

The Paraguayan Guaraní future marker *-ta*¹

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Goal: To explore the temporal and modal meaning of the Guaraní suffix *-ta* in the context of Guaraní temporal system.

- (1) a. Ko'áña / kuehe a-purahei.
now / yesterday I-sing
'I am singing now. / I sang yesterday.'
- b. Ko'ẽrõ a-purahei-**ta**.
tomorrow I-sing-
'Tomorrow I will sing.' [E]

Other means for expressing future time reference (cf. Tonhauser 2006; see Appendix I for glosses):

- (2) a. A-purahei-**ne**.
I-sing-
'I might sing.'
- b. A-purahei-**se**.
I-sing-
'I want to sing.'
- c. A-purahei **va'erã**.
I-sing
'I must sing.'
- d. **A-ha** a-purahei.
I-go I-sing
'I am going to sing.' [E]

In the Guaraní literature, *-ta* is typically considered a future tense/marker (e.g. Gregores and Suárez 1967, Liuzzi and Kirtchuk 1989, Guasch 1996, Melià et al. 1997, Zarratea 2002).

What constitutes a future tense?

- A future tense occurs in all clauses that have future time reference (Yavaş 1982).
→ Too strong, since present tenses and modals can also realize future time reference.
- Future time reference is a necessary but not a sufficient condition for a future tense (e.g. Enç 1996, Kaufmann 2005).
- If future time reference is inherently non-factual, and non-factual assertions are accompanied by a modal attitude, can there be “pure” future tenses or do future markers always have a modal meaning component? (e.g. Comrie 1985, 1989, Bohnemeyer 2000)

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Discussion about English *will* (e.g. Smith 1978, Comrie 1985, 1989, Hornstein 1990, Kamp and Reyle 1993, Enç 1996, Sarkar 1997, Abusch 1997, 1998, Condoravdi 2002, Copley 2002, Kaufmann 2005).

Whether all future markers are inherently modal “is an empirical question that can only be answered on the basis of the investigation of grammatical expressions of future time reference across a number of languages” (Comrie 1985:44).

Outline:

- §1 Interpretation of unmarked predicates
- §2 Temporal and modal properties of *-ta*
- §3 *-ta* with past shifting expressions
- §4 Conclusions

1 The interpretation of unmarked predicates

Guaraní does not have past or present tenses; out of the blue, unmarked predicates may be interpreted with past or present time reference, i.e. factual mood (Tonhauser 2006, 2007b).

- (3) A-purahei.
I-sing
‘I sing. / I sang. / I am/was singing.’ [E]

Unmarked predicates are compatible with a present or past *perspective time*.

Unmarked predicates cannot be assumed to be realized with a zero non-future tense morpheme (e.g. Matthewson 2006 for St’át’imcets) or a factual mood morpheme:

- (4) a. Embedded under modal *i-katu*
I-katu a-**purahei**.
3-possible I-sing
‘It’s possible I sang / am singing / will sing.’ [E]
- b. Temporal adjunct clauses
Re-karu-ta re-**ju**-rire.
you-eat- you-return-after
‘You will eat after you return.’ [overheard]
- c. Abusch (1998) sentences
Ko pyharé-pe a-mombe’ú-ta che-sý-pe o-pa-mba’e a-**hecha**-va ko ’ára-pe.
this night-at I-tell- my-mother-to 3-all-thing I-see- this day-at
‘Tonight I’ll tell my mother about all the things I see today.’ [E]
- d. Schedules
Nde-omnibus o-**sẽ** a las sínko.
your-bus 3-leave at the five
‘Your bus leaves at 5.’ [E]
- e. Conditionals
O-**ky**-rõ ko’ẽrõ ja-**pyta** óga-pe.
3-rain-if tomorrow 1pl.incl-stay house-at
‘If it rains tomorrow we’ll stay home.’ [E]

Proposal: Unmarked predicates denote properties of times.

$$(5) \quad a\text{-purahei} \Rightarrow \lambda w \lambda t [AT(t, w, sing(sp))]$$

Unless the discourse context provides alternative temporal/modal reference, predicates receive a factual interpretation at a non-future perspective time (-):

- (6) $\llbracket - (a\text{-purahei}) \rrbracket^{M,g}$ presupposes a non-future perspective time pt . If defined:
 $\llbracket - (a\text{-purahei}) \rrbracket^{M,g} = \llbracket AT(pt, w_0, sing(sp)) \rrbracket^{M,g}$.
 “The speaker sings at the non-future perspective time pt in the actual world w_0 .”

2 The temporal and modal meaning of *-ta*

With present perspective times, *-ta* locates the eventuality in the future of the perspective time (= utterance time), and is compatible with the modal attitudes of intention, prediction and expectation.

- (7) a. Intention
 Context: A woman is scheming on how to catch the monkey that is playing tricks on her.
 A-japó-**ta** ta'anga araity kakuaa porã-va.
 I-make- figure wax big pretty-
 ‘I will make a big and pretty wax figure.’ [MK]
- b. Prediction
 Context: A girl tells her mother that she ripped her bed sheets.
 Ha nde-ru i-tarová-**ta** voi i-mandu'á-ramo upéva-rehe.
 and your-father 3-crazy- surely 3-hear-if this-about
 ‘And your father will go crazy if he hears about this.’ [T]
- c. Expectation
 Context: The frog says: “I will follow them and then...
 ...ai-kuaa-**ta** moõ-pa oi-ko.
 ...I-know- where- 3-live
 ‘...I'll know where they live.’ [F1]

-ta does not entail the realization of the eventuality.

2.1 *-ta* with past perspective times

-ta realizes future time reference in contexts with past perspective times.

- (8) Main clauses
- a. Context: Although I had been doing her cure all the time,
 primera vez a-hecha-**ta** hña
 first time I-see-
 ‘I would see it [her wound] for the first time.’ [R]
- b. Context: A mother receives a call from school that her daughter has had an accident and was taken to the hospital. She tells me: “I was told to wait at a particular road crossing.”
 Upépevé o-gueru-**ta** chupe la i-profesor.
 there 3-bring- her the her-professor
 ‘Her teacher would bring her there.’ [R]

(9) Subordinate clauses

- a. Context: “They called me to tell me not to worry about my daughter...”
 ...porque o-ġuahe-**ta** tarde-vé i-compañera-kuéra-gui.
 ...because 3-arrive- late-more 3-school.friend- -
 ‘...because she would arrive later than her school friends.’ [R]
- b. Context: She continued to practice moving her hand.
 Nd-o-kree-i la i-kuã ha’e o-rekuperá-jey-**ta**-ha
 -3-believe- the 3-finger 3.pron 3-recuperate-again- -
 ‘She didn’t believe that her fingers would recuperate.’ [R]
- c. Context: “And he hissed and sputtered at me.”
 Pytã-mba ko gringo, ñemo’a ku o-soro-**ta**-va
 red- this gringo as.if 3-explode- -
 ‘He was completely red, this gringo, like he would explode.’ [T]

Again, the eventuality located by *-ta* is not entailed to be realized.

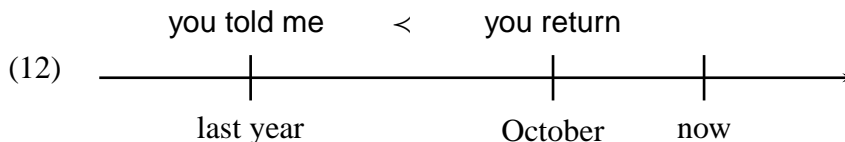
***-ta* with past time denoting adverbs**

Out of the blue, i.e. with a present perspective time, *-ta* is incompatible with past time adverbials:

- (10) #Kuehe a-purahei-**ta**.
 yesterday I-sing- [E]

-ta is compatible with past time adverbs in contexts with a past perspective time:

- (11) Context: A Paraguayan friend complains that I returned to Paraguay later than I said I would.
 E-re ambue ary-pe che-ve e-ju-**ta**-ha-gue octubre ñepyrũ-há-pe.
 you-say other year-in me-to you-return- - - October beginning- -in
 ‘You told me last year that you would return (last) October.’ [E]



Conclusion: *-ta* realizes future time reference with present and past perspective times; the realization of the eventuality is implicated.

2.2 *-ta* obligatorily shifts the evaluation time into the future

Unlike future markers in other languages, *-ta* obligatorily shifts the evaluation time into the future of the perspective time.

Epistemic modality: *-ta* cannot realize present time reference with epistemic modality.

- (13) Context: I try to soothe my friend whose child hasn’t come home from school yet.
 a. He’ll be with his friend.
 b. Spanish
 Estará con su amigo.
 be.3. with his friend
 ‘He’ll be with his friend.’

c. German

Er **wird** bei seinem Freund sein.
 he will at his friend be
 ‘He’ll be with his friend.’

d. Guaraní

#Oi-me-**ta** iñ-angiru-ndive.
 he-be- his-friend-with

(Intended: He’ll be with his friend.)

[E]

Dispositional modality: *-ta* does not realize present time reference with dispositional modality, unlike English *will/would* (cf. Palmer 1987, Sarkar 1997, Copley 2002).

(14) Context: When my sister was small she had a strange habit.

a. Oi-ke mesa-guy-pe ha o-herei mesa-guy.
 3-enter table-under-at and 3-lick table-under

‘She would sit under the table and lick it (its underside).’

[E]

b. #Oi-ke-**ta** mesa-guy-pe ha o-herei mesa-guy.
 3-enter- table-under-at and 3-lick table-under

(*Speakers’ comments: She will sit under the table at a future time.*)

[E]

2.3 Towards an analysis

-ta shifts the evaluation time into the future:

$$(15) \quad -ta \Rightarrow \lambda P_{\langle s, \langle i, t \rangle \rangle} \lambda w \lambda t [\forall w' (w' \in MB(w, t) \rightarrow \exists t' (\underline{t < t'} \wedge P(t')(w')))]$$

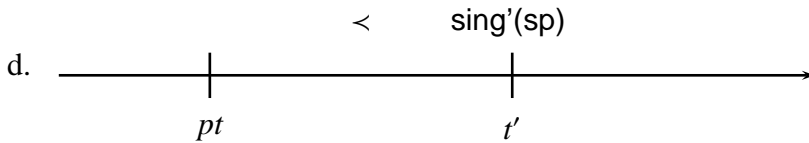
Examples

(16) *A-purahei-ta* ‘I-sing-’

a. (- (a-purahei))

b. $\forall w' (w' \in MB(w_0, pt) \rightarrow \exists t' (pt < t' \wedge AT(t', w', sing'(sp))))$

c. “For all worlds w' in the modal base at the actual world w_0 and the non-future perspective time pt , there is a time t' in the future of pt such that the speaker sings at t' in w' .”

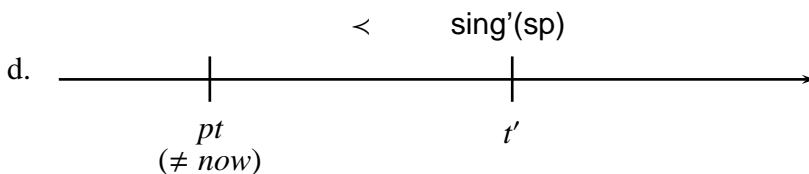


(17) *Kuehe a-purahei-ta* ‘Yesterday I-sing-’

a. (- ((a-purahei)))

b. $\forall w' (w' \in MB(w_0, pt) \rightarrow \exists t' (pt < t' \wedge t' \subseteq \text{denotation of yesterday} \wedge AT(t', w', sing'(sp))))$

c. “For all worlds w' that are in the modal base at the actual world w_0 and the non-future perspective time pt , there is a time t' in the future of pt and in the denotation of *yesterday* such that the speaker sings at t' in w' .”



3 Present perspectives on future in the past

–*ta* it is compatible with past time referring expressions *kuri* and *va'ekue* ('then (in the past)').

- (18) a. #Kuehe a-purahei-**ta**. (= (10))
yesterday I-sing-
b. (Kuehe) a-purahei-**ta** **kuri**.
yesterday I-sing-
'Yesterday I was going to sing.' [E]

These examples are felicitous only in contexts where there was an expectation that some eventuality would be realized. The examples (strongly) implicate that the eventuality was not realized.

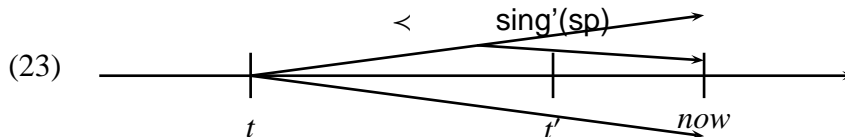
- (19) Context: The weather report the day before yesterday said that it was going to rain yesterday.
Kuehe o-ky-**ta** **kuri**.
yesterday 3-rain-
'Yesterday it was going to rain.' [E]
a. ...ha nd-o-ky-i.
...and -3-rain-
'...but it didn't rain.'
b. ...ha o-ky.
...and 3-rain
'...and it rained.'

- (20) Context: "When I cleaned her wound I tried not to show her how badly it looked."
O-ñe-hundi-**ta** chugui la i-po **kuri**
3- -lose- to.her the 3-hand
'She was going to lose her hand.' [R]

Analysis:

kuri shifts the perspective time into the past:

- (21) $kuri \Rightarrow \lambda P \exists t [t < now \wedge P(t)(w_0)]$
(22) *A-purahei-ta kuri* 'I-sing-
a. ((a-purahei))
b. $\exists t (t < now \wedge \forall w' (w' \in MB(w_0, t) \rightarrow \exists t' (t < t' \wedge AT(t', w', sing'(sp))))$
c. "There is a (perspective) time t in the past of the utterance time and for all worlds w' in the modal base at the actual world w_0 and t there is a time t' in the future of t such that the speaker sings at t' in w' ."



A counterfactual interpretation is implicated (Condoravdi 2002).

4 Conclusions

- The Guaraní future marker *-ta*
 - is compatible with present and past perspective times,
 - entails future time reference; is incompatible with present time reference,
 - is compatible with past time adverbs, but only if they locate the eventuality in the future of a (past) perspective time, and
 - is compatible with a variety of modal attitudes about the future.
- Is Guaraní *-ta* a future tense?
 - In (15): $-ta \Rightarrow \lambda P_{\langle s, \langle i, t \rangle \rangle} \lambda w \lambda t [\forall w' (w' \in MB(w, t) \rightarrow \exists t' (\underline{t < t'} \wedge P(t')(w')))]$
 - Alternative #1? $-ta \Rightarrow \lambda P_{\langle s, \langle i, t \rangle \rangle} \lambda w \lambda t [\exists t' (\underline{t < t'} \wedge P(t')(w))]$
 - Alternative #2? $-ta \Rightarrow \lambda P_{\langle s, \langle i, t \rangle \rangle} \lambda w \lambda t [\forall w' (w' \in MB(w, t) \rightarrow P(t')(w'))]$
(where t' is provided by the modal base)
- Do we find the Guaraní pattern realized across a wide variety of languages?
Future time reference cross-linguistically: See references above and Haiman 1975, 1980 on Hua, Bohnemeyer 2002 on Yucatec Maya, Bittner 2005 on Kalaallisut, ...

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Appendix I: Glosses

1/2/3 sg/pl = first/second/third singular/plural person crossreference marker, - = ablative, - = completive aspect, = demonstrative, - = desiderative modality, - = future marker, incl = inclusive, - = nominal past marker (Tonhauser 2006, 2007a), = negation, - = nominalizer/complementizer, = plural, = progressive, = question, - = relative clause, - = reflexive/middle prefix.

Appendix II: Corpus

Since Guaraní is mildly polysynthetic, the 7,300 words in the Guaraní corpus correspond to about 15,000 words in the English translation.

Genre	Name		# of Guaraní words	# of occurrences of <i>-ta</i>
Nature description	<i>Crocodile</i>	[C]	143	1
Fable	<i>Frog story I</i>	[F1]	412	7
	<i>Frog story II</i>	[F2]	247	1
	<i>Kirikiri</i>	[K]	196	1
	<i>Mono Kai</i>	[MK]	375	10
	<i>Ypei</i>	[Y]	82	0
Personal narrative	<i>Small</i>	[S]	283	0
	<i>Parents</i>	[P]	351	1
	<i>Accident</i>	[R]	1,022	19
Conversation	<i>Theater</i>	[T]	≈4,200	39
Total			≈7,300	79

Table 1: Guaraní *-ta* in naturally occurring data