up with \ \checkmark \ that_{RemoteEvT} / \ \checkmark \ that_{∅} \ radio?' (YCG; LWG; DGG)
Remote Past Component

The remote past component involves ordering as well as remoteness. Series 6 is not acceptable in situations where the speaker anticipates first perceiving a referent in the remote future of UT.

(11) Context: There are two visitors in town whose daughter lives in the United States. I (AHS) am returning to the United States in 10 days, and I want to visit the daughter there. I ask the mother where the daughter lives, saying,

a. ✓ ṅe⁹ʔta⁵ ni⁴¹ʔi⁴ i⁴ ku³¹a³ki¹ i⁴ Be³tʃi¹?
   ṅe⁹ʔta⁵ ni⁴¹ʔi⁴ i⁴ ku⁴³ i⁴ Be³tʃi¹
   where COP LNK(IV) 2SG.PRO + daughter(IV) LNK(IV) B
   'Where does your daughter Betsy live?'

b. × ṅe⁹ʔta⁵ ni⁴¹ʔi⁴ ga⁴ ku³¹a³ki¹ ga⁴ Be³tʃi¹?
   ṅe⁹ʔta⁵ ni⁴¹ʔi⁴ ga⁴ ku⁴³ i⁴ Be³tʃi¹
   where COP LNK:GA 2SG.PRO + daughter(IV) LNK:GA B

(LWG; DGG)
Direct Perception Component

The direct perception meaning component is nonpropositional: about whether the speaker perceived the referent, not whether they perceived any property of the referent.

- Speaker perceived referent recently, believed it was something else, now knows identity: \( \times \text{DNOM6, ✓DNOM5} \)
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- Speaker perceived referent recently, didn't know what it was, now knows identity: \( \times\)DNOM6, \( \checkmark\)D NOM5
- Speaker perceived referent long ago, unsure whether has perceived recently: \( \checkmark\)DNOM6, \( \checkmark\)DNOM5