Nominal Tense? The meaning of Guarani Nominal Temporal Markers

Judith Tonhauser

Goals:  1. Explore the meaning of nominal temporal markers of Guarani
       2. Are these markers nominal tense?

   (1) a. Jagua-ndadje o-kuaru o-ňakamby-pe’a-há-pe, yma
dog-say A3-urinate A3-spread.legs-open-nom-pe long.time.ago
   ho’a-giu-ve hi’-ári pare-kue, peteí fárra-há-pe.
   A3.fall-abl-ve 3-on wall-kue one party-nom-pe
   ‘It is said that dogs urinate with their legs spread open (one up) because
   a long time ago an old wall fell onto a dog, at a party.’ [P:106]
   A3-go one man A3-ask.for-at la 3-wife-ra-re
   ‘A man went to ask for his future wife.’ [P:57]

Spiel:  1. Guarani markers do not locate the NP time
       2. NPs are tenseless (too) – contra Nordlinger & Sadler (2004), Matthewson (2005)

1. Background

1.1 What is nominal tense?
So far, we’ve seen tense, aspect and mood realized on verbs (or not).

   (2) Yesterday, a student knitted.
   → knitting – true of an individual at some particular time (however long the event lasted)
   → a student – property true at particular times (until the student graduates / drops out)
   NP-time interpreted at the time at which the verbal predicate is interpreted.

Are NPs always interpreted at the same time the VP is interpreted? NOPE.

   (3) Every fugitive is now in jail. ΄ENC(1981)
   Q: Are they still fugitives?
   → property of being a fugitive not true at UT, but true before UT
   (4) ex-soldier, former friend, future president, wife-to-be

What do these examples have in common?

→ temporal precedence relation (revisit (1))
→ argued to be nominal ‘tenses’ by various people (Liuzzi 1987, Lecarme 1996, N&S 2004)
+ Lake Miwok (1951), Potowatomi (1958), Halkomelem (1997), Somali (1996) + 15 others (N&S)
1.2 What’s Guarani?

- Guarani – 4 million people in Paraguay and neighboring countries
- two main predicate classes – dynamic (A-marker) and stative (B-marker)
- Guarani nouns – defined as a subset of the stative property-denoting predicates

(5) a. A-jupi.
   A1sg-climb.
   ‘I am climbing’ or ‘I climbed’.

b. Che-kane’o.
   B1sg-tired.
   ‘I am tired’ or ‘I was tired’.

c. A-jupi-ta.
   A1sg-climb-FUT
   ‘I will climb’.

Observations

- NPs not obligatorily realized
- no temporal marker on the verb
- future time reference PIN1

2. Guarani temporal markers

- *kue ≈ former
  past-time oriented

- *ra ≈ future
  future-time oriented

2.1 Distribution

productive only with NPs (indefinites, possessives, demonstratives, quantificational NPs)

<table>
<thead>
<tr>
<th>PROFessions</th>
<th>NONFood ARTIFACTS</th>
<th>FOOD ARTIFACTS</th>
<th>NATURAL KINDS (EXCEPT HUMAN RELATIONS)</th>
<th>TEMPORARY HUMAN RELATIONS</th>
<th>PERMANENT/FINAL-STAGE HUMAN RELATIONS</th>
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<tbody>
<tr>
<td>-kue</td>
<td>✓</td>
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<td>✓</td>
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<tr>
<td>-ra</td>
<td>✓</td>
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</table>

Table 1. The acceptability of *kue and -ra across semantic noun classes.

professions: 
- priest, employee, boss, teacher, hairdresser, lawyer

non-food artifacts:
- chair, house, bridge, refrigerator, machete, store, book

food artifacts:
- meat, cheese, starch, bread

natural kinds:
- chicken, dog, bull, horse, person, child, woman, forest, water

temporary human relations:
- owner, neighbor, husband, wife

permanent relations:
- father, grandfather, daughter, son
2.2 The Precedence meaning property

<table>
<thead>
<tr>
<th></th>
<th>Precedence relations</th>
</tr>
</thead>
<tbody>
<tr>
<td>tpnp</td>
<td>time at which the whole noun phrase is interpreted</td>
</tr>
<tr>
<td>tnom</td>
<td>time at which the property denoted by the nominal is true of the NP individual(s)</td>
</tr>
<tr>
<td>tpposs</td>
<td>time at which the possessive relation is true of the possessor and the possessed.</td>
</tr>
</tbody>
</table>

- **(6)** one farmer-RA future farmer
  - $t_{np} < t_{nom} = \text{future}$
- **(7)** wall-KUE former wall
  - $t_{nom} < t_{np} = \text{UT}$
- **(8)** my house-KUE my former house, a ruin
  - the house which was mine once
  - $t_{nom} < t_{np}, t_{poss} = \text{UT}$
  - $t_{poss} < t_{np}, t_{nom} = \text{UT}$

$\Rightarrow$ Q: Is $t_{np}$ always UT? PIN3

2.3 The change-of-state meaning property

change-of-state **kue** / **former**

- **(9)** Juan is a former teacher and he is still a teacher. BAD
- **(10)** Juan is a former teacher and now he's a teacher again. GOOD

$kue \rightarrow$ nominal/possessive predication was true prior to $t_{np}$ and ceased to be true prior to $t_{np}$

$\Rightarrow$ Guarani kue behaves like English **former**, but not like English past!

- **(11)** On Wednesday Arthur was sick. He is still sick today.
  - past-time oriented precedence relation, but same event (no “change” property)

change-of-state **ra**

- **(12)** a. Kuehe a-hecha petei abogado-ra-ne
  - yesterday A1sg-see one lawyer-RA-
  - ‘Yesterday I saw a future lawyer’
  - true at $t_{nom}$
  - not yet at $t_{np}$
- **b.** A-hecha-ramo-gua-re ha’e abogado-ma
  - A1sg-see-cond-of-agr he lawyer-already
  - ‘When I saw him he was a lawyer already’ BAD

**Context**: Marco is currently a farmer but he has to move to the city for a couple of years.

- After that he wants to come back to his land and be a farmer again.
- **(13)** Marco petei chocokue ha Marco avei petei chocokue-ra
  - Marco one farmer and Marco also one farmer-RA
  - ‘Marco is a farmer and he is also a future farmer’ GOOD

$ra \rightarrow$ nominal/possessive predication is false at a time between $t_{np}$ and $t_{nom}$, ±agnostic about $t_{np}$ PIN4
-ra vs. English ‘future X’

Context: Pedro, Juan and Mario are presidential candidates (for the same position).

(14) Pedro, Juan ha Mario tendota-\textit{ra}.
Pedro, Juan and Mario president-RA
‘Pedro, Juan and Mario are presidential candidates / #future presidents’.

→ ∀x, ∃ a set of possible worlds in which x is president at t\text{nom} (sometime after t\text{np})
→ ‘ideal worlds’ for each candidate where everything goes according to plan (inertia-worlds)

-kue – property denoted by the NP is true of the NP individuals at t\text{nom} in the actual world
-ra – property denoted by the NP is true of the NP individuals at t\text{nom} in a set of possible worlds

PIN4 - so what are the conditions truth for –ra at t\text{np}?

(13) -ra is agnostic. Marco may or may not be a farmer at t\text{np} / utterance time
(14) Tonhauser: “change property”. Neither of the three candidates is a president at t\text{np} / utterance time
Q: Is (14) felicitous in a scenario where Juan is the current president but also running for re-election?

PIN1 - what kind of future time reference does –ta have?
-ra vs. FUT ta

Context: Pedro, Juan and Mario are presidential candidates (for the same position).

(15) # Pedro, Juan ha Mario tendota-\textit{ta}.
Pedro, Juan and Mario president-FUT
‘Pedro, Juan and Mario will be president’.

→ all of these guys will be president at some point in the actual world (one after the other)
→ -ta expresses predictions about the future

(16)a. Ko-\text{va} petei pa’i-\textit{ra}
this-RC one priest-RA
‘This is a future priest’

b. Ko-\text{va} petei pa’i-\textit{ta}
this-RC one priest-TA
‘This will be a priest’

Observations

Preferred context
 already enrolled in a seminary
Preferred context
 prediction about a child
→ how much work is the RC doing?
→ what about the demonstrative?

NOTE: Not all of Tonhauser’s consultants had strong preferences for either reading.
Distinction between –ra and –ta is not clear-cut.
2.4 The existence meaning property

**existence -kue**

\[ kue \rightarrow t_{\text{nom}} \text{ and } t_{\text{np}} \text{ fall within the time of existence of the NP individuals} \]

**Context:**

The town of San Isidro once had a priest called Jose. This man died as a priest

(17) a. \#pe pa’i-kue Jose
that priest-KUE Jose

‘that ex-priest Jose’ \(\rightarrow\) felicitous only if Jose was not a priest when he died

b. ore-pa’i-kue Jose
our.excl-priest-KUE Jose

‘our ex-priest Jose’ \(\rightarrow\) kue modifies the possessive relation

(17b) \(\rightarrow\) existence meaning property fulfilled by the existence time of the community

**NOTE:** Not all past-time-oriented nominal temporal markers have the existence property (Halkomelem)

**Table 1.** The acceptability of -kue and -rā across semantic noun classes.

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<tr>
<th>NOUN CLASSES</th>
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<td>√</td>
<td>∗</td>
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<tr>
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<td>√</td>
<td>√</td>
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</tbody>
</table>

Assumptions: natural kind nouns – permanent properties, artifact nouns – temporary properties

**Time of existence**

Krifka’s temporal trace function + times of existence for entities

(18) The time of existence \(\tau(x)\) of an entity \(x\) is:

a. the lifetime of \(x\) if \(x\) is animate, and

b. the temporal extension of the spatiotemporal path of \(x\) if \(x\) is inanimate

\(\rightarrow\) The existence property of –kue accounts for its incompatibility with permanent properties

What about artifacts?

bike-KUE = fine; if the bike is broken, its structural integrity is lost

*cheese-KUE – still cheese even if you cut it in half \(\rightarrow\) structural homogeneity matters!

**structural homogeneity**

If \(P\) is the property denoted by the artifact noun, and \(P(x)\) is true at time \(t\), then the entity \(x\) is structurally homogenous if and only if, for all proper parts \(y\) of \(x\), \(P(y)\) is true at \(t\).

**PIN2** Tonhauser: food artifacts are always homogenous \(\rightarrow\) no -kue

**BUT1** she only seemed to look at mass noun food artifacts (*cheese, milk, bread, starch*)

**BUT2** she did not look at mass noun non-food artifacts
(19) Ko kamby kesu-ra.
	his milk cheese-RA

‘This milk is for cheese/to make cheese’

**BUT 3** Milk as future cheese is fine, but cheese as past milk is bad. Huh?

Tonhauser: -ra has a weaker existence meaning property.

\[-ra \rightarrow t_{nom} \text{ and } t_{np} \text{ fall within the time of existence of entities that are spatiotemporal continuations of each other.}\]

**BUT 4**: caterpillars = future butterflies, cow = future meat, child ≠ future priest.

**WEIRD**: Cow meat is a spatiotemporal continuation of a cow, and a butterfly is a spatiotemporal continuation of a caterpillar (which isn’t even in a cocoon yet), but a priest is not a good spatiotemporal continuation of a child. I guess?

**Existence Property & nominal temporal markers**

- **-kue** strong: \( t_{nom} \) and \( t_{np} \) fall within the lifetime of the NP
- **-ra** weaker: \( t_{nom} \) and \( t_{np} \) fall within the existence of the spatiotemporal continuation

* structural homogeneity accounts for some of -kue’s distribution

2.5 **What do the Guarani temporal markers mean?**

<table>
<thead>
<tr>
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<th>-kue</th>
<th>-ra</th>
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<tbody>
<tr>
<td><strong>Precedence</strong></td>
<td>( t_{nom} &lt; t_{np} \quad \text{OR} \quad t_{poss} &lt; t_{np} )</td>
<td>( t_{np} &lt; t_{nom/poss} ) (maybe)</td>
</tr>
<tr>
<td><strong>Change</strong></td>
<td>( t_{nom/poss} &lt; t_{cease-to-be-true} &lt; t_{np} )</td>
<td>( \exists t'. \ t_{np} &lt; t' &lt; t_{nom}: P(t') = \text{false} )</td>
</tr>
<tr>
<td><strong>Existence</strong></td>
<td>( {t_{nom}, t_{np}} \subseteq t_{existence(\text{of entity / possessor})} )</td>
<td>( t_{np} \subseteq t_{existence \text{ of entity}} &amp; t_{nom} \subseteq t_{existence \text{ of spatiotemporal continuation}} )</td>
</tr>
</tbody>
</table>

For an entity x that is denoted by a noun phrase marked with -kue:

\( \rightarrow \) the property/relation denoted by the nominal/possessive predication is true of x at a time t prior to \( t_{np} \),
\( \rightarrow \) it has ceased to be true of x (and y, in case of relations) after t, but prior to \( t_{np} \),
\( \rightarrow \) the time of existence of x includes t and \( t_{np} \) (for properties) or the time of existence of the entities x and y minimally includes t and the time of existence of the possessor x also includes \( t_{np} \) (for relations).

For an entity x that is denoted by a noun phrase marked with -ra:

\( \rightarrow \) the property/relation denoted by NP MIGHT become true of x at a time t subsequent to \( t_{np} \),
\( \rightarrow \) it is false of x at a time between \( t_{np} \) and t,
\( \rightarrow \) the time of existence of x includes \( t_{np} \) and the time of existence of an entity y that is the spatiotemporal continuation of x includes t.
3. Temporal interpretation of NPs in Guarani

Assumptions: \( t_{\text{nom}} \) and \( t_{\text{poss}} \) defined as situation times during which \( P(x) = T \) or \( R(x,y) = T \)

Krifka’ (1989) temporal trace function: \( \tau(P(x)) = t_{\text{nom}}, \tau(R(x,y)) = t_{\text{poss}} \)

Proposal: -kue & -ra are predicate modifiers applying to the denotation of predicates (Q) and returning novel properties/relations KUE/RA(Q)

3.1 A formal semantic analysis of –kue

-kue

\[
\text{Property -kue} \\
\forall P \forall x \left[ \text{KUE}(P)(x) = 1 \text{ at } t_{np} \text{ in w iff } \exists t_{\text{nom}} \left[ t_{\text{nom}} < t_{np} \land \tau(P(x)) = t_{\text{nom}} \text{ in w } \land t_{np} \subseteq \tau(x) \right] \right]
\]

For all properties \( P \) and entities \( x \), the property KUE(P) is true of \( x \) at the noun-phrase time \( t_{np} \) in a world \( w \) if and only if there is a time \( t \) that precedes \( t_{np} \) and \( t \) is the situation time of \( P(x) \) in a world \( w \) and \( t_{np} \) is included in the lifetime of \( x \).

Relational -kue

\[
\forall R \forall x \forall y \left[ \text{KUE}(R)(x)(y) = 1 \text{ at } t_{np} \text{ in w iff } \exists t_{\text{poss}} \left[ t_{\text{poss}} < t_{np} \land \tau(R(x)(y)) = t_{\text{poss}} \text{ in w } \land (t_{np} \subseteq \tau(x) \lor t_{np} \subseteq \tau(y)) \right] \right]
\]

(20) Noun classes

Temporary properties/relations
- priest/friend \( \tau(P(x)) \subseteq \tau(x) \) / \( \tau(R(x)(y)) \subseteq \tau(x) \)

Permanent properties/relations
- woman/son \( \tau(P(x)) = \tau(x) / \tau(R(x)(y)) = \tau(x) \)

Final-stage properties/relations
- survivor/father \( \tau(P(x)) \in \text{FIN(}\tau(x)) \) / \( \tau(R(x)(y)) \in \text{FIN(}\tau(x)) \)

(21) Permanent + -kue computation

permanent property: \( \tau(P(x)) = \tau(x) \)
existence property: \( t_{np} \subseteq \tau(x) \)
\[ t_{np} \subseteq \tau(P(x)) \]

change property: \( \tau(P(x)) = t_{\text{nom}} \)
\[ t_{np} \subseteq t_{\text{nom}} \]

precedence property: \( t_{\text{nom}} < t_{np} \)
contradiction
-kue incompatible with permanent properties/relations: woman-kue, son-kue

The existence property and the situation time cannot account for the ungrammaticality of food artifacts modified by -kue (structural homogeneity to the rescue)

3.2 A formal semantic analysis of -ra

-ra

**Property -ra**

\[ \forall P \forall x \ [ \text{RA}(P)(x) = 1 \text{ at } t_{np} \text{ in } w \text{ iff } \forall w' \in \text{Best(Circ, NOcc, P)} \exists t_{nom} \exists x' \ [t_{np} < t_{nom} \& t_{nom} = \tau(P(x')) \text{ in } w' \& \text{cont}(x,x') \text{ in } w' \& t_{np} \subseteq \tau(x)] ] \]

For all properties P and individuals x, the property RA(P) is true of x at the noun-phrase time t_{np} in the actual world w if and only if for all worlds w' that are in the set of worlds given by Best(Circ, Nocc, P) there is a time t and an individual x' such that t follows t_{np}, where t is the situation time of P(x') in w' and x' is a spatiotemporal continuation of x in w', and t_{np} is included in the time of existence of x.

**Relational -ra**

\[ \forall R \forall x \forall y \ [ \text{RA}(R)(x)(y) = 1 \text{ at } t_{np} \text{ in } w \text{ iff } \forall w' \in \text{Best(Circ, Nocc, P)} \exists t_{poss} \exists x' \exists y' \ [t_{np} < t_{poss} \& t_{poss} = \tau(R(x')(y')) \text{ in } w' \& \text{cont}(x,x') \text{ in } w' \& \text{cont}(y,y') \text{ in } w' \& (t_{np} \subseteq \tau(x) \lor t_{np} \subseteq \tau(y))] ] \]

→ **weaker existence meaning**: t_{nom} does not have to be within the existence time of the same individual t_{nom} within (equal to) the existence time of the spatiotemporal continuation of x in w'

→ Best(Circ, NOcc, P)

(Dowty 1979, Portner 1998’s progressive) **Kratzer’s modality**

Best(Circumstantial modal base, Non occurrence, property)

\[ \text{inertia worlds} \quad \text{whatever event(s) might prevent P doesn't happen} \]

→ the world continues to develop after t_{np} and nothing happens to prevent P from becoming true

(22) **Context**: Pointing to some caterpillars

Umi yso panambi-ra

these caterpillar butterfly-RA

‘These caterpillars are future butterflies’
Circ(butterfly) = {‘The caterpillars look healthy’, ‘This kind of caterpillar turns into butterflies’, ...}
NOcc(butterfly) = {‘The caterpillars don’t get eaten’, ‘They don’t get stepped on’, ‘They don’t starve’, ...}
Special NOcc ordering source → (22) is felicitous even in a context where 99% of caterpillars get eaten

→ the modal base is dependent on the subject + wider world-space than usual inertia

PIN5 -ra vs. English ‘future X’ again
Context: Pedro, Juan and Mario are presidential candidates (for the same position).

(23) Pedro, Juan ha Mario tendota-ra.
Pedro, Juan and Mario president-RA
‘Pedro, Juan and Mario are presidential candidates / #future presidents’.

→ ∀x, ∃ a set of possible worlds in which x is president at t_{nom} (sometime after t_{np})
→ ‘ideal worlds’ for each candidate where everything goes according to plan (inertia-worlds)

vs.

(24) ∀P∀x [RA(P)(x) = 1 at t_{np} in w iff ∀w' ∈ Best(Circ,NOcc,P) ∃t_{nom} ∃x' [t_{np} < t_{nom} & t_{nom} = τ(P(x')) in w' & cont(x,x') in w' & t_{np} ≤ τ(x') ]]
→ Pedro, Juan and Mario are presidents in all the (best) worlds at the same time ?
→ is Best(Circ,NOcc, P) whatever we want it to be?

PIN4 so what are the conditions truth for –ra at t_{np} again?

(13) → ra is agnostic. Marco may or may not be a farmer at t_{np} / utterance time
(23) → Tonhauser: “change property”. Neither of the three candidates is a president at t_{np} / utterance time

Q: Is (23) felicitous in a scenario where Juan is the current president but also running for re-election?

A: Yes, according to the semantics in (24).

→ t_{np} is in the past of the time at which the property holds true of a spatiotemporal continuation of x
→ t_{np} is included in the lifetime of x

→ P(x) may or may not be true at t_{np}
→ Marco (13) can be a farmer AND Juan (23) can be a current president

BUT Doesn’t this mean that –ra does not have the change of state property?

PIN6

Predictions

-kue & -ra do not affect the temporal interpretation of the noun phrase
t_{nom} / t_{poss} are existentially bound by –kue & –ra

→ the situation time cannot be further constrained by a temporal modifier / contextually given time
3.3 The interpretation of Guarani temporal markers in discourse

NPs can be interpreted at the **reference time**, the time of utterance or some **contextually given time**.

(25) a. Ha o-guahe-ma katu h-endu-pe
and 3\textsuperscript{rd}-arrive-already indeed 3\textsuperscript{rd}-place-PE
‘And he (the frog) had already arrived at his (the boy’s) place’.
\(\rightarrow (RT < UT) \quad t_{\text{poss}} = RT, t_{\text{np}} = RT \rightarrow t_{\text{np}} = t_{\text{poss}}\)

b. A-topa che-rembireko-pe Villarica-pe
A\textsuperscript{1sg}-find B\textsuperscript{1sg}-wife-PE Villarica-PE
‘I met my wife in Villarica’.
\(\rightarrow (RT < UT) \quad t_{\text{poss}} = UT, t_{\text{np}} = UT \rightarrow t_{\text{np}} = t_{\text{poss}}\)

c. Ko’aga pe fugitivo o-i-jey-ma carcel-pe
now that fugitive A\textsuperscript{3}-be-again-already prison-PE
‘Now that fugitive is in prison again’
\(\rightarrow (RT = UT) \quad t_{\text{nom}} < UT, t_{\text{np}} = \text{contextually given time} \text{ before UT} \rightarrow t_{\text{np}} = t_{\text{nom}}\)

-**kue** -kue \[\text{PIN3}\] \(t_{\text{np}}\) is not always UT. The location of the NP time is as unrestricted as in (25).

(26) a. Che a-ha-ramo nde re-ju che-renda-gue-pe
B\textsuperscript{1sg} A\textsuperscript{1sg}-go-cond B\textsuperscript{2sg} A\textsuperscript{2sg}-come B\textsuperscript{1sg}-place-KUE-PE
‘When I go, you come to my (then) former place (the place where I am now)’
\(\rightarrow (UT < RT) \quad t_{\text{poss}} = UT, t_{\text{np}} = RT \rightarrow t_{\text{poss}} < t_{\text{np}}\)

b. Che-mita-me ko pa’i-**kue** o-ne-e gueteri iglesia-pe
B\textsuperscript{1sg}-child-PE this priest-KUE A\textsuperscript{3}-speak still church-PE
‘When I was a child, this former priest still spoke in church’
\(\rightarrow (RT < UT) \quad t_{\text{nom}} = RT, t_{\text{np}} = UT \rightarrow t_{\text{nom}} < t_{\text{np}}\)

c. Pe pa’i-**kue** h-enoi 1960-pe
that priest-KUE 3-born 1960-PE
‘That ex-priest was born in 1960’
\(\rightarrow (RT < UT) \quad RT < t_{\text{nom}} < UT, t_{\text{np}} = UT \rightarrow t_{\text{nom}} < t_{\text{np}}\)
(27) a. Kuehe  a-jogua  che-syrykoi-\textit{ra}  
yesterday  A1sg-buy  B1sg-motorbike-RA  
‘Yesterday I bought my motorbike’.  
\[ \rightarrow (\text{RT} < \text{UT}) \quad t_{\text{poss}} = \text{UT}, \quad t_{\text{np}} = \text{RT} \rightarrow t_{\text{np}} < t_{\text{poss}} \]

b. A-topa-ta  nde-\textit{termo-\textit{ra}}  
A1sg-find-FUT  B2sg-thermos-RA  
‘I will find a thermos for you’  
\[ \rightarrow (\text{UT} < \text{RT}) \quad t_{\text{poss}} = \text{RT}, \quad t_{\text{np}} = \text{UT} \rightarrow t_{\text{np}} < t_{\text{poss}} \]

c. A-topa-ro-gua-re  Juan-pe,  ha’e  petei  abogado-\textit{ra}…  
A1sg-meet-cond-past  Juan-PE  3pron  one  lawyer-RA…  
ko’aga  ha’e-ma  petei  abogado-\textit{kue}  
now  3pron-already  one  lawyer-\textit{kue}  
‘When I met Juan he was a future lawyer. Now he’s already a former lawyer’.  
\[ \rightarrow (\text{RT} < \text{UT}) \quad \text{RT} < t_{\text{nom}} < \text{UT}, \quad t_{\text{np}} = \text{RT} \rightarrow t_{\text{np}} < t_{\text{poss}} \]

\[ \rightarrow \text{-\textit{kue} and -\textit{ra} do not affect the location of the NP time or the location of the } t_{\text{nom/poss}} \]
\[ \rightarrow t_{\text{np}} \text{ is a contextually given time} \]

Q: Is this fact surprising?  
Do we not expect \textit{kue} and \textit{ra} NPs to behave more like embedded tense rather than matrix tense?

3.4 Locating the Nominal and Possessive Times  
nominal/possession time existentially bound by the nominal temporal marker  
\[ \rightarrow \text{it cannot be located by an NP internal modifier or through discourse context.} \]

teach-nom-ag  eighty-of  A3-happy  
‘Teachers of the eighties are happy.’

b. Mbo’e-ha-ra-\textit{kue}  \textbf{ochenta-gua}  o-vy’a  
teach-nom-ag-KUE  eighty-of  A3-happy  
‘Former teachers of the eighties are happy.’  
\[ \rightarrow t_{\text{np}} \text{ and } t_{\text{nom}} \text{ located in the eighties.} \]

(28b) – individuals who were former teachers in the eighties are happy now  
\[ \rightarrow \text{temporal modifier locates the } t_{\text{np}}, \text{ not the } t_{\text{nom}} \]
(29) Ambue ary-pe petei doytor-kue o-mo-nguera in-angiru-pe i-mba’asy
other year one doctor-KUE A3-cause-healthy 3-friend-pe 3-sickness
‘Last year, an ex-doctor healed his friend’s sickness’.

Strong preference for the reading in which the healer was a former doctor at the time of healing
\( t_{np} = RT, t_{nom} = \) unspecified time prior to \( t_{np} \)
if \( t_{nom} \) could be located by last year, then speakers should accept a context in which the healer was a
doctor last year

-kue does not anaphorically locate the time of the nominal predicate / possession
No data given for -ra, but Tonhauser claims that (28) and (29) do have counterparts for –ra.

4. Are these guys tenses?

Reference time – RT   Event/Situation time – ET/ST   Utterance time – UT

4.1 Characteristics of verbal tense markers

- TENSE-1: Verbal tense markers relate RT and the perspective time (UT)
- TENSE-2: Verbal tense markers can relate the perspective time (UT) and the ET/ST
- TENSE-3: Verbal tense markers can relate UT and RT or the RT and the ET

(30) Yesterday, John went to the zoo. At 6 PM, he had already eaten.

TENSE-1: went, had \( \rightarrow \) RT < UT (+yesterday, at 6 PM constrain the reference time)
TENSE-2: went \( \rightarrow \) ST < UT
TENSE-3: had eaten \( \rightarrow \) ST<RT<UT

4.2 How Guarani –kue and –ra don’t behave like TENSE-1 markers

Properties of TENSE-1 markers

1. they do not exhibit semantic restrictions. Any VP is fine.
2. they don’t co-occur on the same finite verb
3. they do not encode a state change
4. their denotation is restricted by modifiers
5. the relation may be contextually determined

Sheila had a party last Friday and Sam got drunk.

Guarani nominal markers

1. –kue is picky. See section 2.
2. see example (31)
3. Change meaning property
4. See section 3.4, example (28)
5. See section 3.4, example (29)
A-hecha pa’i-ra-ngue-pe.  
A1sg-see priest-RA-KUE-pe  
‘I am seeing the former future priest’.

→ he wanted to be a priest at some time in the past, but failed  
→ Always RA-KUE, never KUE-RA → they’re not both tenses.  
**Q:** maybe –*kue* is aspect and –*ra* is tense?

<table>
<thead>
<tr>
<th>TENSE-1 vs. Guarani nominal markers</th>
<th>TENSE-1 markers</th>
<th>-kue</th>
<th>-ra</th>
</tr>
</thead>
<tbody>
<tr>
<td>no semantic restrictions</td>
<td>√</td>
<td>X</td>
<td>√</td>
</tr>
<tr>
<td>distinct markers cannot cooccur</td>
<td>√</td>
<td>X/√</td>
<td>X/√</td>
</tr>
<tr>
<td>no change of state</td>
<td>√</td>
<td>X</td>
<td>X/ ?</td>
</tr>
<tr>
<td>restricted by modifiers</td>
<td>√</td>
<td>X</td>
<td>X/ ?</td>
</tr>
<tr>
<td>may be contextually determined</td>
<td>√</td>
<td>X</td>
<td>X/ ?</td>
</tr>
</tbody>
</table>

4.3 How they don’t behave like TENSE-2

**Properties of TENSE-2 markers**

1. they do not exhibit semantic restrictions. Any VP is fine.  
2. they don’t co-occur on the same finite verb  
4. their denotation is restricted by modifiers

_Last night, Matt partied with his friends._

**Guarani nominal markers**

1. –*kue* is picky. See section 2.  
2. see example (31)  
4. See section 3.4, example (28)

If –*kue* and –*ra* were tense-2 markers, it would mean that they had access to perspective time, which is fixed → not more than one NP time per sentence

< UT  = UT

(32) _Every fugitive is back in jail and is not happy about it_

**TENSE-2 vs. Guarani nominal markers**

<table>
<thead>
<tr>
<th>TENSE-1 markers</th>
<th>-kue</th>
<th>-ra</th>
</tr>
</thead>
<tbody>
<tr>
<td>no semantic restrictions</td>
<td>√</td>
<td>X</td>
</tr>
<tr>
<td>distinct markers cannot cooccur</td>
<td>√</td>
<td>X/√</td>
</tr>
<tr>
<td>no change of state</td>
<td>√</td>
<td>X</td>
</tr>
<tr>
<td>restricted by modifiers</td>
<td>√</td>
<td>X</td>
</tr>
<tr>
<td>may be contextually determined</td>
<td>√</td>
<td>X</td>
</tr>
</tbody>
</table>
4.4 How they don’t behave like TENSE-3

TENSE-3 markers can co-occur since they express different relations on the same verb (ST – RT – UT) + the relation between RT and ST can encode a state change

Properties of TENSE-3 markers

1. they do not exhibit semantic restrictions. Any VP is fine.
2. distinct markers cannot cooccur since they express different relations on the same verb (ST – RT – UT)
3. the relation may be contextually determined

Guarani nominal markers

1. –kue is picky. See section 2.
2. See section 3.4, example (28)
3. See section 3.4, example (29)

TENSE-3 vs. Guarani nominal markers

<table>
<thead>
<tr>
<th>Property</th>
<th>TENSE-3 markers</th>
<th>-kue</th>
<th>-ra</th>
</tr>
</thead>
<tbody>
<tr>
<td>no semantic restrictions</td>
<td>√</td>
<td>X</td>
<td>√</td>
</tr>
<tr>
<td>distinct markers cannot cooccur</td>
<td>√</td>
<td>X/√</td>
<td>X/√</td>
</tr>
<tr>
<td>no change of state</td>
<td>√</td>
<td>X</td>
<td>?</td>
</tr>
<tr>
<td>restricted by modifiers</td>
<td>√</td>
<td>X</td>
<td>?</td>
</tr>
<tr>
<td>may be contextually determined</td>
<td>√</td>
<td>X</td>
<td>?</td>
</tr>
</tbody>
</table>

5. Conclusions

→ -kue and -ra are not PURE tenses, maybe they are combined tense/aspect markers
→ Lecarme (1996), Nordlinger & Sadler (2004), etc did not compare what they claim to be nominal tenses to verbal tenses → the claim that nominal tenses exist is not empirically supported.
→ a precedence relation is not enough for something to be a tense

→ maybe we need more data, at least for –ra, before we dismiss the possibility of it being nominal tense

6. Somali –kii (past tense determiner)

6.1 Basic definite determiner facts

→ T/D & K/G “genders”
→ Nouns can have one gender in the singular and another in the plural.

<table>
<thead>
<tr>
<th>‘a student’</th>
<th>arday</th>
<th>‘students’</th>
<th>arday</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘the student’</td>
<td>ardayga</td>
<td>‘the students’</td>
<td>ardayda</td>
</tr>
<tr>
<td>‘T.DEF student’</td>
<td>ardaygii</td>
<td>‘T.DEF students’</td>
<td>ardaydii</td>
</tr>
</tbody>
</table>
6.2 Change of state?

**Context**

We are talking about several students. Maxamed is the one who dropped out of college/graduated.

(33) M. waa ardaydii hore. Hadana arday ma aha

M decl. students.tdef former now student not is

‘Maxamed is a former student and now he’s not a student anymore’.

(34) Maxamed waa ardaydii hore

Maxamed decl. students.TDEF former

‘Maxamed is one of the former students’

(35) ... ee wali ardayga ah

which still student is

‘who is still a student’

→ Somali -kii does not have the change of state property?

**Context**

Yesterday I went to a bike shop and out of all of the bikes they had I chose one for my sister.
I didn’t have enough money yesterday. Tomorrow I’ll go back to the shop and buy the bike I chose.

(33) Baskiilkii bari baan gadanaya

Bike.def tomorrow foc.1st buy.future

‘I will buy the bike tomorrow’

(34) Baskiilkii bari baan gadanaya

Bike.Tdef tomorrow foc.1st buy.future

‘I will buy the bike tomorrow’

Guarani consultant: -kue in (34) would mean the bike is broken, change of state.

Somali Consultant: -kii = familiar bike. “The bike which you know that I will buy”

→ Somali -kii encodes precedence, but definiteness adds discourse saliency into the picture
6.3 Existence

(35) MADAXWENI-HII WUU DHINTAY
President-defM.past Foc.3rd.male die.3ms.past
‘The president died’ (Lecarme 2012)

\[ \text{vs. } \# \text{that priest – } \text{kue} \]

\[ \Rightarrow \text{ Maybe Somali – } kii \text{ does not mean “former”, like Guarani – } kue \]

6.4 What can it mean?

Lecarme(2012) \( \Rightarrow \) maybe it has to do with visibility, whether the NP is in the visible domain or not

**Context**

Nurto and Axmed are walking down a street and we see a beautiful house. Nurto asks who built the house. Axmed answers that Yoonis built the house.

(36) YAA DHISAY GURIGAN?
Who built house.this
‘Who built the house?’

\[ \Rightarrow \text{ no Tense Det if we’re in front of the house!} \]

(37) YOONIS WAA DHISAY GURIGA(N) / GURIGII
Yoonis decl. built house.this house.TDEF
‘Yoonis built the house’

**Context**

Nurto and Ahmed talked about Yoonis’s house yesterday. Today, Ahmed finds out that it was actually Bedel who built the house they were talking about yesterday. Ahmed tells Nurto.

(38) YOONIS MA DHISIN EE BEDEL BAA DHISAY GURIGII/ *GA / *GAN
Yoonis not built it Bedel foc. Built house.TDEF/*def/*dem
‘Yoonis didn’t build the house, but Bedel built it’

If (37) can be the answer to (36) when both speakers are still in front of the house, maybe it’s not only about visibility. –kii does encode some “< UT” relation, but it does not seem to be like Guarani –kue.